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The NLM Technical Bulletin

INDEX

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through

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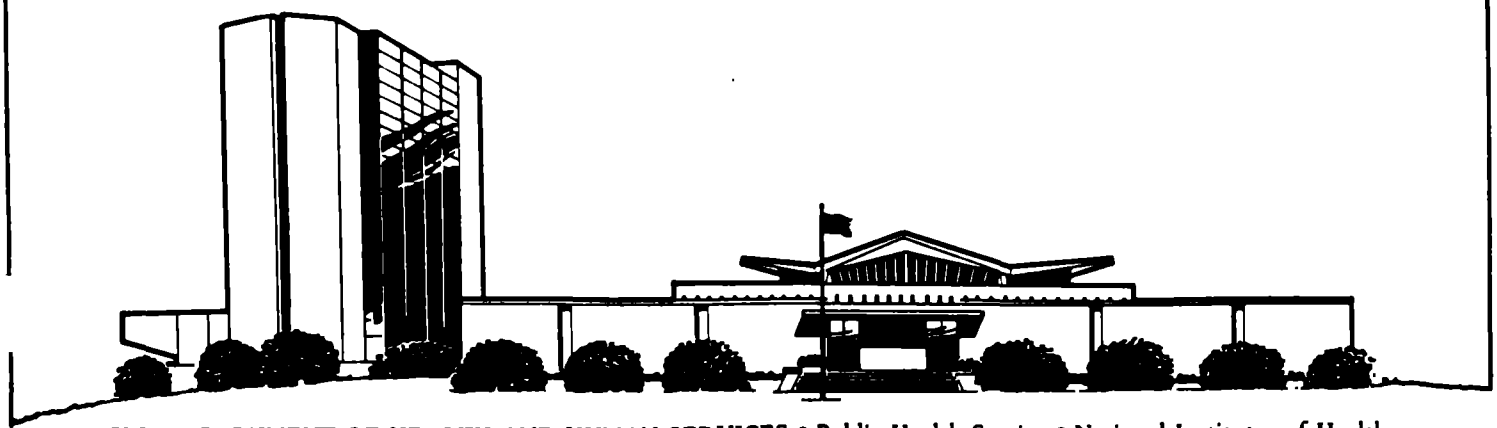

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NLM Technical Bulletin Index
No. 225, January 1988 through No. 236, December 1988
Prepared by Harriet Rusin, MEDLARS Management
Section, NLM

SUBJECT	DATE	ISSUE-PAGE
Abstracts, Structured	Nov 88	235-10
ADDRESS (AD) field		
added to MEDLINE	Mar 88	supplement-18
AIDS Bibliography is monthly	Nov 88	235-5
AIDS Literature Searches	Jun 88	230-4
AIDS Subfile added to DIRLINE	Dec 88	236-7
AIDSLINE		
file description	Jul 88	231-1
GRATEFUL MED modification, Verison 3.0	Jul 88	231-9
	Jul 88	231-Appendix B
strategy for MEDLINE	Jul 88	231-Appendix A
And ENG vs And Not FOR vs TS (LA) ENG	Jul 88	231-12
Author! Author!	Jan 88	225-14
AVLINE		
certain data elements translated into English phrases	Mar 88	227-3
form & geographic subheadings	May 88	229-5
producer abstracts	Oct 88	234-16
regeneration	Dec 88	236-12
review SDI strategy for 1989 MeSH	Oct 88	234-6
Backfiles		
content rearranged by year of publication, (YR)	Mar 88	227-5
Billing		
credit card customers charged twice for Jan 1988	Mar 88	227-3
BIOETHICSLINE		
update	Mar 88	supplement-46
1988 Thesaurus available	Oct 88	234-3
Bulletin Board (through GRATEFUL MED), Ver.4.0	Dec 88	236-1
Cancer Databases, update	Mar 88	supplement-48
Cancer Detection Guidelines in PDQ	May 88	229-4
CANCERLIT		
searching becoming more like MEDLINE	Oct 88	234-13
regenerated	Jan 88	225-4
review SDI strategy for 1989 MeSH	Oct 88	234-6
year-end processing	Oct 88	234-7
1988 MeSH and changes	Jan 88	225-4
Catalogs discontinued	Dec 88	236-5
CATLINE		
certain data elements translated into English phrases	Mar 88	227-3
form & geographic subheadings	May 88	229-5
PRINT LO	Apr 88	228-4
regeneration	Dec 88	236-12
review SDI strategy for 1989 MeSH	Oct 88	234-6
CCRIS		
enhancements for Dec 8, 1987	Jan 88	225-10
CD-ROM, update	Mar 88	supplement-5
CDF (Chemical Directory File)		
locator tool for TOXNET	Jul 88	231-10

Charges		
see pricing		
Chemical and Toxicological Files		
Demo Disk revised	Jun 88	230-5
update	Mar 88	supplement-4
Chemical Carcinogensis Research Information System see CCRIS		
Chemical Dictionary File See CDF		
Chemicals with Elusive Names	Jun 88	230-8
CHEMLEARN, update	Mar 88	supplement-4
version 2.0 description	Jul 88	231-7
CHEMLINE		
price increase	Jan 88	225-3
regeneration for European Drug Names and more TSCA data	Aug 88	232-5
update	Mar 88	supplement-50
Chinese Traditional Medicine, update	Mar 88	supplement-39
Classical Article, update	Mar 88	supplement-34
Clinical trials information in PDQ	Jul 88	231-3
CLINPROT		
clinical trails information in PDQ	Jul 88	231-3
drug terms modified	May 88	229-4
Index Term Listing		
March 1988 available	Mar 88	227-4
July 1988 available	Jul 88	231-3
Oct 1988 available	Oct 88	234-4
January 1989 available	Dec 88	236-6
Commands		
EXPLAIN CHARGES updated with Jan 1988 rates	Mar 88	227-3
EXPLAIN for subheadings now available	May 88	229-15
MAIL=PROMPT	Feb 88	226-10
Neighbor enhancements, update	Mar 88	supplement-7
PRINT, new command for CATLINE	Apr 88	228-4
PRINT, new feature	Jan 88	225-1
PRINT, update	Mar 88	supplement-11
Computer		
downtime scheduled for Dec 10-11,88	Oct 88	234-3
	Nov 88	235-3
Coming attractions for 1988 System	Oct 88	234-9
Conference Publications; classification changed	Nov 88	235-4
Congress Publications cataloged differently	Jul 88	231-4
Cumulated Index Medicus		
1987 edition available	Feb 88	226-3
Data Elements		
translated into English phrases for AVLINE, CATLINE, HISTLINE, NAF	Mar 88	227-3
newly created for MeSH VOCABULARY file	Mar 88	227-4
Databanks that register molecular sequences		
now being added to MEDLINE records	Apr 88	228-1
Date of Entry (DA) field		
Index Medicus ranges	Jan 88	225-Appendix A
Decode Values Change for CATLINE/AVLINE	Mar 88	227-3
Decode Values updated for offline printing	Jun 88	230-3

Demo Disk for Chemical and Toxicological files, update	Mar 88	supplement-4
revised	Jun 88	230-5
Direct Dial Access (Washington, D.C.)		
2400 Baud direct number available	Aug 88	232-3
DIRLINE		
HMD subfile added	Apr 88	228-3
subfile from Nat'l Ctr Ed in Maternal & Child Health added (MCH)	Aug 88	232-4
	Sep 88	233-6
subfiles added: AIDS, Self-Help Clearinghouses, NIH Research Resources	Dec 88	236-7
toll-free numbers/Health Hotlines	Apr 88	228-5
DOCUSER		
documentation prepared	Jun 88	230-3
file available	Apr 88	228-8
searching	May 88	229-1
Drug Combination Terms changed for CLINPROT	May 88	229-4
ELHILL		
corrections causing SAVE/STORESEARCH problems	Jan 88	225-6
ELHILL 3.3	Oct 88	234-17
enhancements for 1989	Oct 88	234-1
walk-thru	Oct 88	234-26
EMIC		
will be added to TOXNET	Jul 88	231-10
English language articles		
cost effective method for searching	Jul 88	231-12
Entry Vocabulary update	Mar 88	supplement-28
Environmental Mutagen Information Center		
See EMIC		
Environmental Teratology Information Center		
See ETIC		
Errata Policy for MEDLINE, update	Mar 88	supplement-38
Errors by Publisher for MEDLINE, update	Mar 88	supplement-38
ETIC		
will be added to TOXNET	Jul 88	231-10
EXPLAIN CHARGES, updated with 1988 rates	Mar 88	227-3
Form & Geographic Subheadings for CAT/AVLINE	May 88	229-5
Forms, update	Mar 88	supplement-58
GATEWAY for TOXNET system		
expanded	Feb 88	226-1
GENBANK, update	Mar 88	supplement-40
(SI) in MEDLINE now have accession numbers	Sep 88	233-3
GENE-TOX		
bioassays will be added to TOXNET	Jul 88	231-10
GRATEFUL MED		
AIDSLINE modification	Jul 88	231-9
	Jul 88	Appendix A + B
Bulletin Board System	Dec 88	236-1
Copyright	Jun 88	230-7
DEBUG "fix" for blank screen problem	Mar 88	227-9
default database	Aug 88	232-25

DIRLINE search	Feb 88	226-5
downloading large retrieval	May 88	229-9
fewer citations "on target"	Aug 88	232-25
Exploding MeSH terms	Apr 88	228-7
GRATEFUL MED Version 3.0	Mar 88	supplement-3
MeSH changes in version 4.0	Dec 88	236-11
MeSH heading of less than 5 characters	Feb 88	226-4
MeSH use by F10 key	Mar 88	227-9
multiple users	Mar 88	227-9
narrowing a search	Aug 88	232-25
NTIS list of addresses for upgrades	Nov 88	235-9
review citations and go back for abstracts	Oct 88	234-15
SDILINE searches	May 88	229-9
searching for a publication year	Jan 88	225-8
searching for chemicals	Jan 88	225-8
SETUP access preventable	Jun 88	230-7
single floppy installation version 4.0	Nov 88	235-9
telephone number entering in SETUP	Feb 88	226-5
transfer account	Jun 88	230-7
update	Mar 88	supplement-3
use of version 3.0 after 1989 system up	Nov 88	235-8
version 3.0 being mailed	Jan 88	225-3
version 4.0 announcement	Nov 88	235-1
	Dec 88	236-11
2400 baud vs 1200 baud, cost/time savings	Sep 88	233-7
Guidelines for Early Cancer Detection in PDQ	May 88	229-4
Hazardous Substances Databank		
see HSDB		
HEALTH HOTLINES		
updated version	Sep 88	233-enclosure
HEALTH PLANNING & ADMINISTRATION		
review SDI strategy for 1989 MeSH	Oct 88	234-6
update	Mar 88	supplement-51
Health Sciences Audiovisuals Catalog		
microfiche catalog discontinued	Dec 88	236-5
HISTLINE		
certain data elements translated into English phrases	Mar 88	227-3
HIV Virus, update	Mar 88	supplement-35
HMD Subfile of DIRLINE	Apr 88	228-3
Holiday Schedule		
Christmas Day, 1988	Nov 88	235-3
Columbus Day, 1988	Aug 88	232-3
George Washington's Birthday, 1988	Jan 88	225-3
Inauguration Day, 1989	Dec 88	236-3
Independence Day, 1988	May 88	229-3
Labor Day, 1988	Jul 88	231-3
Martin Luther King's Birthday, 1988	Dec 88	236-3
Memorial Day, 1988	Apr 88	228-3
New Year's Day, 1989	Nov 88	235-3
Thanksgiving Day, 1988	Oct 88	234-3
Veteran's Day, 1988	Sep 88	233-3
1989 Schedule	Oct 88	234-Appendix D

HSDB		
data from POISINDEX deleted	Jan 88	225-4
review status tags modified	Jun 88	230-3
RTECS data removed	Dec 88	236-5
unit record changes	Dec 88	236-5
Index Medicus		
May '88 edition month/issue information incorrect	Aug 88	232-3
Index to the NLM Technical Bulletin		
1987	Jan 88	225-enclosure
Integrated Risk Information System		
See IRIS		
INTROMED discontinued	Nov 88	235-5
INTROTOX discontinued	Apr 88	228-4
IRIS		
will be added to TOXNET	Jul 88	231-10
JNCI		
title change	Aug 88	232-3
Journal Title Abbreviations (TA)		
changing with year-end processing	Aug 88	232-26
Journal Title Changes	Dec 88	236-3
Language		
searching for English articles in MEDLINE	Jul 88	231-12
List of Serials Indexed for Online Users		
1988 available	Jan 88	225-5
Literature Searches		
distributed free by Reference Section will now be sold by GPO	Jun 88	230-4
Looking for Chemicals with Elusive Names	Jun 88	230-8
MAIL=PROMPT	Feb 88	226-10
MARC format for 1989 MeSH tapes	Jun 88	230-1
MCH Subfile added to DIRLINE (Nat'l Ctr Ed in Maternal & Child Hlth)	Aug 88	232-4
	Sep 88	233-6
Medical Subject Headings, Annotated Alphabetic List		
1989 available	Sep 88	233-4
changes to 1989 publication	Dec 88	236-Appendix A
Medical Subject Headings, Tree Structures		
1989 available	Sep 88	233-4
Medical Subject Headings - Supplementary Chemical Records		
1989 available	Dec 88	236-5
MEDLARS		
calling the Service Desk	Sep 88	233-10
DOCUSER file available	Apr 88	228-8
genetics, update	Mar 88	supplement-40
microcomputer access	Aug 88	232-8
new features for Dec 12, 1988	Oct 88	234-9
payments should be sent to NTIS	Aug 88	232-4
update	Mar 88	supplement-1
MEDLINE		
Address Field (AD) added, update	Mar 88	supplement-18

Backfiles rearranged by year of publication (YR)	Mar 88	227-5
CD-ROM update	Mar 88	supplement-5
coverage dates changing	Nov 88	235-3
Date of Entry (DA) ranges	Jan 88	225-Appendix A
Molecular Sequence data added	Apr 88	288-1
N (SB); Nursing Subset Tag, update	Mar 88	supplement-16
NEIGHBOR command, update	Mar 88	supplement-7
pocket card available	Feb 88	226-3
review articles	Mar 88	supplement-14
semi-monthly updates begin in April 1988	Mar 88	227-1
	Apr 88	228-3
STORESEARCHes can be run online, update	Mar 88	supplement-15
1988 MeSH being used	Jan 88	225-4
MED86		
new backfile created Dec 12, 1988	Nov 88	235-3
MeSH Searching		
* used to refine search	Aug 88	232-25
available in USMARC format for authority data	Jun 88	230-1
Backfile rearrangement by (YR) will impact new headings when moved into backfile	Mar 88	227-5
Pocket Card, update	Mar 88	supplement-20
1989 terms available	Oct 88	234-7
MeSH VOCABULARY FILE		
backfile postings	Nov 88	235-4
backfile postings, update	Mar 88	supplement-26
changes 1989	Dec 88	236-6
new data element	Mar 88	227-4
field added (Pre-Explosion), update	Mar 88	supplement-23
new features, update	Mar 88	supplement-20
(UI) field added, update	Mar 88	supplement-26
Microcomputers and Telecommunication Software	Aug 88	232-8
MFS		
see Multifile Searching		
Molecular Sequence Databanks	Apr 88	228-1
address of contributing databanks	Jul 88	231-5
Multifile Searching	Oct 88	234-1
	Oct 88	234-17
walk-thru	Oct 88	234-26
more on SPRINT and MFSearching	Nov 88	235-11
NAF		
certain data elements translated into English phrases	Mar 88	227-3
rebuilt changes	Apr 88	228-4
regeneration	May 88	229-10
	Dec 88	236-12
National Cancer Institute's Databases, update	Mar 88	supplement-48
National Library of Medicine		
classification of congress publications now different	Jul 88	231-4
Reference Section Literature Searches now be sold by GPO	Jun 88	230-4
revised treatment of analyzable serials	May 88	229-14

NCI		
see National Cancer Institute		
Neighbor (NBR) Enhancements, update	Mar 88	supplement-7
New Rubric [classical article], update	Mar 88	supplement-34
NIH Research Resources Subfile added to DIRLINE	Dec 88	236-8
NLM Catalog Supplement		
microfiche catalog discontinued	Dec 88	236-5
NLM Online Users Meeting at MLA Annual Meeting		
1988 announced	Mar 88	227-3
NLM Technical Bulletin		
1987 Index	Jan 88	225-enclosure
NTIS charges	Dec 88	236-6
Nursing Journal Subset Tag, update	Mar 88	supplement-16
omission of one journal	May 88	229-3
Offprints		
MAIL=PROMPT, used to send prints to places other than stored address	Feb 88	226-10
Online Services Reference Manual		
1988 edition available	Mar 88	227-4
Parameters used for telecommunication software by microcomputers	Aug 88	232-8
PDQ		
changes to file	Sep 88	233-3
clinical trials in PDQ	Jul 88	231-3
early cancer detection guidelines	May 88	229-4
enhancements	Feb 88	226-3
	Jul 88	231-3
eortic investigational protocols	Jun 88	230-3
Login via TOXNET Gateway possible	Feb 88	226-1
maintenance changes	Dec 88	236-4
standard therapy protocols	Jan 88	225-4
user group	Jul 88	231-3
Permuted Medical Subject Headings		
1989 available	Sep 88	233-4
Pharmacodynamics (SH) changed to Pharmacology (SH), update	Mar 88	supl-36
Pharmacokinetics (PK) subheading, update	Mar 88	supl-35
Pharmacology subheading, update	Mar 88	supl-36
Phones List	Feb 88	226-enclosure
	Jun 88	230-enclosure
	Nov 88	235-enclosure
Pocket Cards		
MEDLINE 1988 available	Feb 88	226-enclosure
MeSH update	Mar 88	supl-20
POISINDEX Subfile		
data deleted from HSDB	Jan 88	225-4
POPLINE		
Newsletter from the Population Information Program, Johns Hopkins University now available	Dec 88	236-6
producer has moved office	Oct 88	234-3
rebuilt and updated	May 88	229-4
1988 MeSH use	Jan 88	225-4
	Mar 88	227-4

Pre-Explosions		
GRATEFUL MED	Apr 88	228-7
PX field added to MeSH VOCABULARY FILE, update	Mar 88	supplement-23
1989 list	Oct 88	234-Appendix A
Pregnancy check tag, update	Mar 88	supplement-33
Preservation microfilming records added to SERLINE	Mar 88	227-10
Pricing		
CHEMLINE/TOXLIT increases	Jan 88	225-3
Dec 1988 invoices will have 2 SDILINE charges	Nov 88	235-3
NTIS charges	Dec 88	236-6
1989 Pricing Schedule	Oct 88	234-enclosure
Pricing Algorithm Chart	Jan 88	225-Appendix B
Printing		
MAIL=PROMPT	Feb 88	226-10
new features	Jan 88	225-1
PRT LO for CATLINE/AVLINE	Apr 88	228-4
update	Mar 88	supplement-11
Prodrugs, new heading	Mar 88	supplement-42
Protocols		
Standard Therapies in PDQ	Jan 88	225-4
PRT LO command for CATLINE	Apr 88	228-4
Publications		
AIDS Bibliography issued monthly	Nov 88	235-5
Bioethics Thesaurus, 1988	Oct 88	234-3
Cumulated Index Medicus		
1987 edition available	Feb 88	226-3
Health Sciences Audiovisuals Catalog		
discontinued	Dec 88	236-5
Index Medicus		
May 1988 edition has incorrect month/issue information	Aug 88	232-3
List of Serials Indexed for Online Users		
1988 available	Jan 88	225-5
Medical Subject Headings - Supplementary Chemical Records		
1989 available	Dec 88	236-5
NLM Catalog Supplement		
discontinued	Dec 88	236-5
Online Services Reference Manual		
1988 edition available	Mar 88	227-4
Technical Notes: MEDLARS Indexing Instructions, Tumor Key Supplement		
1989 revision	Oct 88	234-3
1989 Searching Tools List	Sep 88	233-3
Review Articles, update	Mar 88	supplement-14
	Mar 88	supplement-31
Revised Treatment of Analyzable Serials at NLM	May 88	229-14
Number of References (RF) included with all standard PRINT formats, update	Mar 88	supplement-14

RTECS		
data removed from HSDB	Dec 88	236-5
discontinued on ELHILL	Mar 88	227-3
now on TOXNET, update	Mar 88	supplement-52
SAVESEARCH		
difference between SAVESEARCH & STORESEARCH	Mar 88	227-14
revise for 1989 MeSH	Oct 88	234-5
SAVE/STORESEARCH problems due to ELHILL software program correction	Jan 88	225-6
use in the toxicology files, update	Mar 88	supplement-56
SDILINE searches using GRATEFUL MED	May 88	229-9
SDI's		
SDILINE searchesrun twice 12/88	Nov 88	235-3
notice to revise strategies for 1989	Oct 88	234-5
8901 (EM) SDILINE update delayed until 12/88	Oct 88	234-6
Search Hints		
AND ENG vs AND NOT FOR vs TS (LA) ENG	Jul 88	231-12
Author! Author!	Jan 88	225-14
calling the MEDLARS Service Desk	Sep 88	233-10
MAIL=PROMPT	Feb 88	226-10
Online help for subheading searching	May 88	229-15
Removing the Glitch from SMARTCOM Version 2 when Downloading to Disk	Aug 88	232-29
SAVESEARCH or STORESEARCH	Mar 88	227-14
searching for Chemicals with Elusive Names	Jun 88	230-8
short form DIAG will not work	Dec 88	236-16
Structured Abstracts	Nov 88	235-10
User ID in Use	Apr 88	228-12
Self-Help Clearinghouses Subfile added to DIRLINE	Dec 88	236-7
SERLINE		
changes for April 1988	Mar 88	227-4
journal title changes	Dec 88	236-3
JNCI Journal of the National Cancer Institute reverted to original title	Aug 88	232-3
Preservation Microfilming records added	Mar 88	227-10
Title Abbreviations changed	May 88	229-3
update	Mar 88	supplement-55
SMARTCOM Version 2; Removing the Glitch when Downloading to Disk	Aug 88	232-29
Smoking; more allowable subheadings, update	Mar 88	supplement-37
SPRINT		
see Multifile Searching		
Standard Therapy Protocols in PDQ	Jan 88	225-4
Stored Address override with MAIL=PROMPT	Feb 88	226-10
Structured Abstracts	Nov 88	235-10
STORESEARCHes		
revise for 1989 MeSH	Oct 88	234-5
update	Mar 88	supplement-15
Student Code Program, update	Mar 88	supplement-6
Subheadings		
EXPLAIN commands available	May 88	229-15

Tape Request Form	Jun 88	230-Appendix A
Technical Bulletin		
Index 1/87 - 12/87	Jan 88	225-enclosure
Telecommunication		
Removing the Glitch from SMARTCOM Version 2 when Downloading to Disk	Aug 88	232-29
Software parameters for access	Aug 88	232-8
TELENET WATS number changing	Oct 88	234-3
2400 baud Direct Dial phone *number*	Aug 88	232-3
TELENET		
800 phone number changing	Oct 88	234-3
Title Abbreviation Field (TA) changing with		
year-end processing of MEDLINE	Aug 88	232-26
	Oct 88	234-7
Title Abbreviations changed in SERLINE	May 88	229-3
Toxic Chemicals Release Inventory		
See: TRI		
Toxicology Files and the use of SAVESEARCH,		
update	Mar 88	supplement-56
Toxicology Information Program Files Demo Disk		
name change	Jun 88	230-5
TOXLINE		
regeneration	Sep 88	233-1
	Nov 88	235-4
TSCATS subfile added	Mar 88	227-4
TSCATS subfile corrections	Apr 88	228-4
TSCATS subfile description	Apr 88	228-6
TOXLINE65		
file appearing	Sep 88	233-1
TOXLINE/TOXLIT update	Jan 88	225-3
TOXLIT		
price increase	Jan 88	225-3
TOXNET		
CCRIS enhancements	Jan 88	225-10
files being phased in	Jul 88	231-10
gateway expanded	Feb 88	226-1
HSDB unit record changing	Dec 88	236-5
INTROTOX discontinued	Apr 88	228-4
new pocket card	Apr 88	228-enclosure
POISINDEX deleted from HSDB	Jan 88	225-4
RTECS, update	Mar 88	supplement-52
Training		
application	Sep 88	233-Appendix A
1989 schedule	Sep 88	233-5
1989 Jan-June class schedule	Sep 88	233-5
Train the Trainers course at MLA 1988	Mar 88	227-3
registration flyer for course	Mar 88	227-Appendix A
TRI (Toxic Chemicals Release Inventory)		
file will be added to TOXNET	Jul 88	231-10
Tree number changes, update	Mar 88	supplement-45
TSCATS Subfile		
added to TOXLINE	Mar 88	227-4
corrected	Apr 88	228-4
description	Apr 88	228-6

Tumor Key, update	Mar 88	supplement-33
Tumor Key Supplement		
1989 revision available	Oct 88	234-3
Unique Identifier (UI) field added to MeSH VOCABULARY FILE, update	Mar 88	supplement-20
Update Schedule		
semi-monthly	Oct 88	234-Appendix B
monthly	Oct 88	234-Appendix C
USER ID in Use	Apr 88	228-12
Users' Meeting at MLA		
questions and answers, 1988	Aug 88	232-1
time change, 1988	Apr 88	228-3
USMARC Format for MeSH tapes available	Jun 88	230-1
Year-End Processing		
changes to journal title abbreviations (TA)	Aug 88	232-26
1989 MeSH changes for MEDLINE/HEALTH	Oct 88	234-4
1989 schedule	Oct 88	234-8
2400 baud number for Direct Dial access	Aug 88	232-3

GRATEFUL MED Users Not Responding? - Page 7

The NLM Technical Bulletin

ISSN 0146-3055
JANUARY 1989
No. 237

In This Issue:

Survey of Individual Users of MEDLINE Available 1

Payments for MEDLARS Service 6

TRI (Toxic Release Inventory) on TOXNET 8

Attachments: Letter Announcing CHEMLINE/TOXLIT Price Change

License Agreement Change

Enclosed: Pricing Schedule

Regular Features:

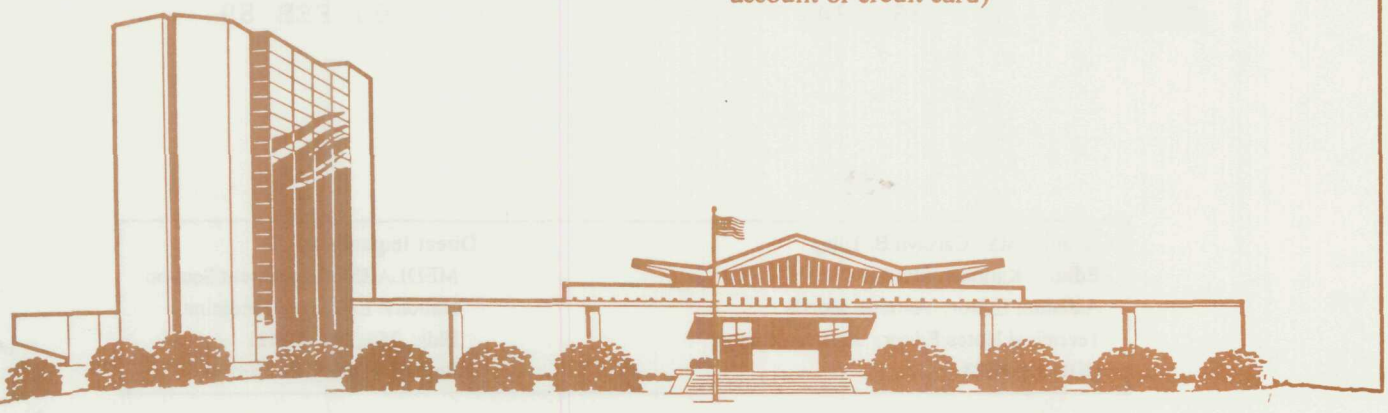
Databases 2
Technical Notes 3
GRATEFUL MED 7
Serials Update 10

Survey of Individual Users of MEDLINE® Available

NLM conducted a survey (from October 2, 1987 to December 10, 1987) of its end-user population. This survey was an initial attempt to determine the characteristics of individual users of MEDLINE, their methods of access to the system, their reasons for searching, and their level of satisfaction with current system features and capabilities. The information gathered will be used to identify improvements that can provide a better level of information service to U.S. health professionals.

The results of this survey have been published and are available from the National Technical Information Service. The publication number is PB-89-133722/GBB. The price is $21.95 ($43.90 non-U.S.); there is a $3.00 (U.S./Canada) shipping and handling charge required for each order ($4.00 non-U.S.). Please send remittance with orders to:

National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650 (for telephone orders with deposit account or credit card)



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MEDLARS DATABASE	TOTAL RECORDS	DATES COVERED	DATE LAST UPDATED	LATEST UPDATE TAG
ELHILL COMPUTER				
AIDSLINE*	16,057	JAN 80-MAR 89	04 FEB 89	8903(EM)
AVLINE	18,207	THROUGH 1989	03 FEB 89	
BIOETHICS	26,402	JAN 73-1988	17 DEC 88	8812(EM)
CANCERLIT	638,030	JAN 63-FEB 89	04 FEB 89	8902(EM)
CATLINE	639,819	THROUGH 1989	03 FEB 89	
CHEMLINE	833,229		17 DEC 88	8812(EM)
CLINPROT	7,073		24 JAN 89	8901(EM)
DIRLINE	16,047		23 DEC 88	
DOCUSER	11,265		14 JAN 89	
HEALTH	443,171	JAN 75-MAR 89	04 FEB 89	8903(EM)
HISTLINE	86,501		04 FEB 89	8902(EM)
MEDLINE*	247,950	JAN 88-MAR 89	28 JAN 89	8903(EM)
MED86	639,438	JAN 86-DEC 87	19 JAN 89	
MED83	889,211	JAN 83-DEC 85	17 DEC 88	
MED80	803,271	JAN 80-DEC 82	23 DEC 88	
MED77	775,193	JAN 77-DEC 79	10 DEC 88	
MED72	1,175,406	JAN 72-DEC 76	21 JAN 89	
MED66	1,310,387	JAN 66-DEC 71	09 JAN 89	
MESH VOC	66,782	1989	04 FEB 89	
NAME AUTH	315,501		04 FEB 89	
PDQ		THRU FEB 89	01 FEB 89	
POPLINE	165,514	1970-JAN 89	14 JAN 89	8901(EM)
SDILINE	24,745	MAR 89	28 JAN 89	8903(EM)
SERLINE	72,085	1989	06 FEB 89	
TOXLINE	920,760	PRE-1965-1989	14 JAN 89	8901(EM)
TOXLIT	935,358	1981-1989	14 JAN 89	8901(EM)
TOXLIT65	771,593	1965-1980	01 SEP 87	

*N.B. FILE IS UPDATED SEMI-MONTHLY; THIS IS PART 2 OF 2.

TOXNET COMPUTER			
CCRIS	1,222	22 JUN 88	
DBIR	340	21 JAN 89	
ETICBACK	46,374	30 JAN 89	
HSDB	4,200	30 JAN 89	
RTECS	96,334	04 FEB 89	

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Editor: Kathleen Stenger
Assistant Editor: Annette Morris
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MEDLARS Management Section
National Library of Medicine
Bldg., 38A, Rm. 4N421
Bethesda, Maryland 20894

CONTENTS NOT COPYRIGHTED FREELY REPRODUCIBLE

Technical Notes

Whenever applicable, the heading of each Technical Note includes a reference to the section of the Online Services Reference Manual, 1988 that is considered most relevant to the item being discussed, e.g., (Manual 4.7.2). Users should keep in mind that the item may pertain to other sections as well.

PRESIDENTS' DAY HOLIDAY MONDAY FEB. 20, OBSERVED

System	Rates/Status
ELHILL®	non-prime; non-guaranteed
TOXNET®	non-prime; guaranteed
DOCLINE®	N/A; non-guaranteed
Service Desks	
MMS	not staffed
DOCLINE	not staffed

GEORGE WASHINGTON'S BIRTHDAY WEDNESDAY, FEB. 22

System	Rates/Status
ELHILL & TOXNET	regular; guaranteed
DOCLINE	N/A; guaranteed
Service Desks	
MMS	staffed
DOCLINE	staffed

GRATEFUL MED®, VERSION 4.0

Distribution of GRATEFUL MED, Version 4.0 began on December 19, 1988. New versions have been sent free of charge to all who purchased earlier versions of the program. All new orders for GRATEFUL MED are now being filled with Version 4.0. If an earlier version was purchased, but Version 4.0 has not been received, please contact NTIS at (703) 487-4660.

DATABASES AVAILABLE WITH 1989 MESH®

The following databases should now be searched using the 1989 MeSH® vocabulary:

- MEDLINE® (and its Backfiles), HEALTH®, CATLINE®, and AVLINE® were updated with 1989 MeSH effective December 12.

- AIDSLINE was made available with 1989 MeSH on December 23.

- CANCERLIT® was made available with 1989 MeSH effective December 15. The searching default in CANCERLIT is now MeSH Headings (MH). Searchers no longer need to qualify MeSH Headings. Text Words (TW), however, will now need to be qualified in CANCERLIT.

- BIOETHICSLINE® was made available with 1989 MeSH on February 8.

The following databases will be regenerated with MeSH headings in the next month:

- The TOXLINE® family of databases will be regenerated in early March 1989. TOXLINE still has 1988 MeSH on most records in the TOXBIB subfile. The TOXLINE updates from 8812 (EM) forward include TOXBIB records with 1989 MeSH Vocabulary. Users need to plan search strategies that allow for the existence of both 1988 and 1989 indexing terms in TOXLINE until the files are regenerated.

- POPLINE is scheduled to be available with 1989 MeSH in February or March. The online NEWS will have further information.

CUMULATED INDEX MEDICUS

The 1988 *Cumulated Index Medicus*, volume 29 may now be ordered from the U.S. Government Printing Office. Delivery is expected in late April. The stock number is S/N 617-052-00276-1; the U.S. price is $250 ($312.50 non-U.S.). Orders should be sent to:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(202) 783-3238

INDEX MEDICUS, MeSH, LJI 1989

As announced in the October *NLM Technical Bulletin*, *Index Medicus* monthly issues will be bound in two parts beginning with the January 1989 issue. The annual subscription rate is $230 ($287.50 non-U.S.); GPO List ID: IM89. In addition to the monthly issues, subscribers also receive *Medical Subject Headings* and the *List of Journals Indexed in Index Medicus* ("LJI") as part of the January issue. Information for ordering separate copies of these titles appears below. Order from: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 783-3238.

o *Medical Subject Headings*, 1989 ("Black and White" MeSH). The price is $42 ($52.50 non-U.S.). Order after February 1. This publication is for use with the printed *Index Medicus*. Online searchers should use the *Medical Subject Headings--Annotated Alphabetic List*, 1989 instead. (Ordering information for the *Annotated MeSH* was provided in the September 1988 issue of the *NLM Technical Bulletin*.)

o *List of Journals Indexed in Index Medicus*, 1989. The price is $11.00 ($13.75 non-U.S.). Order after February 1. Online searchers may want to use the *List of Serials Indexed for Online Users* instead.

IMPORTANT NOTICE FOR INDEX MEDICUS SUBSCRIBERS

The January 1989 *Index Medicus* issue, Part 1 (Subject Section) and Part 2 (Author/Bibliography of Medical Reviews Section) has been delayed. Mailing is now scheduled for early March. It is expected that the regular issues for February and March will follow soon thereafter.

LIST OF SERIALS INDEXED FOR ONLINE USERS 1989

The *List of Serials Indexed for Online Users*, 1989 may now be ordered from the National Technical Information Service (NTIS). Delivery is expected in March. The publication number is PB89-135610/GBB. The hardcopy price is $20.50 ($41.00 non-U.S.); the microfiche price is $6.95 ($13.90 non-U.S.). There is a $3.00 (U.S./Canada) shipping and handling charge required for each order ($4.00 non-U.S.). Please send remittance with orders to:

National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650 (for telephone orders with deposit account or credit card)

NEW PRINT FORMAT FOR SERLINE®

A new print format, PRINT FILM, has been added for the SERLINE database. PRINT FILM or PRT FI includes the following data elements: TI, FL, PL, PU, GN, QDA, QV, QY, FDA, FMR, FV, FY, FNO, UI.

NEW DBIR DATABASE AVAILABLE ON TOXNET

A new database, the Directory of Biotechnology Information Resources (DBIR), was mounted on the TOXNET system on January 23. This file is produced by the Bioinformatics Department of American Type Culture Collection in Rockville, Maryland under contract with NLM. DBIR is a multi-component databank containing information on a wide range of resources related to biotechnology. These resources include online databases and networks, organizations, collections, and repositories of cells and subcellular elements, and selected publications. DBIR also identifies groups and agencies working on issues of nomenclature in biotechnology and molecular biology. The database now contains about 400 records, but it is expected that this number will grow to nearly 1,000 within two years. DBIR will also soon be publicly available as a subset of the Library's DIRLINE file. The February issue of the *NLM Technical Bulletin* will contain a detailed article about this new file.

ETICBACK DATABASE AVAILABLE ON TOXNET

On January 30 ETICBACK, the backfile of the Environmental Teratology Information Center database became available on TOXNET. ETICBACK is a

bibliographic database which includes references to articles on birth defects and reproductive and developmental toxicology from 1950-1988. Some older references are included, as well. Records include complete bibliographic citations, specialized indexing keywords, and Chemical Abstracts Service Registry Numbers for chemicals. Current teratology references will be included in the ETIC database which will become available on TOXNET in the Spring. The ETIC database is produced by the Environmental Mutagen, Carcinogen, and Teratogen Information Program of the Oak Ridge National Laboratory and is funded by several agencies of the federal government. ETICBACK can be accessed by typing FILE ETICBACK at any TOXNET user prompt. More information on ETIC and ETICBACK will be found in the February issue of the *NLM Technical Bulletin*.

VIDEOCASSETTES AVAILABLE ON CD-ROM

The National Library of Medicine (NLM) recently released copies of a number of videocassettes derived from a meeting held at the NLM in September 1988 to evaluate MEDLINE on CD-ROM. The evaluation forum, "MEDLINE on CD-ROM," included research reports from 21 evaluation sites. It provided an opportunity for CD-ROM users and vendors to explore issues of common interest. The presentations were made primarily in panel format. The videotapes which document this meeting are available as a group or individually for loan from the Regional Medical Libraries (RML). All have been issued in both 3/4" and 1/2" formats, so be sure to specify the desired format in the request. Call numbers are included.

MEDLINE on CD-ROM

o Rose Marie Woodsmall, Becky Lyon-Hartman. MEDLINE on CD-ROM: introduction. Z 699.5.M39 VC no.4.1 1988

o Nancy K. Roderer. CD-ROM in the health sciences library: users and uses. Z 699.5.M39 VC no.4.2 1988

o Prudence W. Dalrymple. CD-ROM in the clinical setting: users and uses. Z 699.5.M39 VC no.4.3 1988

o Paul B. Kantor. Assessing the costs. Z 699.5.M39 VC no.4.4 1988

o Nancy N. Woelfl. Systems: features and capabilities. Z 699.5.M39 VC no.4.5 1988

o William David Penniman. Vendors: lessons learned and future plans here and abroad. Z 699.6.M39 no.4.6 1988

o William David Penniman. Putting it all in perspective. Z 699.5.M39 VC no.4.7 1988.

Please access **FILE INFORM** *and type* **NEWS** *to see the most recent news items online!*

Payments for MEDLARS Service

Walter L. Finch, Director, Office of Product Management, NTIS

The National Technical Information Service (NTIS) has made a number of improvements in its accounting system for MEDLARS users. Major enhancements to the system allow payments to be posted within 24 hours of receipt and invoices to be mailed promptly. Every MEDLARS user should now be receiving complete, accurate and up-to-date information. Figure 1 represents the invoice form that was slightly changed when the new system became active. Statements for deposit accounts reflect similar changes.

Although the system has been operating effectively for many months, the timely processing of payments is dependent upon NTIS receiving complete information from the user. Unfortunately, NTIS is continuing to receive payments for online services that cannot be processed because of insufficient information. To insure that payments are promptly and correctly credited to the NTIS account, please send the upper portion of the invoice with the payment or write the User ID code which appears directly above the agency/institution name and address (see Figure 1) on the payment. If payment is sent for more than one account, indicate the amount to be applied to each individual account. A properly identified payment will be entered into the system within 24 hours of receipt and will be reflected on the next invoice. Therefore, please supply sufficient identifying information with payments. For questions about the account please contact NTIS Billing at (703) 487-4770.

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

AMT PAID $

USER ID CODE → USER ID CODE: AAA00
CUSTOMER ADDRESS

DATE March 15, 1989
AMT DUE $25.00

PURCHASE ORDER	PG	INVOICE NO.
********		9075AAA00

IMPORTANT: PLEASE RETURN THE UPPER PORTION OF THE INVOICE WITH YOUR PAYMENT AND REFERENCE YOUR USER ID CODE ON THE CHECK STUB.

DOCUMENT NUMBER/SERVICE	DATE PROCESSED	AMOUNT	REMARKS
MEDLARS CHARGE FOR MONTH OF FEB		$25.00	
STATEMENT OF ACCOUNTS			
PREVIOUS BALANCE		.00	
TOTAL CURRENT CHARGES		25.00	
TOTAL AMOUNT DUE		$25.00	

* FOR DETAILS ON SERVICE OR CHARGES, PLEASE CALL NLM (301)496-6193 *
* FOR DETAILS ON PAYMENTS OR ACCT STATUS, PLEASE CALL NTIS (703)487-4770 *
* PLEASE MAKE CHECKS PAYABLE TO NTIS. *

PURCHASE ORDER NUMBER	NTIS INVOICE NUMBER	RETAIN THIS PORTION FOR YOUR RECORDS
**********	9075AAA00	

Figure 1

VERSION 4.0

[Editor's Note: Each month the NLM Technical Bulletin features a column concerning GRATEFUL MED, often consisting of questions/answers. Contributions for this column will be appreciated.]

I've been using Version 3.0 quite happily. Do I have to install my Version 4.0 when I receive it?

We believe that it is important for users to install Version 4.0 as soon as possible. And, when it is up and running you should delete any previous versions so you or other users do not use them accidentally. This is necessary because Version 4.0 has numerous enhancements which make it an even better searching aid (see November issue). Prior versions of GRATEFUL MED are not like old versions of other types of software. Using an older version of GRATEFUL MED, could cause you to miss information. Here are some of the reasons for installing Version 4.0 as soon as possible:

1. Version 4.0 comes with the 1989 MeSH vocabulary. This includes new terms and also terms that replaced other terms.

2. Version 4.0 includes access to the new MEDLINE backfile, BACK86 (1986 & 1987 years of publication).

3. Version 4.0 includes access to both SDILINE (citations from the current month of MEDLINE) and AIDSLINE (AIDS-related citations.)

4. Version 4.0 is FREE to anyone who purchased an earlier version and is easy to install.

5. Technical support for Version 3.0 will be phased out.

I haven't been able to connect to the computer to do a search. GRATEFUL MED dials and seems to connect but then I get the message, "Not Responding." I'm using TELENET with a 2400 baud modem.

The problem may be an incompatibility between the speed of transmission and the network number you are using. There are two things a user with a 2400 baud modem can check on the Dialing Directory of the Telecommunications Data Entry Screen. (To get to this screen select: "CHANGE" from the ACTION screen and "Telephone numbers" from the list of "Selections.")

1. Be sure you are using a 2400 baud number if one is available for your city. 2400 baud numbers are noted in the Phones List by the dollar sign ($). The Phones List is sent to each new user and is included quarterly with this publication.

2. Make sure the baud rate is set for 2400.

If not, you will need to select "Change or view an existing entry" and enter the number for the service you are trying to modify on your Dialing Directory. When you get to the "Change A Service" screen, change the communications speed to H meaning High which is 2400 baud.

If 2400 baud is not a choice, i.e., the choices for baud rate are: 300 baud/1200 baud, you will need to exit the program in order to "upgrade" this parameter. This is done by erasing your current parameters and starting again with the default values for Version 4.0 which include parameters for 2400 baud. Be sure you have your User ID, Password and network telephone numbers at hand in order to re-enter this information.

Steps: Exit the program.
Stay in the GM subdirectory and at the DOS prompt enter: **DEL BLOGIN**
At the next DOS prompt enter: **SEARCH**

You will then be led through SETUP, which is the part of the program where you input the network numbers, etc.

This brings up another point. Most cities have network numbers for both TELENET and TYMNET. Users should include telephone numbers for **both** in the dialing directory. This way if GRATEFUL MED cannot get through on one network, it can try the other.

Note: 2400 baud modem users can also operate at 1200 baud communications. If you elect to include 1200 baud numbers in your Dialing Directory, be sure to select L for low speed. The lower speed will not significantly increase the cost of your searches (see Sept. '88 column).

TRI (Toxic Release Inventory) on TOXNET

Philip Wexler
Dorothy Stroup, Ph.D.
Toxicology Information Program, NLM

Scheduled to become part of NLM's TOXNET system sometime in the late Spring of 1989 is the TRI (Toxic Chemical Release Inventory) file. It will contain industry data submitted to the EPA (Environmental Protection Agency) on the amounts of toxic chemicals released to the environment or transferred to waste sites. This article will review the legislation leading up to TRI and outline, in general terms, the content of the file. A follow-up article will present the full unit record, discuss search strategies, and include sample searches.

TRI falls under Section 313 of the Emergency Planning and Community Right-to-Know Act, Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). The Right-to-Know concept first surfaced at the workplace. The Occupational Safety and Health Administration's (OSHA) Hazard Communication Rule was the culmination of much effort to improve worker safety. This rule emphasized the workers' rights to know about their exposures to hazardous chemicals, and provided for the means of guaranteeing these rights. A heightened awareness that the general public was also being exposed to potentially hazardous chemicals in the environment suggested that further legislation was necessary. The urgency of disclosing to citizens more information about chemicals in their communities reached a peak after the Bhopal, India, incident of 1984 in which the release of methyl isocyanate resulted in the deaths of 2500 people and the injury of many more. Two years later, SARA and the Emergency Planning and Community Right-to-Know Act, were in place.

Title III calls for the establishment of State Emergency Response Commissions and Local Emergency Planning Committees to develop comprehensive plans to deal with chemical emergencies. It also requires facilities to provide notification of emergency releases and make available to the EPA information on the hazardous chemicals they store and use. Section 313, which mandates the TRI file, contains provisions for reporting routine or accidental toxic chemical releases to the air, water, and soil. This reporting of any of some 320 chemicals is required of facilities which manufacture, process, or use more than certain "threshold" amounts of the chemicals and which employ more than ten people. Many of the chemicals covered by TRI could pose long-term, chronic, health hazards. The law further required EPA to establish and maintain a publicly accessible computer file, based upon this data. After examining various alternatives, the EPA settled on NLM's TOXNET as the system of choice.

The file structure of TRI on TOXNET is generally based on Form R, the form on which industry is required to submit TRI data to EPA. Because each facility must submit a separate form for any of the listed chemicals, there will likely be many records for any given chemical or facility. In this respect, TRI differs from current TOXNET databanks, which contain one record per chemical. In addition to a category for administrative information, the TRI file will consist of the following five subject categories. Listed next to each is some of the data that will be included.

0 Facility Identification - Name and address of facility. Public contact and phone numbers. Other ID data such as Dun and Bradstreet Number and EPA Identification Number.

0 Substance Identification - Chemical-specific information including name of substance, CAS Registry Number, uses, and maximum amount on site.

0 Environmental Release of Chemical - Estimates of the amounts of chemicals released into the air (point and non-point emission), water, land, and by underground injection. The bases (e.g., monitoring data, mass balance calculations) of these estimates are also provided.

0 Waste Treatment - State of matter (e.g., gaseous, wastewater) of the general wastestream, method (e.g., flare, aerobic biological treatment), treatment efficiency, and waste minimization data.

0 Off-Site Waste Transfer - Names and addresses of publicly owned treatment works and other off-site locations to which chemical wastes are transferred, estimated amounts transferred, and bases of estimates.

TRI will be updated annually. The initial public file coming up this Spring will contain submissions for the 1987 reporting year. An estimated 74,000 records representing some 17,500 facilities will constitute this first-year file. TRI users will also have access to the entire family of TOXNET files, including the Hazardous Substances Data Bank, and NLM files outside of TOXNET, such as the TOXLINE/TOXLIT group,

which contain some 2.5 million references on literature related to toxic chemicals.

Users will be able to pose questions such as the following to TRI:

0 How much benzene was reported released to waterways in 1987 by Virginia industrial plants?

0 What waste minimization methods are reported by Marin County manufacturers of toluene?

0 What are the names and addresses of Baltimore Steel Plants importing vanadium?

The complete unit record, to appear in a later issue of this Bulletin, will look familiar to TOXNET users. The hierarchical category-header-field structure is retained. Subfields, used in existing TOXNET files only as organizing dividers (and known in those files as data tabs), will become individually searchable and printable in TRI. Commands for sorting, ranging and numerical manipulation of data will become available on TRI, and a menu-driven search package for inexperienced users is being developed. The TRI file will offer TOXNET users an opportunity to access unique and previously unavailable "chemical demographics" data.

Serials Update

INDEXED TITLES UPDATE, JANUARY 1989

The following titles cited in MEDLINE, HEALTH, and POPLINE have recently been selected for indexing, undergone a title change, or ceased publication. This list is not cumulative; the information provided is only for titles whose status has changed since the last UPDATE. More detailed information may be found in SERLINE. For further information, please contact MMS or Ms. Esther Baldinger, (301) 496-1276, Technical Services Division, NLM.

TITLES SELECTED FOR INDEXING, DECEMBER 1988

HLI CONTRACT HEALTHCARE
CONTRACT HEALTHC
FEB 1988--
BUSINESS AND HEALTH
LYNDHURST NJ UNITED STATES
INDEXING BEGAN WITH MAY 1988.
ON ORDER 0891-5059
SR0063183 JC: DR6

INI KANHO HAKHOE CHI
KANHO HAKHOE CHI
1,1970--
TAEHAN KANHO HAKHOE
SEOUL KOREA, SOUTH
INDEXING BEGAN WITH V18N1,MAY 1988.
WI KA4434 0378-004X
K01750000 JC: KUX

TITLES NO LONGER INDEXED AS OF DECEMBER 1988

IM AUSTRALIAN JOURNAL OF BIOLOGICAL SCIENCES
AUST J BIOL SCI
6N1,FEB 1953-41N4,DEC 1988
COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION
EAST MELBOURNE AUSTRALIA
CONTINUES AUSTRALIAN JOURNAL OF SCIENTIFIC RESEARCH. SERIES B: BIOLOGICAL SCIENCES.
ISSUED BY THE COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION IN COLLABORATION WITH THE AUSTRALIAN NATIONAL RESEARCH COUNCIL.
WI AU623 0004-9417
A75330000 JC: 9EO

HLI ENGINEERING IN MEDICINE
IM
ENG MED
1,1971-17,1988
INSTITUTION OF MECHANICAL ENGINEERS
LONDON ENGLAND
INDEXING FOR HLI BEGAN 1977. INDEXING FOR IM BEGAN WITH V11,N1,JAN 1982.
WI EN643 0046-2039
E07980000 JC: E4K

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health
National Library of Medicine
Bethesda MD 20894

January 31, 1989

Dear Domestic MEDLARS User:

This is to notify you that on March 1, 1989, the pricing structure of CHEMLINE and the TOXLIT files (TOXLIT and TOXLIT65) will be modified in response to changes in the 1989 royalty rates charged by Chemical Abstracts Service (CAS), the supplier of proprietary data for these files. The prices for these files also reflect the movement of BIOSIS and ASHP data from TOXLIT to the TOXLINE files.

To accommodate these changes, the NLM Online Pricing Algorithm has been updated in the Connect Charge, Search Statement Charge, and Citation Charge components. Based on usage patterns in 1988, we estimate that the approximate average hourly rate in Prime Time for CHEMLINE will be $95, and that for TOXLIT and TOXLIT65 will be $165. An individual's actual hourly rate will vary, of course, based on total resources used.

This year CAS has lowered its Connect Charge royalty, and raised its Online Citation Charge and Search Statement Charge royalties. The latter serves as an estimate of the number of Search Terms used. These changes are reflected in the updated NLM Online Pricing Algorithm.

Please see Table I on the reverse side of this letter for the new NLM rates for the six components of the online algorithm. Additionally, note that offline page charges have been increased due to royalty charges. NLM has not increased any of its component charges for these files. The NLM portion of the total price reflect the rate established for the October 1, 1987 MEDLARS Pricing Structure.

Sincerely yours,

Lois Ann Colaianni

Lois Ann Colaianni
Associate Director
Library Operations

Henry M. Kissman

Henry Kissman, Ph.D.
Associate Director
Specialized Information Services.

(over)

TABLE I

New NLM Rates for CHEMLINE, TOXLIT, TOXLIT65

EFFECTIVE March 1, 1989

NLM ONLINE PRICING ALGORITHM CHARGES TO DOMESTIC USERS 1/

Files	Connect Charge (Per Hour)		Search Statement Charge	Online Citation Charge	Interaction Charge (Carriage Returns)	Computer Resources (Disk Accesses) (Per 100)		Online Character Charge (Per 1,000)	
	Non-Prime	Prime				Non-Prime	Prime	Non-Prime	Prime
CHEMLINE	$44.10*	$46.85*	$0.28*	$0.40*	$0.01	$0.07	$0.13	$0.08	$0.12
TOXLIT & TOXLIT65	$44.10**	$46.85**	$0.54**	$0.41**	$0.01	$0.07	$0.13	$0.08	$0.12

* Includes Royalties of $39.00 Per Connect Hour, $0.262 per Search Statement, $0.39 per Online Citation.
** Includes Royalties of $39.00 Per Connect Hour, $0.52 per Search Statement, $0.40 per Online Citation.

NLM OFFLINE CHARGES TO DOMESTIC USERS 1/

	Per Page	
CHEMLINE	$1.77	(Includes $1.52 Royalty Charge)
TOXLIT & TOXLIT65	$1.20	(Includes $0.95 Royalty Charge)

AUTOMATIC SDI SEARCHES (plus page charges)

TOXLIT	$5.00	Per search (Includes $4.00 Royalty Charge)

Current prime time is 10:00 AM to 5:00 PM Eastern Time, Monday through Friday.
All other time is non-prime.

1/ Non-U.S. online users incur charges under the online pricing algorithm and are charged $3.00 extra on the connect charge (per hour) portion, and $0.10 extra per offline printed page.

Attachment: License Agreement Change

Notice of CANCERLIT Lease Availability

Effective immediately the National Cancer Institute (NCI) will license CANCERLIT as well as PDQ to domestic licensees. New potential licensees should contact the following for information about the NCI license:

Dr. Dianne Tingley
R.A. Bloch International Cancer Information Center
9030 Old Georgetown Road
Bethesda, MD 20852
301-496-7403

Existing CANCERLIT licensees will be transitioned from the NLM license to the NCI license and tape shipments effective October 1, 1989. NLM will continue to license CANCERLIT to the non-U.S. International Centers, and to provide online MEDLARS access to CANCERLIT both to U.S. and non-U.S. users.

MEDLARS® PRICING SCHEDULE

NLM DOMESTIC AND NON-U.S. CHARGES AND MINIMUMS FOR ONLINE SERVICES AND LEASING TAPE COPIES OF DATABASES EFFECTIVE JANUARY 1, 1989

	Online Charges		Leased Tape Charges	
Database	Domestic 1/	Non-U.S. 2/	Domestic 3/	Non-U.S. 4/
AIDSLINE	Online Algorithm	$1,000/yr minimum	$1,000/yr minimum	$1,000/yr minimum
AVLINE®	Online Algorithm	No minimum; usage charges only	5/Base file: (up to current year) $1,000 Current year: $1,000/yr; updated monthly No usage charges	5/Base file: (up to current year) $1,250 Current year: $1,250/yr; updated monthly No usage charges
BIOETHICSLINE®	Online Algorithm	$1,000/yr minimum	$1,000/yr minimum	$1,000/yr minimum
CANCERLIT®	Online Algorithm	$3,000/yr minimum	18/Not available from NLM	$3,000/yr minimum
CATLINE®	Online Algorithm	No minimum; usage charges only	5/Base file: (1965 up to the current year) $3,000 Current year: $4,000/yr; updated weekly -or- Current year: $2,000/yr; updated monthly Retrospective file: (Pre-1965) $3,000 No usage charges	5/Base file: (1965 up to the current year) $3,750 Current year: $5,000/yr; updated weekly -or- Current year: $2,500/yr; updated monthly Retrospective file: (Pre-1965) $3,750 No usage charges

Revised January 1989

NLM DOMESTIC AND NON-U.S. CHARGES EFFECTIVE JANUARY 1, 1989

Database	Online Charges		Leased Tape Charges	
	Domestic 1/	Non-U.S. 2/	Domestic 3/	Non-U.S. 4/
CHEMICAL CARCINOGENESIS RESEARCH INFORMATION SYSTEM (CCRIS)	8/Online Algorithm	9/$5,000/yr minimum	14/$2,500/yr minimum	15/$2,500/yr minimum
CHEMLINE®	6/Online Algorithm	12/$1,000/yr minimum	7/$1,000/yr minimum	7/$1,000/yr minimum
CLINPROT®	Online Algorithm	$1,000/yr minimum	$1,000/yr minimum	$1,000/yr minimum
DIRLINE®	Online Algorithm	$1,000/yr minimum	Not available	Not available
DOCUSER	Online Algorithm	Not available	Not available	Not available
HAZARDOUS SUBSTANCES DATA BANK (HSDB®)	8/Online Algorithm	9/$5,000/yr minimum	14/$5,000/yr minimum	15/$5,000/yr minimum
HEALTH PLANNING	Online Algorithm	$3,000/yr minimum	$3,000/yr minimum	$3,000/yr minimum
HISTLINE®	Online Algorithm	$1,000/yr minimum	$1,000/yr minimum	$1,000/yr minimum
INFORM	Online algorithm excluding the charge for citations and characters; no offline processing	No minimum or flat rate; online algorithm excluding the charge for citations and characters; no offline processing	Not available	Not available

NLM DOMESTIC AND NON-U.S. CHARGES EFFECTIVE JANUARY 1, 1989

Database	Online Charges		Leased Tape Charges	
	Domestic 1/	Non-U.S. 2/	Domestic 3/	Non-U.S. 4/
MEDLEARN®	$23.50/hr prime time; $16.50/hr non-prime time; no offline processing	11/No minimum; $26.50/hr prime time; $19.50/hr non-prime time; no offline processing	Not available	Not available
MEDLINE® & BACKFILES	Online Algorithm	$15,000/yr minimum	17/Base file: (1966 up to the current year) $10,000 /yr minimum 17/Current year: $5,000/yr minimum; updated monthly -or- 17/Current year: $8,000/yr minimum; updated semi-monthly	Base file: (1966 up to the current year) $10,000 /yr minimum Current year: $5,000/yr minimum; updated monthly -or- Current year: $8,000/yr minimum; updated semi-monthly
MESH VOCABULARY FILE®	Online Algorithm	No minimum; usage charges only	10/$1,000/yr; no charge with MEDLINE; no usage charges	10/$1,250/yr; no charge with MEDLINE; no usage charges
NAME AUTHORITY FILE®	Online Algorithm	No minimum; usage charges only	$1,000/yr; no usage charges	$1,250/yr; no usage charges
PDQ®	$23.50/hr prime time; $16.50/hr non-prime time; no offline processing	11/$1,000/yr minimum; $26.50/hr prime time; $19.50/hr non-prime time; no offline processing	18/Not available from NLM	18/Not available from NLM

NLM DOMESTIC AND NON-U.S. CHARGES EFFECTIVE JANUARY 1, 1989

Database	Online Charges		Leased Tape Charges	
	Domestic 1/	Non-U.S. 2/	Domestic 3/	Non-U.S. 4/
POPLINE	Online Algorithm	$2,000/yr minimum	$2,000/yr minimum	$2,000/yr minimum
REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS®)	8/Online Algorithm	9/$5,000/yr minimum	19/Not available from NLM	15/$2,500/yr minimum
SDILINE®	Online Algorithm	No minimum; usage charges only	$5,000/yr minimum; updated monthly (if leased separately from MEDLINE)	$5,000/yr minimum; updated monthly (if leased separately from MEDLINE)
SERLINE®	Online Algorithm	No minimum; usage charges only	13/$1,000/yr; no usage charges	13/$1,250/yr no usage charges
TOXLINE® & TOXLINE65	Online Algorithm	12/$5,000/yr minimum	7/Current file: (1981 through the current year) $2,500/ yr minimum Backfile: (1965-80) $2,500/yr minimum	7/Current file: (1981 through the current year) $2,500/ yr minimum Backfile: (1965-80) $2,500/yr minimum

The TOXLINE65 backfile will be effective in March 1989. Note: The option to lease TOXLINE data without the royalty based subfiles (BIOSIS & IPA) is available at these same rates.

TOXLIT & TOXLIT65	16/Online Algorithm	12/$5,000/yr minimum	7/Current file: (1981 through the current year) $2,500/ yr minimum Backfile: (1965-80) $2,500/yr minimum	7/ Current file: (1981 through the current year) $2,500/ yr minimum Backfile: (1965-80) $2,500/yr minimum
TOXNET® Databases	8/Online Algorithm	9/$5,000/yr minimum	See individual database names.	

NOTES: In addition to the above rates, the following charges apply to each Domestic and Non-U.S. Online Center: $1 per Offsearch per file and $1 per Automatic SDI. Automatic SDI searches on the TOXLIT database are $4.00 for domestic users ($1.00 plus $3.00 royalty). In general, non-U.S. online users incur charges under the online pricing algorithm and are charged $3.00 extra on the connect charge portion and $0.10 extra per offline page.

A Tape License Agreement packet is available upon written request to the Associate Director, Library Operations, National Library of Medicine, Bethesda, MD 20894. For a fee of $25.00, a sample tape is also available upon written request in advance of signing a license agreement. In addition, NLM offers a Subset Tape Program; see Note 17.

Replacement Tape Policy: All replacement tapes should be requested within 30 days of the original shipment date.

1. If a licensee notifies NLM that a tape is unreadable, the tape should be returned to NLM for testing.
2. If the returned tape is read and found to have errors or is found to be unreadable, NLM will produce and send a replacement tape at no charge.
3. If the tape is read and found to have no errors, NLM will produce and send a replacement tape. There will be a $75.00 charge per tape.
4. If a licensee notifies NLM that the tape is unreadable but the tape is not returned to NLM for testing, there will be a $75.00 charge for each replacement tape NLM produces and sends to the licensee.

1/ ELHILL online charges for domestic users are calculated by using an algorithm which includes connect hour charges and charges for search statements, citations, interactions (i.e., carriage returns), computer resources (i.e., disk accesses), and characters transmitted to the user's terminal. Unless otherwise noted, the connect hour charge portion of the algorithm is $7.85/hour prime time and $5.10/hour non-prime time, and the offline print charge is $0.25 per page. Details of the entire algorithm follow these notes.

2/ ELHILL online charges for non-U.S. users are calculated by using an algorithm which includes connect hour charges and charges for search statements, citations, interactions (i.e., carriage returns), computer resources (i.e., disk accesses), and characters transmitted to the user's terminal. Each database, except the technical databases (AVLINE, CATLINE, NAME AUTHORITY, and SERLINE), the MESH VOCABULARY file, MEDLEARN and the INFORM databases, has a minimum against which usage is charged. Unless otherwise noted, the connect hour charge portion of the algorithm is $10.85/hour prime time and $8.10/hour non-prime time, and the offline print charge is $0.35 per page. Usage over the minimum will be calculated at the rate of the file being accessed. The dollar equivalent of usage over the minimum on one file will be applied to the minimum for the other file(s). Usage on technical databases, the MESH VOCABULARY File, MEDLEARN, and INFORM may not be applied to minimums on other databases. Details of the entire algorithm follow these notes.

3/ ELHILL tape charges for domestic users consist of an annual minimum charge for each database except the technical databases (AVLINE, CATLINE, NAME AUTHORITY, and SERLINE), the MESH VOCABULARY File, and MEDLEARN. Unless otherwise noted, usage charges of $4.00/connect hour and $0.01/offline citation are applied to the annual minimum. (The use charge is $3.00/connect hour between 6:00 p.m. and 6:00 a.m. local time Monday through Friday, and all day Saturday and Sunday. This time period is referred to as tape non-prime time.)

Usage over the minimum will be charged the rate of the file being accessed. For institutions or organizations leasing two or more files with a minimum plus usage, the dollar equivalent of usage over the minimum for one file may be applied to the minimum for the other files(s).

An annual flat fee, with no usage charges, will be charged for each of the technical databases (AVLINE, CATLINE, NAME AUTHORITY, and SERLINE), and the MESH VOCABULARY File. Usage on other leased databases may not be applied to these annual flat rate fees.

Domestic centers providing service to non-U.S. users will be charged at the non-U.S. rate for this portion of their service.

Extra charges are levied for Class Maintained files or special formats. Prices for files and formats currently available are:

SDILINE GENER FORMAT	$1,000/year
CLASS MAINTAINED MEDLINE DATA:	
Complete Database Replacement Copies	$3,000/year
Changed Records Only	$1,000/year

Charges for physical tapes and shipping are included in the minimum charges for each database.

4/ Tape charges for non-U.S. users and the portion of non-U.S. use provided by domestic centers consist of an annual minimum charge for each database except the technical databases (AVLINE, CATLINE, NAME AUTHORITY, and SERLINE), and the MESH VOCABULARY File. Unless otherwise noted, usage charges of $7.00/connect hour and $0.03/offline citation are applied to the annual minimum. (The use charge is $6.00/connect hour between 6:00 p.m. and 6:00 a.m. local time Monday through Friday, and all day Saturday and Sunday. This time is referred to as tape non-prime time.) Usage over the minimum will be charged the rate of the file being accessed. For institutions or organizations leasing two or more files with a minimum plus usage, the dollar equivalent of usage over the minimum for one file may be applied to the minimum for the other file(s).

An annual flat fee, with no usage charges, will be charged for each of the technical databases (AVLINE, CATLINE, NAME AUTHORITY, and SERLINE), and the MESH VOCABULARY File. Usage on other leased databases may not be applied to these annual flat-rate fees.

Extra charges are levied for Class-Maintained files or special formats. Prices for files and formats currently available are:

SDILINE GENER FORMAT	$1,000/year
CLASS MAINTAINED MEDLINE DATA:	
Complete Database Replacement Copies	$3,000/year
Changed Records Only	$1,000/year

Charges for physical tapes and shipping are included in the minimum charges for each database.

5/ Available in ELHILL or MARC version except for weekly updates of the current-year CATLINE file which are available only in MARC.

6/ CHEMLINE royalty charges of $0.29 per online citation, $0.08 per search statement, and $54.00 per hour of connect time are added to the algorithm. Offline page charges of $1.65 per page include $1.40 per page royalty. Effective March 1, 1989, CHEMLINE royalty charges of $0.39 per online citation, $0.262 per search statement, and $39.00 per hour of connect time are added to the algorithm. Offline page charges of $1.77 per page include $1.52 per page royalty. Royalty charges are subject to change without advance notice.

7/ CHEMLINE, TOXLIT, and TOXLIT65 tape royalties are not paid to NLM but are negotiaged with and paid directly to the file content provider, Chemical Abstracts Service (CAS). TOXLINE, and TOXLINE65 tape royalties are not paid to NLM but are negotiated with and paid directly to the file content providers, BioSciences Information Service (BIOSIS) and the American Society of Hospital Pharmacists (ASHP). TOXLINE and TOXLINE65 are available March 1, 1989 for leasing in their 1989 NLM configuration which includes the royalty-based subfiles BIOSIS and IPA and requires separate arrangements with those data suppliers in advance.

A second leasing option is available for NLM tape TOXLINE and TOXLINE65 which includes all subfiles except BIOSIS and IPA. The charges are the same as for the full files because the same number of update tapes are sent. Please specify which TOXLINE version is to be licensed.

8/ TOXNET (HSDB, CCRIS, & RTECS) online charges are calculated for domestic users by using an algorithm which includes connect hour charges and charges for search statements, interactions (i.e., carriage returns), and characters created for transmission to the user's terminal. Unless otherwise noted, the connect hour portion of the algorithm ls $10.00/hour prime time and $8.00/hour non-prime time, and the offline print charge is $0.25 per page.

9/ TOXNET (HSDB, CCRIS, & RTECS) online charges are calculated for non-U.S. users by using an algorithm which includes connect hour charges and charges for search statements, interactions (i.e., carriage returns), and characters created for transmission to the user's terminal. For Fiscal Year 1988, one minimum of $5,000 will be charged for all TOXNET databases. Unless otherwise noted, the connect hour portion of the algorithm is $13.00/hour prime time and $11.00/hour non-prime time, and the offline print charge is $0.35 per page. Usage over the minimum charges will be calculated at the rate of the file being accessed. The dollar equivalent of usage over the minimum on TOXNET may be applied to the minimum for other MEDLARS databases on ELHILL.

10/ Available in ELHILL, Card Image, or MARC format. ELHILL format is updated either monthly or annually; Card Image and MARC formats are updated annually.

11/ Usage is charged separately, i.e., usage on this file may not be applied to the aggregate minimum charges.

12/ Effective January 1988, NLM negotiates with and collects royalties for the Chemical Abstracts Service for CHEMLINE, TOXLIT, and TOXLIT65 from the non-U.S. Online Center. Separate agreements between the non-U.S. Online Center and BIOSIS or ASHP are no longer necessary.

13/ Certain SERLINE data elements related to holdings information are considered proprietary data and are not distributed via tape copies.

14/ TOXNET tape charges for domestic users consist of an annual minimum charge for each database. Included are usage charges of $4.00/connect hour for prime time and $3.00/connect hour for non-prime time (between 6:00 P.M. and 6:00 A.M. ET, Monday-Friday and all day Saturday and Sunday). Usage over the minimum will be charged at the rate of the file being accessed. A charge of $1.00 per 1000 characters printed offline is included in the annual minimum charge.

15/ TOXNET tape charges for non-U.S. users consist of an annual minimum charge for each database. Unless otherwise noted, usage charges of $7.00/connect hour for prime time and $6.00/connect hour for non-prime time will be established. Usage over the minimum will be charged at the rate of the file being accessed. A charge of $1.25 per 1000 characters printed offline is included in the annual minimum charge.

16/ TOXLIT royalty charges of $0.24 per online citation, $0.15 per search statement, and $69.11 per hour of connect time are added to the basic online algorithm. Offline page charges of $0.98 per page include $0.73 per page royalty. Effective March 1, 1989, TOXLIT royalty charges of $0.40 per online citation, $0.52 per search statement and $39.00 per hour of connect time are added to the basic online algorithm. Offline page charges of $1.20 per page include $0.95 per page royalty. Royalty charges are subject to change without advance notice.

17/ MEDLINE data are also available under the NLM Subset Program for domestic users. A subset information packet is available upon request from MEDLARS Management Section, National Library of Medicine, Bethesda, MD 20894. Prices are prorated on the amount of data received and a flat-rate option is also available to qualified users. The detailed "Charges for Subsets" is included at the end of this pricing schedule.

18/ Contact the National Cancer Institute (NCI) for information on leasing PDQ and CANCERLIT on tape:

Dr. Dianne Tingley
R.A. Bloch International Cancer Information Center
9030 Old Georgetown Road
Bethesda, MD 20852
(301) 496-7403

19/ Contact NIOSH (National Institute for Occupational Safety & Health) for information on leasing RTECS on tape.

Editor, RTECS
NIOSH
4676 Columbia Parkway
Cincinnati, OH 45226
(513) 533-8317

SUMMARY FEE SCHEDULE FOR LEASING NLM DATA IN MACHINE-READABLE FORM:
MEDLINE, ITS BACKFILES, AND SDILINE*

In general there are two types of charges associated with licensing machine-readable data from NLM. These are:

1. License fee to obtain the data. This is either a minimum amount, which is offset by a use charge, or a flat rate; and

2. A charge for the use and/or redistribution of the data. Some NLM databases do not require a use charge.

Domestic licensees who do not obtain data directly from NLM but actually receive the NLM data reformatted from a third party that itself is licensed to receive NLM data, are charged a reduced license fee.

Licensees in foreign countries, or domestic licensees who provide data outside the United States and its Territories pay a surcharge for foreign usage. This surcharge was established to recover the portion of the costs of creating the database attributable to non-U.S. use.

License Fee: For licensees providing online services and/or redistributing data. Fee includes monthly MEDLINE/SDILINE updates, and annual or monthly copies of the MeSH Vocabulary File.

For Licensees receiving the data from NLM:

	Domestic	Non-U.S.
1. Annual minimum for Complete Current Year		
Monthly Updates	$5,000	$5,000
Semi-Monthly Updates	$8,000	$8,000
2. Annual minimum for Complete Older Data	$10,000	$10,000

For Licensees receiving reformatted data from a third party:

	Domestic	Non-U.S.
1. Annual minimum for Complete Current Year	$5,000	N/A
2. Annual minimum for Complete Older Data	$5,000	N/A

Use Charge: For licensees providing online services.

	Domestic	Non-U.S.
1. Prime time	$4.00/hr. +$0.01/offline cit.	$7.00/hr. $0.03/offline cit.
2. Non-prime**	$3.00/hr. +$0.01/offline cit.	$6.00/hr. $0.03/offline cit.

Redistribution Charge: For licensees redistributing the data.

	Domestic	Non-U.S.
Redistribution on laser optical discs	$100/subscription***	$125/subscription***

* Charges for SDILINE are the same as those for the current year of MEDLINE.

**Non-prime time is defined as between 6:00 P.M. and 6:00 A.M. local time, Monday through Friday and all day Saturday, Sunday, and holidays.

***Multiple subscriptions are $100 and $125 each.

Charges For Subsets

Subsets are available on magnetic tape from the MEDLINE database and its Backfiles. All charges include a copy of the MESH Vocabulary File if requested.

"Personal Use" Subsets: There is an annual limit of 150,000 citations.

I. Individualized Subsets: annual subscription to the current year and Backfiles. Charges include monthly updates and annual replacement tape(s) for which maintenance and error correction have been performed.

	Domestic	Non-U.S.
A. Licensee receiving data from NLM	$1,500	N/A
B. Licensee receiving data from a third party	N/A	N/A

II. Custom Subsets: one-time retrieval from current year and Backfiles -- $500 flat rate; no updates provided.

	Domestic	Non-U.S.
A. Licensee receiving data from NLM	$500	N/A
B. Licensee receiving data from a third party	$250	N/A

"Individualized Multiple Use" Subsets: Charges include monthly updates and annual replacement tape(s) for which maintenance and error correction have been performed.

I. Option A: Annual minimum with use charge. (The use charge offsets the annual minimum charge. If the use is a dollar equivalent less than the minimum, the minimum is paid. If the actual use is a dollar equivalent more than the minimum, the dollar equivalent is paid.)

A. Current Year Annual Subscription

1. Annual Minimum Charge is dependent upon the percentage of the current year's MEDLINE data received:

	Monthly Updates	Semi-Monthly Updates
up to 25% file:	$1,250	N.A.
26% to 50% file:	2,500	N.A.
51% to 75% file:	3,750	N.A.
76% to 100% file:	5,000	$8,000 - all records, (100% of the file) only all data elements.

2. Use charges offset annual minimum: $4 per connect hour during prime time and $3 per hour during non-prime time (6:00 pm to 6:00 am local time Monday through Friday, and Saturday, Sunday, and holidays) PLUS $0.01 for each citation printed offline at the host computer.

B. Backfiles Annual Subscription

1. Annual Minimum Charge is dependent upon the percentage of data from 1966 up to the current year received:

up	to	25%	file:	$2,500
26%	to	50%	file:	5,000
51%	to	75%	file:	7,500
76%	to	100%	file:	10,000

2. Use charges offset annual minimum: as described for Current Year Annual Subscription

II. Option B: Flat Rate, Domestic (U.S.) Only

Under certain circumstances, a flat rate pricing option is available for a domestic institution/organization which does not vend a database service. In order to qualify for the flat rate, the institution/organization must limit access to either academically affiliated institutions or corporate members of the organization which are located within a "reasonable geographic distance" (usually interpreted to be within the confines of the local region's telephone area code). Alternatively, if the institution/organization does not anticipate having sufficient use to warrant paying the flat rate, it may offset the minimum annual charge by $4 per connect hour with no charges for citations printed offline (as a second option to the annual minimum use charges described in Section I.A.2 above).

A. Current Year Annual Subscription from NLM

Charges are not dependent upon the size of the file. There is a $10,000 annual flat rate which includes one academically affiliated institution for a subscription updated monthly; $13,000 annual flat rate which includes one academically affiliated institution for a subscription updated semi-monthly. The semi-monthly update option is defined to include all records (100% of the file) and all data elements. An additional annual charge of $1,000 is made for each additional academically affiliated institution to which service is provided.

B. Backfiles Annual Subscription from NLM

Annual flat rate is dependent upon the size of the subset licensed. For MEDLINE data from 1966 up to the current year:

up	to	25% file:	$2,500
26%	to	50% file:	5,000
51%	to	75% file:	7,500
76%	to	100% file:	10,000

C. Current Year Annual Subscription to Reformatted Data from a Third Party: $5,000

D. Backfiles Annual Subscription to Reformatted Data from a Third Party:

up to 25% file:	$1,250
26% to 50% file:	$2,500
51% to 75% file:	$3,750
76% to 100% file:	$5,000

EFFECTIVE MARCH 1, 1989

NLM ONLINE PRICING ALGORITHM CHARGES TO DOMESTIC USERS 1/

File	Connect Charge (Per Hour)		Search Statement Charge	Online Citation Charge	Interaction Charge (Carriage Returns)	Computer Resources Disk Accesses (Per 100)		Online Character Charge (Per 1,000)		Average Searcher Charges* (Per Hour)	
	Non-Prime	Prime				Non-Prime	Prime	Non-Prime	Prime	Non-Prime	Prime
ELHILL SYSTEM											
MEDLINE & Backfiles	$ 5.10	$ 7.85	$.02	$.01	$.01	$.07	$.13	$.08	$.12	$16.50	$23.50
TOXLIT & TOXLIT65	44.10**	46.85**	.54**	.41**	.01	.07	.13	.08	.12	158.00	165.00
TOXLINE	5.10	7.85	.02	.01	.01	.07	.13	.08	.12	16.50	23.50
CHEMLINE	44.10***	46.85***	.28***	.40***	.01	.07	.13	.08	.12	88.00	95.00
INFORM	5.10	7.85	.02	--	.01	.07	.13	--	--	8.50	11.50
All Other	5.10	7.85	.02	.01	.01	.07	.13	.08	.12	16.50	23.50
MEDLEARN	16.50	23.50	--	--	--	--	--	--	--	16.50	23.50
PDQ	16.50	23.50	--	--	--	--	--	--	--	16.50	23.50
TOXNET SYSTEM											
HSDB	$ 8.00	10.00	.04	--	.02	--	--	.08	.12	18.60	25.70
CCRIS	8.00	10.00	.04	--	.02	--	--	.08	.12	18.60	25.70
DBIR	8.00	10.00	.04	--	.02	--	--	.08	.12	18.60	25.70
ETICBACK	8.00	10.00	.04	--	.02	--	--	.08	.12	18.60	25.70
RTECS	8.00	10.00	.04	--	.02	--	--	.08	.12	18.60	25.70

* Average searcher charges per hour may differ according to computer resources used and citations and characters printed online.

** Includes royalty charges of $39.00 per Connect Charge, $0.52 per Search Statement, and $0.40 per Online Citation Charge for TOXLIT and its Backfile (TOXLIT65).

***Includes royalty charges of $39.00 per Connect Charge, $0.262 per Search Statement, and $0.39 per Online Citation Charge for CHEMLINE.

NLM OFFLINE CHARGES TO DOMESTIC USERS 1/

Pages	Per Page
MEDLINE and other databases	$0.25
TOXLIT & TOXLIT65	1.20 (Includes $0.95 royalty charge per page)
CHEMLINE	1.77 (Includes $1.52 royalty charge per page)
TOXNET (HSDB, RTECS or CCRIS)	0.25
Offsearches	**Per File**
All Databases	$1.00 (plus page charges)
Automatic SDI Searches	
SDILINE, HEALTH, AVLINE, CATLINE, CANCERLIT, POPLINE, TOXLINE	1.00 (plus page charges)
TOXLIT	5.00 (plus page charges; includes $4.00 royalty charge)

Current prime time is 10:00 AM to 5:00 PM Eastern Time, Monday through Friday. All other time is non-prime.

1/Non-U.S. online users incur charges under the NLM online pricing algorithm and are charged $3.00 extra on the connect charge (per hour) portion and $0.10 extra per offline printed page.

GRATEFUL MED Users
Updating a Search - Page 14

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No. 238

In This Issue:

Using GRATEFUL MED's Editing Capability for Searches 1

TOXLINE Regenerated 4

NLM Online Training Classes Announced for July - December 16

HEALTH Unique Identifiers in DOCLINE 17

ETICBACK - A New Bibliographic Database on TOXNET 18

DBIR: A New Database Containing Information About Biotechnology Resources 21

Enclosed: Index
TRI Fact Sheet

Regular Features:

Databases	2
Technical Notes	3
GRATEFUL MED	14
Serials Update	25

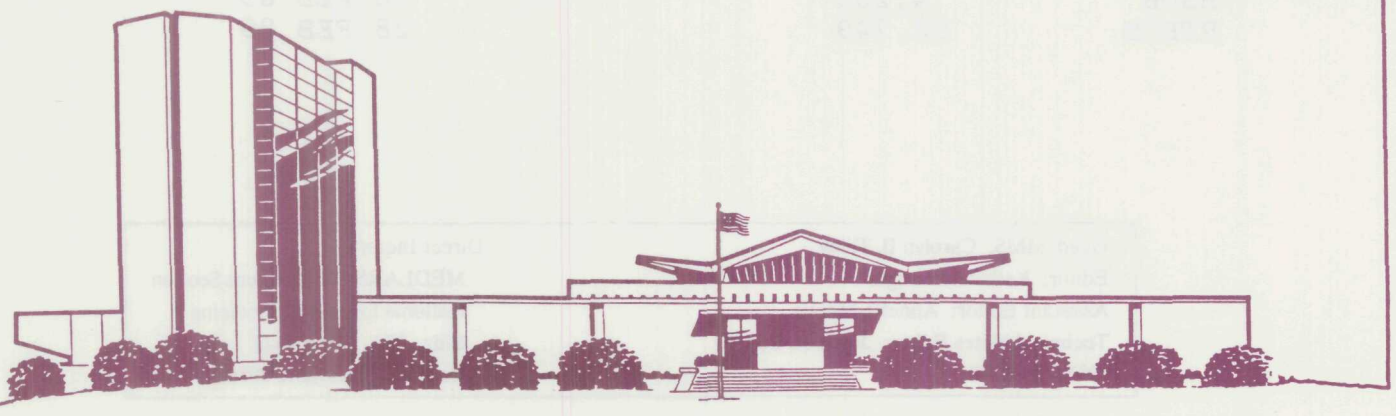
Using GRATEFUL MED's Editing Capability for Searches

Carolyn B. Tilley
Head, MEDLARS Management Section

The new Version 4.0 GRATEFUL MED® program includes an EDIT feature which allows you to modify a previous search without complete re-keying on an Input Form screen. This feature can be used immediately after running a search. The option is not available if you choose to review the results of a search at a later time. Although the GRATEFUL MED *User's Guide* offers a more thorough review of this subject (pages 2-38 and 2-39), here is a brief walk-through of this feature.

We'll assume, for this example, that the searcher is interested in articles on use of shock waves to dissolve stones in the gallbladder. We will also assume that the searcher does not know the proper MeSH® headings to use to describe these concepts. The steps described here (the examples begin on page 8) represent a useful approach for subjects where the appropriate MeSH headings are more difficult to envision and a first search leads to the identification of headings to use in a subsequent search to increase retrieval.

Continued on page 8.



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service • National Institutes of Health
National Library of Medicine

MEDLARS DATABASE	TOTAL RECORDS	DATES COVERED	DATE LAST UPDATED	LATEST UPDATE TAG
ELHILL COMPUTER				
AIDSLINE*	16,688	JAN 80-APR 89	25 FEB 89	8904(EM)
AVLINE	18,284	THROUGH 1989	03 MAR 89	
BIOETHICS	26,802	JAN 73-FEB 89	09 FEB 89	8902(EM)
CANCERLIT	643,588	JAN 63-MAR 89	04 MAR 89	8903(EM)
CATLINE	641,946	THROUGH 1989	03 MAR 89	
CHEMLINE	841,960		11 FEB 89	8902(EM)
CLINPROT	7,124		18 FEB 89	8902(EM)
DIRLINE	16,047		23 DEC 88	
DOCUSER	11,303		18 FEB 89	
HEALTH	446,327	JAN 75-APR 89	04 MAR 89	8904(EM)
HISTLINE	86,876		04 MAR 89	8903(EM)
MEDLINE*	276,335	JAN 88-APR 89	25 FEB 89	8904(EM)
MED86	639,438	JAN 86-DEC 87	19 JAN 89	
MED83	889,211	JAN 83-DEC 85	18 FEB 89	
MED80	803,258	JAN 80-DEC 82	18 FEB 89	
MED77	775,193	JAN 77-DEC 79	10 DEC 88	
MED72	1,175,406	JAN 72-DEC 76	21 JAN 89	
MED66	1,310,377	JAN 66-DEC 71	09 JAN 89	
MESH VOC	67,041	1989	03 MAR 89	
NAME AUTH	318,690		04 MAR 89	
PDQ		THRU FEB 89	01 FEB 89	
POPLINE	166,744	1970-MAR 89	04 MAR 89	8903(EM)
SDILINE	28,412	APR 89	25 FEB 89	8904(EM)
SERLINE	72,085	1989	06 FEB 89	
TOXLINE	663,443	1981-1989	11 FEB 89	8902(EM)
TOXLINE65	698,414	PRE 1965-1980	04 MAR 89	
TOXLIT	701,496	1981-1989	11 FEB 89	8902(EM)
TOXLIT65	586,405	1965-1980	01 SEP 87	

*N.B. FILE IS UPDATED SEMI-MONTHLY; THIS IS PART 2 OF 2.

TOXNET COMPUTER			
CCRIS	1,222	22 JUN 88	
DBIR	340	21 JAN 89	
ETICBACK	46,374	30 JAN 89	
HSDB	4,200	10 FEB 89	
RTECS	96,749	28 FEB 89	

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Technical Notes

Whenever applicable, the heading of each Technical Note includes a reference to the section of the Online Services Reference Manual, 1988 that is considered most relevant to the item being discussed, e.g., (Manual 4.7.2). Users should keep in mind that the item may pertain to other sections as well.

REVISED BASICS AVAILABLE

The revised edition of the *Basics of Searching MEDLINE* will be available for purchase from the National Technical Information Service (NTIS) in early April. This *Guide* is designed to acquaint the health professional and other novice searchers with the basic concepts and skills involved in using MEDLARS® to retrieve information directly from its primary database, MEDLINE®. It may be used in a formal training course or as a self-paced learning tool. The publication number is PB89-146179/GBB. The price is $20.50. There is a $3.00 (U.S. and Canada) shipping and handling charge required for each order. Please send remittance with orders to:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650 (for telephone orders with deposit account or credit card)

1989 INDEX MEDICUS® SUBSCRIPTION PRICE CHANGE ANNOUNCED; PRODUCTION DELAYS

As announced in the October 1988 *NLM Technical Bulletin*, the 1989 monthly *Index Medicus* will begin to be issued in two parts because of the increasing number of pages in the monthly issues. This change, plus dramatic increases in paper and manufacturing costs, has led GPO to reprice the 1989 *Index Medicus* subscription at $297 ($371.25 non-U.S.). The new price will apply to orders received after January 30, 1989; orders received earlier will be honored at the previously announced rate of $230 ($287.50 non-U.S.).

There have been unusual delays in producing this year's January issue of *Index Medicus*, parts 1 and 2, and these books are scheduled to be shipped to customers in early March. The February issue will appear in early April, with March following shortly thereafter.

PDQ® CHANGES

Myeloproliferative Disorders state-of-the-art statement:

The state-of-the-art statement on polycythemia vera has been incorporated into a new statement titled "Myeloproliferative Disorders." In addition to polycythemia vera, the new statement contains information about agnogenic myeloid metaplasia and essential thrombocythemia. The fourth myeloproliferative disorder, chronic myelogenous leukemia, continues to be discussed in a separate statement.

Cancer Prevention and Detection:

A new menu option is available which allows one to select protocols that deal with aspects of cancer prevention and detection. This option is described in the PDQ news.

NLM TECHNICAL BULLETIN INDEX

Enclosed with this issue is a copy of the latest index to the *NLM Technical Bulletin*, covering the January 1988 through December 1988 issues.

TRI FACT SHEET

Enclosed with this issue please find the TRI Fact Sheet.

Please access **FILE INFORM** *and type* **NEWS** *to see the most recent news items online!*

TOXLINE® Regenerated

Ready? The reconfiguration of the TOXLINE family of databases first announced last Fall has been completed, with the new files released to the public on March 5, 1989. The regenerated TOXLINE file now has Class Maintained 1989 MeSH on the Toxicity Bibliography (TOXBIB) portion of TOXLINE and its new backfile, TOXLINE65. The latter covers publication years 1980 and earlier.

FILE CONFIGURATION

The biggest change in the newly-reconfigured TOXLINE file is that NLM has returned to the practice of including bibliographic information in toxicology from BioSciences Information Service (i.e., the Toxicological Aspects of Environmental Health subfile, with the subfile acronym BIOSIS) and from the American Society of Hospital Pharmacists (i.e., the International Pharmaceutical Abstracts subfile, with the subfile acronym IPA) in the TOXLINE and TOXLINE65 databases. Accordingly, NLM has negotiated licenses with the suppliers of these files allowing payment of flat fees by NLM for all online use of their data in the TOXLINE files without any additional royalty charges based on usage. This means that the charge to users for accessing the new TOXLINE and TOXLINE65 files will be the same as that for searching MEDLINE and most other MEDLARS files. The list of TOXLINE subfiles as of the March 1989 regeneration is shown in Table I.

The new TOXLINE files will thus include all the subfiles in the collection of toxicology bibliographic information except the subfile from Chemical Abstracts Service (CAS). This subfile, known as Chemical-Biological Activities (subfile acronym CA), will constitute the content of the TOXLIT and TOXLIT65 files. The 1989 prices for using the TOXLIT files, which will continue to have royalty fees included in their use charges, were announced in the January 1989 *NLM Technical Bulletin*.

Other details about the regenerated TOXLINE files are:

BIOSIS SUBFILE: BIOSYSTEMATIC CODES, CONCEPT CODES, AND MeSH HEADINGS

The BIOSIS subfile records added to TOXLINE since August of 1985 now contain the textual equivalents of the Biosystematic Codes and Concept Codes from BIOSIS in the TOXLINE keyword field. These keywords are searchable directly (the first thirty-nine characters) with the Keyword (KW) qualifier; they are, of course, also searchable as Text Words (TW) following ELHILL's textracting rules. In addition - and this is really BIG NEWS - for these approximately 120,000 BIOSIS records with keywords, we have used a mapping program that links these keywords to MeSH Headings! This is the first step in a long-term effort to provide MeSH vocabulary for all TOXLINE subfiles. The presence of these MeSH terms on the BIOSIS records should make searching for broad concepts more efficient. While this mapping approach does not yield the same level of detail as actual indexing with MeSH terms, it does provide a consistent searching vocabulary across more of TOXLINE. Look for a March *NLM Technical Bulletin* article on this project.

TSCATS SUBFILE: SEARCHABLE EPA SUBMISSION NUMBERS

The TSCATS subfile will be reloaded in order to make the EPA submission types searchable. These submission types will appear in the Classification Code (CC) data field. In addition, this reload includes many additional abstracts. TOXLINE users should use the Order Number (OD) field to get the number needed to order copies of these EPA submissions from the National Technical Information Service (NTIS).

TOXBIB SUBFILE: SI DATA INCLUDED

Contrary to what was reported in the September 1988 *NLM Technical Bulletin*, the MEDLINE-assigned molecular sequence data bank numbers will be reported in TOXLINE's ID Number (ID) data field. The Secondary Source ID (SI), which serves as the unique identifier for records in TOXLINE, will continue to have only a single occurrence per record.

CRISP SUBFILE: COVERAGE

The Toxicology Research Projects subfile (subfile acronym CRISP) was replaced during the regeneration with a new version of this subfile that contains Public Health Service toxicology research projects for fiscal years 1986, 1987, and 1988. Even though some of the 1988 projects do not yet have abstracts, they have been included in the interest of more timely access to these important references to current research efforts. During next year's TOXLINE regeneration, the 1988 reports will be replaced with a new file containing all the abstracts for this period.

EPIDEM SUBFILE: UPDATED

The Epidemiology Information System subfile (EPIDEM) was also reloaded with this regeneration. This allowed the Food and Drug Administration,

supplier of this subfile, to provide updated versions of their records as well as additional records.

EMIC AND ETIC SUBFILES

The Environmental Mutagen and Teratology Information Center Files (EMIC and ETIC subfiles) are still included in TOXLINE and TOXLINE65. As explained in another article in this issue, substantial changes have occurred in the way these files are created and managed. Neither subfile has been updated recently in TOXLINE, but we are anticipating an update sometine this year once all the EMIC and ETIC files are up on TOXNET.

HMTC SUBFILE: ACCESS TO MORE RNs

Finally, the Hazardous Materials Technical Center File (HMTC subfile) has been reloaded following a modification to our program for bringing these records into TOXLINE. Users will notice additional CAS Registry Numbers in this subfile.

SUMMARY AND MULTIFILE EXAMPLE

In summary, we hope that the new configuration of the TOXLINE files, with substantially more records available at the usual MEDLARS searching rates, will increase the utilization of this information. Users are reminded that the toxicology bibliographic files are particulary well-suited to searching with the new ELHILL Multifile Search (MFS) command. This allows efficient processing of search strategies across databases, with the flexibility of intervening when specific files or output are needed. An example of such a MFS search is shown in Figure 1.

Table 1

SUBFILE ARRANGEMENT/MARCH 1989

TOXLINE/TOXLINE65:

ANEUPLOIDY FILE (ANEUPL)

ENVIRONMENTAL MUTAGEN INFORMATION CENTER FILE (EMIC)

ENVIRONMENTAL TERATOLOGY INFORMATION CENTER FILE (ETIC)

EPIDEMIOLOGY INFORMATION SYSTEM FILE*** (EPIDEM)

HAZARDOUS MATERIALS TECHNICAL CENTER FILE*** (HMTC)

INTERNATIONAL LABOUR OFFICE FILE (CIS)

INTERNATIONAL PHARMACEUTICAL ABSTRACTS (IPA)

NIOSHTIC (NIOSH)

PESTICIDES ABSTRACTS* (PESTAB)

POISONOUS PLANTS BIBLIOGRAPHY (PPBIB)

TOXIC SUBSTANCES CONTROL ACT TEST SUBMISSIONS*** (TSCATS)

TOXICITY BIBLIOGRAPHY (TOXBIB)

TOXICOLOGICAL ASPECTS OF ENVIRONMENTAL HEALTH** (BIOSIS)

TOXICOLOGY DOCUMENT AND DATA DEPOSITORY FILE (NTIS)

TOXICOLOGY RESEARCH PROJECTS*** (CRISP)

TOXLIT/TOXLIT65:

CHEMICAL-BIOLOGICAL ACTIVITIES (CA)

*Formerly HAPAB

**Formerly HEEP

***Only in TOXLINE

```
YOU ARE NOW CONNECTED TO THE TOXLINE (1981 FORWARD, NON-ROYALTY) FILE.

SS 1 /C?
USER:
mfs
PROG:
SEARCH TO BE RUN ALREADY EXISTS. DO YOU WISH TO REPLACE IT? (Y/N)

USER:
y
PROG:
MULTIFILE SESSION ABOUT TO BEGIN
MODE: MANUAL
SEARCHNAME: &-MFS-& (TO BE INPUT)
FILES TO BE SEARCHED:
** MEDLINE                    (1988 - 89)
** BACK86                     (1986 - 87)
** BACK83                     (1983 - 85)
** BACK80                     (1980 - 82)
** BACK77                     (1977 - 79)
** BACK72                     (1972 - 76)
** BACK66                     (1966 - 71)
OK? (Y/N/C/LIST)

USER:
files=toxgroup
PROG:
OK? (Y/N/C/LIST)

USER:
list
PROG:
MULTIFILE SESSION ABOUT TO BEGIN
MODE: MANUAL
SEARCHNAME: &-MFS-& (TO BE INPUT)
FILES TO BE SEARCHED:
** TOXLINE                     (1981 FORWARD, NON-ROYALTY)
** TOXLINE65                   (1965 - 80, NON-ROYALTY)
** TOXLIT                      (1981 FORWARD, ROYALTY)
** TOXLIT65                    (1965 - 80, ROYALTY)
OK? (Y/N/C/LIST)

USER:
y
PROG:
ENTER SEARCH-

*STS* SS 1 /C?
USER:
108-88-3 or toluene
PROG:
SS (1) PSTG (4056)

*STS* SS 2 /C?
USER:
1 and all neurotox: (tw)
PROG:
SS (2) PSTG (122)

*STS* SS 3 /C?
USER:
1 and all neurolog: (tw)
PROG:
SS (3) PSTG (82)

*STS* SS 4 /C?
USER:
1 and all neuropharm: (tw)
PROG:
SS (4) PSTG (8)
```

Figure 1A

```
*STS* SS 5 /C?
USER:
1 and all cereb: (tw)
PROG:
SS (5) PSTG (56)

*STS* SS 6 /C?
USER:
2 or 3 or 4 or 5
PROG:
SS (6) PSTG (168)

*STS* SS 7 /C?
USER:
finished
PROG:
SEARCH SET FROM SS 1 FORWARD SAVED AS '&-MFS-&'.

READY TO PRINT FROM SEARCH STATEMENT 1, CONTAINING 168 ITEM(S) FROM
TOXLINE.

ENTER SPECIFICATIONS FOR PRINTING (E.G., BR, SD, FU, DL), OR 'SAME'
(DO NOT USE THE WORDS 'PRINT' OR 'PRT'):

USER:
br
PROG:

1
TI  - Toluene exposure during maturation of intraocular brain tissue
      transplants: alterations of host and graft cerebellar Purkinje
      neuron function and sensitivity to norepinephrine.
2
TI  - Neurobehavioural Effects and Pharmacokinetics of Toluene in
      Rats and Their Relevance to Man

3
TI  - Biochemical Changes in Different Brain Areas after Toluene
      Inhalation
 .
 .

YOUR LAST SEARCH TO BE PRINTED HAS BEEN PROCESSED.

REPRINT PRIOR SEARCH RESULTS? (Y/N/C/SKIP PLUS OPTIONAL WORD(S)
'PRINTSPECS' AND/OR 'RECORDS' TO REQUEST PROMPTS FOR THESE CHANGES):

USER:
n
PROG:
SUPERPRINT COMPLETED.

SS 2 /C?
USER:
next
PROG:
THE NEXT FILE TO BE SEARCHED IS TOXLINE65.
OK? (Y/N/C/SKIP)

USER:
Y
PROG:
YOU ARE NOW CONNECTED TO THE TOXLINE65 (1965 - 80, NON-ROYALTY) FILE.
TIME OVFLW: CONT? (Y/N)

USER:
Y
PROG:
SS (1) PSTG (78)

 .
 .
```

Figure 1B

GRATEFUL MED Editing

Continued from page 1.

STEP 1. Searcher enters the search on an Input Form screen:

```
                          INPUT YOUR SEARCH                              MEDLINE
FILL IN THE APPLICABLE LINES. E.G., TYPE AUTHOR'S NAME IN THE AUTHOR LINE.
PRESS  DY  TO GO TO NEXT LINE. FOR HELP PRESS  HOME . PRESS  ESC  TO RESTART.

  AUTHOR/NAME
                                ENTER TITLE WORDS
  TITLE WORDS
                    ENTER ALTERNATIVE WORDS OR USE F10 TO SELECT FROM MESH.
SUBJECT WORDS   shock
          and     ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
  2ND SUBJECT   waves
          and     ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
  3RD SUBJECT   gallbladder
          and     ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
  4TH SUBJECT   stone#
                  ENTER ANY CHARACTER TO SEARCH ONLY ENGLISH LANGUAGE.
 ENGLISH ONLY   English Only.
          and     ANY CHARACTER FOR ONLY REVIEWS. USE HOME FOR DEFINITION.
  REVIEW ONLY
                  ENTER JOURNAL ABBREVIATION. USE HOME KEY FOR LIST.
JOURNAL ABBREV

                  DO YOU WANT TO RETRIEVE THE ABSTRACTS (y/N)?  Y
                  OK TO GO ON TO SEARCH (Y/n/v/s/*)?
```

Author & Title words lines are skipped by pressing the ENTER key twice.

The # is used to indicate either "stone" or "stones" will be acceptable.

Here is the first reference found for the search.

```
1                          MEDLINE
Heberer G: Paumgartner G: Sauerbruch T: Sackmann M: and others
A retrospective analysis of 3 year's experience of an interdisciplinary
approach to gallstone disease including shock-waves.
Department of Surgery, Klinikum Grosshadern, Ludwig-Maximilian-
University, Munich, West Germany.
Ann Surg 1988 Sep:208(3):274-8
Unique Identifier:  88339419

Abstract:

1206 patients with gallstone disease were treated between January
1985 and December 1987, using an interdisciplinary concept that
included surgery, endoscopic sphincterotomy, and extracorporeal
shock-wave lithotripsy (ESWL). Twenty-five per cent of the
patients who were admitted for gallbladder stones were treated by
ESWL, whereas 75% underwent surgery. Mortality of elective
treatment for gallbladder stones amounted to 0.25% (0.4% in
surgery, 0% in ESWL). Postoperative complication rate was low
(4.2% in surgery, 7.0% in ESWL). After ESWL treatment, 80% of the
patients were free of stones after a follow-up period of 1 year.
Recurrence rate in these patients amounted up to 10%; in seven of
70 patients, mean follow-up period was 6 months after complete
disappearance of stones. Twenty-seven per cent of all patients
who were admitted for bile duct stones underwent surgery, whereas
in the other 73%, calculi were removed via endoscopy. ESWL
treatment was used additionally, if necessary. Fragments were
left behind in three of 75 patients (4.0%) after surgical
treatment, and in 7 of 200 patients (3.5%) after endoscopic and
ESWL treatment, respectively. In the latter group, three patients
(1.5%) required an additional operation. There were no deaths in
either of the groups. The use of ESWL for treatment of
gallbladder stones needs to be evaluated in long-term follow-up
studies. Thus far, surgery remains the dominating method.
Endoscopic procedures, eventually combined with ESWL, represent
the preferred treatment for patients with bile duct stones.

Medical Subject Headings:

Aged
Cholelithiasis--SURGERY--THERAPY
Follow-Up Studies
Human
Lithotripsy
Male
Postoperative Complications
Recurrence
Retrospective Studies
:
:
```

STEP 2. - After reviewing several references, two MeSH headings are suggested by the program. GRATEFUL MED will only suggest MeSH headings for searches where at least 3 references were found and if a pattern of headings in the citations indicated as relevant:

```
If you searched on a subject and did not find all you want
your relevancy judgments indicate that you might try again using
these headings:

    CHOLELITHIASIS
    LITHOTRIPSY


TERMS ARE SHOWN ABOVE IN THE FORMAT THEY SHOULD BE ENTERED ON A SUBJECT LINE.

                    PRESS ENTER TO GO ON.
```

CHOLELITHIASIS is the MeSH heading for the presence of gallstones.

LITHOTRIPSY is the MeSH heading used to represent the use of sound waves to dissolve stones or "calculi."

STEP 3. - Answer 'N' to the question on searching for older material. (Or, press ENTER as the default answer is indicated by the capitalized 'N'.)

```
DO YOU WANT TO RUN THE SAME SEARCH AGAINST OLDER MATERIAL (y/N)?
```

STEP 4. - Answer 'Y' to the question on whether you wish to continue. (Or, just press ENTER, as the default is 'Y'.)

```
DO YOU WANT TO CONTINUE SEARCHING (Y/n)?
 ANSWERING NO WILL RETURN YOU TO DOS.
```

STEP 5. - Answer 'N' or just press ENTER in response to the question on changing databases.

```
      DO YOU WANT TO CHANGE DATABASES (y/N)?

 IF YOU DON'T CHANGE, YOU WILL BE SEARCHING MEDLINE.
```

STEP 6. - Answer 'Y' or press ENTER in response to the EDIT question.

```
DO YOU WANT TO EDIT YOUR LAST SEARCH (Y/n)?
```

STEP 7. - You will then see the Input Form Screen with the entries for the previous search. Also, the postings for each line of the search will be shown in the Found column on the right side of the screen.

```
                          INPUT YOUR SEARCH                          MEDLINE
FILL IN THE APPLICABLE LINES, E.G., TYPE AUTHOR'S NAME IN THE AUTHOR LINE.
PRESS  DY  TO GO TO NEXT LINE. FOR HELP PRESS  HOME . PRESS  ESC  TO RESTART.
                                                                    FOUND
  AUTHOR/NAME
                              ENTER TITLE WORDS
  TITLE WORDS
                 ENTER ALTERNATIVE WORDS OR USE F10 TO SELECT FROM M:
SUBJECT WORDS  shock                                                 1645
        and      ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
  2ND SUBJECT  waves                                                 460
        and      ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
  3RD SUBJECT  gallbladder                                           460
        and      ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
  4TH SUBJECT  stones                                                374
        and      ENTER ANY CHARACTER TO SE COMBINATION OF THE ABOVED>    3
 ENGLISH ONLY  English Only.                                           3
        and      ANY CHARACTER FOR ONLY REVIEWS. USE HOME FOR DEFINI
  REVIEW ONLY
                 ENTER JOURNAL ABBREVIATION. USE HOME KEY FOR LIST.
JOURNAL ABBREV
```

Number of citations found.

STEP 8. - A. Move the cursor to the first Subject Words Line and backspace to the beginning. Then, begin typing the first few letters of the word. Press the F10 function key to select from MeSH.

```
                          INPUT YOUR SEARCH                              MEDLINE
FILL IN THE APPLICABLE LINES, E.G., TYPE AUTHOR'S NAME IN THE AUTHOR LINE.
PRESS  DY  TO GO TO NEXT LINE. FOR HELP PRESS  HOME . PRESS  ESC  TO RESTART.
                                                                        FOUND
   AUTHOR/NAME
                                ENTER TITLE WORDS
   TITLE WORDS
                  ENTER ALTERNATIVE WORDS OR USE F10 TO SELECT FROM MESH.
SUBJECT WORDS    cholei                                                 1645
         and       ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
   2ND SUBJECT   waves                                                   460
         and       ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
   3RD SUBJECT   gallbladder                                             460
         and       ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
   4TH SUBJECT   stones                                                  374
         and       ENTER ANY CHARACTER TO SE COMBINATION OF THE ABOVED>    3
 ENGLISH ONLY    English Only.                                            3
         and       ANY CHARACTER FOR ONLY REVIEWS. USE HOME FOR DEFINI
  REVIEW ONLY
                  ENTER JOURNAL ABBREVIATION. USE HOME KEY FOR LIST.
JOURNAL ABBREV
```

B. Select CHOLELITHIASIS from the display by typing the number choice or by moving the cursor and pressing ENTER. If the term you want is ready for selection, i.e. has an arrow pointer to the left, press ENTER to choose it. Return to the Input Form Screen by pressing the ESC key.

```
    1   Cholecystography
    2   Cholecystokinin +
    3   Receptors, Cholecystokinin
    4   Cholecystostomy
    5   Choledochoduodenostomy (xr) (=Choledochostomy)
    6   Choledochojejunostomy (xr) (=Choledochostomy)
    7   Choledocholithiasis (xr) (=Common Bile Duct Calculi)
    8   Choledochostomy
    9   Choledochus (xr) (=Common Bile Duct)
   10   Cholelithiasis +
   11   Cholelithiasis, Common Bile Duct (xr) (=Common Bile Duct Calculi)
   12   Cholenes
   13   Cholera
   14   Cholera Toxin
   15   Cholera Vaccine
   16   Hog Cholera
   17   Hog Cholera Virus
   18   Cholagogues and Choleretics +
   19   Cholestadienes +
   20   Cholestadienols +
PRESS PgDn TO PAGE DOWN, PgUp TO PAGE UP, E TO GO ELSEWHERE, Esc TO RETURN,
  Home FOR HELP, OR A NUMBER FOLLOWED BY ENTER TO SELECT A TERM.
```

MeSH heading is completely highlighted after it is selected.

STEP 9. - A. - Press ENTER to move the cursor to the 2nd Subject Words line. Then backspace to the beginning of the 2nd Subject Line and begin typing LITHOTRIPSY. Press F10.

```
                          INPUT YOUR SEARCH                          MEDLINE
FILL IN THE APPLICABLE LINES, E.G., TYPE AUTHOR'S NAME IN THE AUTHOR LINE.
PRESS  DY  TO GO TO NEXT LINE. FOR HELP PRESS  HOME . PRESS  ESC  TO RESTART.
                                                                     FOUND
  AUTHOR/NAME
                              ENTER TITLE WORDS
  TITLE WORDS
                 ENTER ALTERNATIVE WORDS OR USE F10 TO SELECT FROM M
SUBJECT WORDS  Cholelithiasis (mh)
        and      ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
2ND SUBJECT    lithot                                          460
        and      ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
3RD SUBJECT    gallbladder                                     460
        and      ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
4TH SUBJECT    stones                                          374
        and      ENTER ANY CHARACTER TO SEARCH ONLY ENGLISH LANGUAGE
ENGLISH ONLY   English Only.
        and      ANY CHARACTER FOR ONLY REVIEWS. USE HOME FOR DEFINI
 REVIEW ONLY
                 ENTER JOURNAL ABBREVIATION. USE HOME KEY FOR LIST.
JOURNAL ABBREV
```

B. Select LITHOTRIPSY and press ESC to return to the Input Form screen.

```
    1   Computer Literacy
    2   Literature +
    3   Medicine in Literature
    4   Review Literature +
    5   Literature, Medieval
    6   Literature, Modern
    7   Lithium
    8   Lithocholic Acid +
    9   Litholapaxy (xr) (=Lithotripsy)
   10   Lithotripsy
   11   Lithuania
   12   Litter Size
   13   Little's Disease (xr) (=Cerebral Palsy)
   14   Liver +
   15   Liver Abscess
   16   Liver Abscess, Amebic
   17   Liver Circulation
   18   Liver Cirrhosis +
   19   Liver Cirrhosis, Alcoholic
   20   Liver Cirrhosis, Biliary
PRESS PgDn TO PAGE DOWN, PgUp TO PAGE UP, E TO GO ELSEWHERE, Esc TO RETURN,
  Home FOR HELP, OR A NUMBER FOLLOWED BY ENTER TO SELECT A TERM.
```

STEP 10. - A. Move the cursor to the 3rd Subject Line and backspace to erase the gallbladder entry. "Stones" will "pop up" to the 3rd line. Erase this also by backspacing.

```
                          INPUT YOUR SEARCH                          MEDLINE
FILL IN THE APPLICABLE LINES, E.G., TYPE AUTHOR'S NAME IN THE AUTHOR LINE.
PRESS  DY  TO GO TO NEXT LINE. FOR HELP PRESS  HOME . PRESS  ESC  TO RESTART.
                                                                     FOUND
  AUTHOR/NAME
                              ENTER TITLE WORDS
  TITLE WORDS
                 ENTER ALTERNATIVE WORDS OR USE F10 TO SELECT FROM MESH.
SUBJECT WORDS  Cholelithiasis (mh)
        and      ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
2ND SUBJECT    Lithotripsy (mh)
        and      ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
3RD SUBJECT
                 ENTER ALTERNATIVE WORDS FOR NEXT CONCEPT, IF ANY.
4TH SUBJECT
                 ENTER ANY CHARACTER TO SEARCH ONLY ENGLISH LANGUAGE.
ENGLISH ONLY   English Only.
        and      ANY CHARACTER FOR ONLY REVIEWS. USE HOME FOR DEFINITION.
 REVIEW ONLY
                 ENTER JOURNAL ABBREVIATION. USE HOME KEY FOR LIST.
JOURNAL ABBREV

                 DO YOU WANT TO RETRIEVE THE ABSTRACTS (y/N)?
```

Postings "gone."

B. Make a selection regarding the ABSTRACTS? question and run the search. In this example, the search retrieval was increased to 47 references. Other parameters, such as starring (*) the MeSH headings or using subheadings, can be employed to restrict the search and increase precision.

```
GRATEFUL MED


YOUR SEARCH FOUND 47 REFERENCES.
YOU SAVED 14 OF THESE TO REVIEW NOW.
THE COST OF THIS SEARCH WAS $3.41


DO YOU HAVE A PRINTER AND WANT TO PRINT RELEVANT CITATIONS (y/N/f)?
```

GRATEFUL MED®

VERSION 4.0

[Editor's Note: Each month the NLM Technical Bulletin features a column concerning GRATEFUL MED, often consisting of questions/answers. Contributions for this column will be appreciated.]

I installed Version 4.0 and have not been able to connect to the NLM computer. Version 3.0 worked fine. What should I do? TYMNET is the only service in my area.

Users who installed Version 4.0 on top of Version 3.0 may have a problem using TYMNET access. This is because part of the program that deals with login procedures is retained from Version 3.0 and is not fully compatible with the rest of Version 4.0. Fortunately, it's easy to make things agree.

Go into the program and select CHANGE from the ACTION screen. Then select Telephone numbers, followed by Change or view an existing directory. When GRATEFUL MED asks what service you want to change, enter the service number for TYMNET from your Dialing Directory (probably number 1 if TYMNET is your only service). You will then go to the CHANGE A SERVICE screen. You won't need to actually change anything on this screen; simply hit <Enter> to take the cursor down to the bottom of the screen and then hit the END key. In fact, hit END until you are all the way back to the initial screen and continue the program as usual. Stepping through SETUP for TYMNET like this will change your program so that connecting to the NLM computer will work properly.

I have a monitor that is designed to go blank if the keyboard is not touched every few minutes. This is a problem when I'm downloading citations because I like to watch them as they appear on the screen. However, if I touch the keyboard to bring back the video when it disappears, the downloading stops.

This is because GRATEFUL MED interprets any keystroke as a signal to abort the search. Fortunately, there is a "safe" key you can touch to bring back your video without aborting your search -- this is the SHIFT key.

I want to update my searches. How can I run a search that will only give me citations that I haven't seen?

The best way to do this is to plan to update your searches once a month. That way you can run your searches in SDILINE® (the database that carries the current month's citations) and only retrieve citations that have been most recently added to MEDLINE. The steps to set up a search that will be used for updating are as follows:

Select SDILINE from the list of Other Databases. (SDILINE stands for Selective Dissemination of Information onLINE.)

Enter your strategy on the SDILINE Input form screen. For an example see Figure 1. The search strategy is now saved as an SDILINE search. Note that a search that will be used for MEDLINE updates is not saved in MEDLINE. This is important because you will want to execute this strategy in SDILINE (the small subset of MEDLINE containing only one month's citations) and the screen on which it is saved determines where the search can be used later.

Once a month you will want to use this SAVED search to do your update.

To do an update:

Select USE from the ACTION screen. You will see a display of the names of the searches you have saved along with the date each was saved.

FILE	SAVED ON
LASTSRCH.MED	Wed Feb 08 10:58:25 1989
MELANOMA.MED	Fri Feb 03 11:24:34 1989
PARKINSN.MED	Mon Feb 06 16:34:18 1989
BYPASS.MED	Tue Feb 07 10:58:25 1989

Note: The first name is always LASTSRCH because the last search executed is automatically SAVED. All SAVED search names are given the extension "MED" and you can't tell from the name what database input screen was used to save the strategy.

Move the cursor to highlight the name of the search, you want to run, in this example, "BYPASS," and hit <Enter>.

The Input screen for this SDILINE search will appear. Hit <Enter> to move to the bottom of the screen and then ..GO ON TO SEARCH. In this example, the BYPASS strategy will run in SDILINE retrieving citations added to MEDLINE in the past month. When should you update?

The following schedule shows when SDILINE will be reloaded with new citations for the remainder of 1989. You will want to USE your SAVED SDILINE searches to do updates after the date shown.

Mar 25 Apr 22 May 27 Jun 29

Jul 29 Aug 26 Sep 23 Oct 28

Editor's note:

A number of problems with version 4.0 have arisen which, fortunately, can be corrected by using special "fix" programs. These fixes are available on the Bulletin Board System (Choice BBS on the ACTION Screen) and can be downloaded and applied to your GRATEFUL MED program. Each fix consists of two files, ___fix.BAT and ___fix.ARC. At the time we go to press there are four fixes available. NOTE: not every user will need to make every fix.

1. GMFIX.BAT & GMFIX.ARC
   - error EXPLODING (+) a MeSH term that contains the character string, "ALL."
   - year and date missing from USELOG file.
   - minor MeSH problems

2.* MONOFIX.BAT & MONOFIX.ARC
   - dim display of online interaction on monochrome composite monitors

3.* AFFIX.BAT & AFFIX.ARC
   - incompatibility with AT&T modems used at NIH

4.* EVERFIX.BAT & EVERFIX.ARC
   - adds a necessary pause for Evercom and other modems

*These fixes are appropriate for a small number of users only.

Instructions for applying these fixes are found in Bulletin #33, "Downloading and Applying Fixes to GRATEFUL MED." Users who installed with a 3.5 inch disk should pay special attention to the note at the end of Bulletin #33. Instructions for downloading files are found in Bulletin #15, "Downloading Files Using GRATEFUL MED." Be sure to read both bulletins (15 and 33) before attempting to download or use fixes.

I've tried downloading from the GRATEFUL MED Bulletin Board. However, according to bulletin #15 I need to use the F8 key, and when I do my computer freezes up. What do I do now?

A small number of users will have this problem with the F8 key when downloading from the BBS. You can correct this particular problem using instructions posted in bulletin #37, "Help for modems that don't send break."

Users should also be aware that they can use any telecommunications software to access the BBS using TELENET address c 301 535. This way a user can download files from the BBS using a more familiar method.

```
                                                    SDILINE
Subject words     Cardiopulmonary Bypass (mh)
                                                  terms selected
2nd Subject       Postoperative Complications (mh)  from F10
                                                    display
.
.
.
        OK TO GO ON TO SEARCH (Y/n/s/*)?  s <---  enter "s" for SAVE
        Enter the name of saved search    [bypass  ] <--- name it
        OK TO GO ON TO SEARCH (Y/n/s/*)?  y <---  if you want to search current month
```

Figure 1

NLM Online Training Classes Announced for July - December 1989

Patricia C. Buchan
MEDLARS Management Section, NLM

The schedule for the second half of 1989 has been announced and is printed below. Please refer to the September 1988 *NLM Technical Bulletin* for the "Request for Training" application form. The January through June portion of the 1989 schedule was announced in that issue. Few classes during that time period remain available. Please call the MEDLARS Service Desk for the most up-to-date class status information.

All classes are considered "tentative" pending sufficient enrollment (a minimum of 12 attendees) by approximately one month before the class.

1989*
NATIONAL LIBRARY OF MEDICINE
ONLINE TRAINING CLASS SCHEDULE

FUNDAMENTALS OF MEDLARS SEARCHING

	DATE	SITE		DATE	SITE
JULY	10-14	PORTLAND, OR	OCTOBER	2- 6	BETHESDA, MD
	10-14	PORTLAND (GORHAM), ME		16-20	NEW YORK, NY
	17-21	BETHESDA, MD		30- 3	BETHESDA, MD
	24-28	LITTLE ROCK, AR			
AUGUST	7-11	NEW YORK, NY	NOVEMBER	13-17	LOS ANGELES, CA
	7-11	LOS ANGELES, CA			
	21-25	BETHESDA, MD	DECEMBER	4- 8	ATLANTA, GA
				4- 8	SEATTLE, WA
SEPTEMBER	11-15	BETHESDA, MD		11-15	BETHESDA, MD
	25-29	OMAHA, NE		11-15	DALLAS, TX

FOLLOW-UP TO THE FUNDAMENTALS

JULY	31- 4	BETHESDA, MD	NOVEMBER	13-17	MIAMI, FL
				13-17	DALLAS, TX
SEPTEMBER	11-15	NEW YORK, NY		27- 1	BETHESDA, MD
OCTOBER	23-27	SAN JOSE, CA			

*JAN.-JUNE 1989 RELEASED 9/88.
CALL TO INQUIRE ABOUT AVAILABILITY OF EARLIER CLASSES.

2/89

HEALTH Unique Identifiers in DOCLINE

Beginning March 1, 1989 most HEALTH file Unique Identifiers (UIs) may be used in DOCLINE® for automatic routing of journal requests.

The HEALTH file currently consists of citations taken primarily from MEDLINE (80%) and citations to articles from Special List Health journals (18%) indexed and added by the American Hospital Association (AHA). Requests for these articles will route based on the UI of the serial title from SERLINE® and serial holdings information in SERHOLD.

There are also some citations to non-journal material (2%) from 1975-1981, added by the National Health Planning Information Center (NHPIC). These documents are mainly technical reports, monographs, monograph chapters and theses. Since there are no holdings for this type of material, requests cannot route automatically.

The user may print the UI field separately or use the standard print command in HEALTH which will display the Secondary Source ID (SI) field.

SI - MED/89023308
AU - Lowe-Phelps K
TI - Dismantling the Medicare home health benefit.
SO - Am J Nurs. 1988 Oct;88(10):1364-7.

SI - AHA/77248998
AU - Gent DI
TI - Energy crunch hits hospitals.
SO - Hosp Financ Manage. 1977 Jan;31(1):22-6.

The new prompt MEDLINE/HEALTH UI > will appear in the BORROW function of DOCLINE for requests for journal photocopies.

Users may enter the 8-digit number that follows the slash (/) in the SI field. This is the UI for citations with MED or AHA in this field. Do not include "AHA", "MED" or a slash after the DOCLINE prompt.

Example for SI - AHA/77248998:

LIBID [34567Z] > (CR)
TYPE (J,M,A) [J] > (CR)
MEDLINE/HEALTH UI > 77248998
TI: Energy crunch hits hospitals.
AU: Gent DI;
SO: Hosp Financ Manage 1977 Jan;31(1):22-6

IS THIS CORRECT? (Y,N) [Y] > (CR)
Citation accepted.

A Secondary Source ID (SI) with NP preceding the slash indicates that the record is derived from NHPIC. The number following the slash is a number for NHPIC records only and is not the UI, which may be printed out separately:

PRT INCLUDE UI:

SI - NP/023182
AU - Mechanic D
TI - Future Issues in Health Care -- Social Policy and the Rationing of Medical Services.
UI - 05009445
SO - 1979;New York: Free Press, 1979 194 p.

In any case, these records are for monographic material. If the UI is entered into DOCLINE at the MEDLINE/HEALTH UI > prompt, the user will receive a message to enter the request as a monograph.

Example for SI - NP/023182:

LIBID [34567Z] > (CR)
TYPE (J,M,A) [J] > (CR)
FORM (P,L) [P] >
MEDLINE/HEALTH UI > 05009445

This HEALTH file citation is not a journal.

If desired, request may be entered as a monograph(M).

TYPE (J,M,A) [J] > M

ETICBACK - A New Bibliographic Database on TOXNET®

Stacey J. Arnesen
Specialized Information Services Division, NLM
John Wassom
Oak Ridge National Laboratory

On January 30, 1989, TOXNET® featured its first bibliographic database. ETICBACK, the backfile for the Environmental Teratology Information Center (ETIC) database, contains over 46,000 references to publications from 1950-1988 on chemical, biological, or physical agents that may cause birth defects. To a lesser extent, the database also includes references to publications on other aspects of developmental and reproductive toxicology. Some references earlier than 1950 are included, as well. Records include complete bibliographic citations, specialized indexing keywords, chemical names, and Chemical Abstract Service Registry Numbers (CAS RN). ETICBACK can be accessed in TOXNET by typing FILE ETICBACK at any user prompt. References to more recent (1989-) teratology information will be included in another file, the ETIC database which will be added to TOXNET this spring.

ETIC and ETICBACK are produced by the Environmental Mutagen, Carcinogen, and Teratogen Information Program (EMCTIP) of the Oak Ridge National Laboratory in Oak Ridge, Tennessee. Founded in 1975, the Environmental Teratology Information Center (a component of the EMCTIP), has devoted its efforts to creating a bibliographic database for researchers, health professionals, and others interested in the scientific discipline of teratology. The Center also maintains a collection of all papers cited in the database. The EMCTIP also produces the Environmental Mutagen Information Center (EMIC) database which will become available on TOXNET later this year.

In the past, funding for the ETIC database came primarily from the National Institute of Environmental Health Sciences. Recently, the Agency for Toxic Substances and Disease Registry (ATSDR) and the Environmental Protection Agency (EPA) also have contributed to this project.

Citations from the ETIC and ETICBACK databases will continue to be found in TOXLINE and TOXLINE65 (labeled as the ETIC subfile in the Secondary Source Identifier field). In order to conform to the TOXLINE unit record structure, the information in the TOXLINE version of the ETIC databases has been condensed and some of the data fields have been excluded.

Records in the ETICBACK database contain 28 data fields which provide bibliographic citations to and related information on journal articles, technical reports, dissertations, meeting abstracts, and symposia proceedings. The data fields are divided among five categories of information (Figure 1): ADMINISTRATIVE INFORMATION (record number, record length, entry date, revision dates), BASIC BIBLIOGRAPHIC INFORMATION (unique identifier, authors, title, and source), OTHER BIBLIOGRAPHIC INFORMATION (language, publication type, journal title abbreviation, year of publication, etc.), SPECIAL KEYWORDS (taxonomic name, sex, assay method, maternal effects, etc.), and SUBSTANCE IDENTIFICATION (name of agents, CAS RNs, etc.).

ETIC indexing is very different from the type of indexing used in MEDLINE®. Whereas MeSH® is used to describe the predominant subjects of the article, ETIC indexing extracts predefined types of data, as can be seen in the Special Keywords category (Figure 1). The taxonomic name (TAX) field gives the genus and species of the organism(s) tested in the study. In addition to the taxonomic name, the common name of the organism(s) is also given in the test object field (OT). For example, a study on humans would be indexed as Homo sapiens in the TAX field and mammal, human in the OT field. The Assay Method (AY) field describes systems, processes, or other factors tested to determine the possible teratogenic effects of agents in the fetus or offspring. Examples of terms in this field include nervous system, digestive system, and drug distribution. The Maternal Effects field (MAT) describes effects on the mother that are of importance to the outcome and assessment of the fetal effects. Examples of terms in this field include fetal loss, maternal fertility, and maternal digestive system. Some of the other Special Keyword fields are the Route of Administration (RA), Cells Cultured (CUL) and Sex Treated (SEX).

The specific chemicals that have been tested for teratogenic activity are extremely important to researchers and health professionals concerned with the potential toxicity of chemicals. In order to meet the needs of these users, all chemicals mentioned in a publication are indexed in the ETICBACK database. In addition, every possible effort is made to list the CAS RN for the chemical.

The ETICBACK database can be searched in a variety of ways including by author, special keywords, CAS RNs, and journal titles. A sample record from the database is shown in Figure 2.

For more information about ETICBACK please contact:

Specialized Information Services
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894
(301) 496-6531 or (301) 496-3147

The ETICBACK Unit Record

The following is the Unit Record description for the ETICBACK (Environmental Teratology Information Center) back file. Names and mnemonics are listed for each category, header, and data field. A name preceded by a double asterisk is a category, while headers are marked by a single asterisk. Data fields, the basic information units, have no asterisks. All of the data fields indented below a category or header can be referenced for the purposes of searching or printing with the mnemonic for that particular category or header.

0.		**	ADMINISTRATIVE INFORMATION
	ETBN		ETICBACK Record Number
	DATE		Last Revision Date
	UPDT		Update History
	RLEN		Record Length
1.	BIB	**	BASIC BIBLIOGRAPHIC INFORMATION
	SI		ORNL Source ID
	AU		Author(s)
	TI		Title of Article
	SO		Source [printable only]
2.	OBIB	**	OTHER BIBLIOGRAPHIC INFORMATION
	CREL	*	Citation Related
	LA		Language
	PT		Publication Type
	TR		Translation Source
	SREL	*	Source Related
	JT		Journal Title
	TA		Journal Title Abbreviation
	JC		Journal Title Coden
	YR		Year of Publication
3.	SPKW	**	SPECIAL KEYWORDS
	TAX		Taxonomic Name
	OT		Object of Test
	SEX		Sex Treated
	CUL		Tissue Cultured
	AY		Assay Method
	EXC		Experimental Conditions
	STR		Stage Treated
	MAT		Maternal Effects
	RA		Route of Administration
4.	ID	**	SUBSTANCE IDENTIFICATION
	NAME		Name of Agent
	RN		CAS Registry Number
	IND		Inducer
	INRN		Inducer CAS Number

Figure 1

ETICBACK RECORD NUMBER	42704
RECORD LENGTH	520
ORNL SOURCE ID	42701
AUTHOR(S)	CARLTON, B.D.
AUTHOR(S)	HABASH, D.L.
AUTHOR(S)	BASARAN, A.H.
AUTHOR(S)	GEORGE, E.L.
AUTHOR(S)	SMITH, M.K.
TITLE OF ARTICLE	SODIUM CHLORITE ADMINISTRATION IN LONG-EVANS RATS: REPRODUCTIVE AND ENDOCRINE EFFECTS
SOURCE	ENVIRON RES 42:238-245, 1987
LANGUAGE	ENGLISH
PUBLICATION TYPE	JOURNAL
JOURNAL TITLE	ENVIRONMENTAL RESEARCH
JOURNAL TITLE ABBREVIATION	ENVIRON RES
JOURNAL TITLE CODEN	ENVRA
YEAR OF PUBLICATION	1987
TAXONOMIC NAME	RATTUS, LONG-EVANS
OBJECT OF TEST	MAMMAL, RAT
SEX TREATED	MALE; FEMALE
ASSAY METHOD	REPRODUCTIVE TOXICITY
ASSAY METHOD	VIABILITY, FERTILITY AND MORTALITY
ASSAY METHOD	GROWTH
ASSAY METHOD	ENDOCRINE SYSTEM
ASSAY METHOD	BIOCHEMISTRY AND METABOLISM
EXPERIMENTAL CONDITIONS	PRECONCEPTION
EXPERIMENTAL CONDITIONS	PRECONCEPTION+
MATERNAL EFFECTS	MATERNAL FERTILITY
MATERNAL EFFECTS	MATERNAL NUTRITION
MATERNAL EFFECTS	MATERNAL ENDOCRINE SYSTEM
ROUTE OF ADMINISTRATION	PER ORAL, DRINKING WATER
NAME OF AGENT	SODIUM CHLORITE
CAS REGISTRY NUMBER	7758-19-2

Figure 2

DBIR: A New Database Containing Information About Biotechnology Resources

James J. Ferguson, Jr., M.D.
Specialized Information Services Division, NLM

As of January 23, 1989, entering the command FILE DBIR while in TOXNET® invokes a novel database concerned with biotechnology. DBIR, the Directory of Biotechnology Information Resources, became publicly available as a component of the TOXNET system on that date. This file provides to the biotechnology and molecular biology communities a convenient guide to useful resources which are available in these sciences. Included among these resources are relevant databases, networks, bulletin boards, analytical application software, collections and repositories of cellular and subcellular elements, collaborative research organizations, and selected publications. In addition, the Directory identifies established committees and organizations which are presently dealing with the nomenclature of biotechnology and molecular biology.

The scope of biotechnology is defined very broadly within the Directory. In addition to the content of its component and cognate basic sciences, it encompasses the various applications of biotechnology in medicine, biology, agriculture, pharmaceuticals, food technology, and environmental sciences.

The publications cited are mainly of a summary, handbook, or compendium type, and do not include the primary periodical literature in the field. Commercial providers of standard laboratory supplies and equipment that are used in biotechnology research are not listed.

The unit record of DBIR contains 28 fields which characterize the resource entity being described. These fields are grouped into four categories: ADMINISTRATIVE INFORMATION (describing the record itself), RESOURCE IDENTIFICATION (which provides fundamental characteristics of the resource entity referenced), KEYWORDS/DESCRIPTORS (which provides a general description of the resource plus special key words and assigned MeSH terms), and DATA TYPE SPECIFIC INFORMATION (providing more detailed information, determined by the type of resource described). It should be noted that full MeSH searching capability (e.g., EXPLODE) is not yet available on TOXNET, but is planned for the future.

The Directory has been assembled and maintained under contract by the Bioinformatics Department of American Type Culture Collection (ATCC) in Rockville, MD. The TOXNET system is used for assembly and maintenance of the Directory in order to exploit TOXNET's facility for frequent and rapid updating. The Directory will also be exported to the ELHILL® system, where it will become accessible as a subset of the DIRLINE® file. This will make it available to a different and larger user community, and will permit the utilization of GRATEFUL MED as a search interface.

The Directory currently has 357 records, and is expected to grow by several hundred more records. The richness and size of the Directory, and thus its usefulness, will ultimately be determined by the amount and kinds of descriptive information which are submitted for inclusion by existing resource entities. Consequently, such input is encouraged and welcomed from as many sources as wish to contribute, and should be directed to ATCC.

For detailed information on DBIR contact:

Specialized Information Services
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894
(301) 496-6531

For submission of information for the Directory contact:

Bioinformatics Department
American Type Culture Collection
12301 Parklawn Drive
Rockville, MD 20852
(301)231-5585

The DBIR Unit Record Structure

The following is the Unit Record description for the Directory of Biotechnology Information Resources (DBIR). The DBIR record contains a category for Administrative Information and three subject categories, which are further subdivided into headers, data fields and data tabs. A name preceded by a double asterisk is a category while headers are marked by a single asterisk. Data fields and data tabs have no asterisk. For purposes of searching and printing, all of the data fields indented below a category or header can be referenced with the mnemonic for that category or header. Note that the data tabs in RELT, RCNA, DINF, OINF, and OPINF are not individually searchable and so do not have mnemonics; their function is to organize and identify the data.

```
      ** ADMINISTRATIVE INFORMATION
DBN       DBIR Record Number
DATE      Last Revision Date
UPDT      Update History
RLEN      Record Length
VRDT      Verification Date

  RID  ** RESOURCE IDENTIFICATION
RNM       Resource Name
ONM       Other Name
GN        General Notes
LUN       Limited Use Notes
SA        Supporting Agency
DTYP      Data Type
RELT      Related DBIR Records
          Component of
          Components
          See Also
RCNA      Resource Contact Name and Address
          Contact
          Institution Name
          Address
          City
          State/Province
          ZIP/Postal Code
          Country
          Telephone Number
          TELEX Number
          FAX Number
          Electronic Mail
  KW  ** KEYWORDS/DESCRIPTORS
GD        General Description
SPKW      Special Keywords
MH        MeSH Headings

  INF ** DATA TYPE SPECIFIC INFORMATION
DINF      Database/Network Information
          Period of Coverage
          Database Structure
          Availability
          Printed Equivalent
          Update Frequency
          Number of Records
          Software Notes
          Language
SO        Nomenclature Source Publication
PB        Publications of the Organization
OINF      Organization Information
          Holdings/Collections
          General Services
          Information Services
          User Charges
      * PINF Publications Information
AU        Author
TA        Title Abbreviation
SUI       SERLINE Unique Identifier
CUI       CATLINE Unique Identifier
ISBN      International Standard Book Number
ISSN      International Standard Serial Number
AI        Abstracting/Indexing Coverage
OPINF     Other Publications Information
          Frequency of Publication
          Period of Coverage
          Collation/Number of Pages
          Language
```

Figure 1

SAMPLE RECORD

DBIR RECORD NUMBER	200083
LAST REVISION DATE	890121
VERIFICATION DATE	05/13/88
UPDATE HISTORY	Complete Update on 01/21/89, 13 fields added/edited/deleted.
RECORD LENGTH	2743
RESOURCE NAME	CODATA-IUIS Hybridoma Data Bank
OTHER NAME	HDB
LIMITED USE NOTES	no special terms or conditions; database owned by CODATA and, therefore, may not be resold or redistributed without permission of CODATA
SUPPORTING AGENCY	Committee on Data for Science and Technology (CODATA); International Council of Scientific Unions (ICSU); International Union of Immunological Societies (IUIS); Switzerland - Fonds National Suisse de la Recherche Scientifique; World Health Organization; Canada - Medical Research Council, Natural Sciences and Engineering Research Council, National Research Council, Health and Welfare Canada; France - Ministere de la Recherche et de la Technologie, Centre Administratif des Alpes-Maritimes; Japan - Institute for Physical and Chemical Research (RIKEN); United Kingdom - Medical Research Council; U.S.A. - National Institutes of Health (NIAID, NIDR, NIGMS, NCI, NICHD, DRR), Food and Drug Administration, National Science Foundation, U.S. Department of Agriculture, American Type Culture Collection; Commission of the European Communities
DATA TYPE	database/network
RELATED DBIR RECORDS	COMPONENT OF: 200129 CODATA/MSDN Network, (CODATA-IUIS Hybridoma Data Bank)
RELATED DBIR RECORDS	SEE ALSO: 100001 American Type Culture Collection

RESOURCE CONTACT
NAME/ADDRESS

CONTACT: Esther Asaki ; Database Manager, U.S. Node
INSTITUTION NAME: Bioinformatics Department ; American Type Culture Collection
ADDRESS: 12301 Parklawn Drive
CITY: Rockville
STATE/PROVINCE: MD
ZIP/POSTAL CODE: 20852-1776
COUNTRY: USA
TELEPHONE NUMBER: (301) 231-5527
TELEX NUMBER: 898 055 ATCC NORTH (telex)
FAX NUMBER: (301) 231-5826
ELECTRONIC MAIL NUMBER: BITNET: ZJA@NIHCU, DIALCOM: 42:CDT0043

RESOURCE CONTACT
NAME/ADDRESS

CONTACT: Database Manager, European Node
INSTITUTION NAME: CERDIC ; Faculte de Medecine
ADDRESS: Chemin de Vallombrose
CITY: Nice
ZIP/POSTAL CODE: 06034
COUNTRY: France
TELEPHONE NUMBER: 93.81.61.61

Figure 2A

```
RESOURCE CONTACT
 NAME/ADDRESS
                CONTACT: Dr. Hideaki Sugawara ; Database Manager, Japanese Node
                INSTITUTION NAME: RIKEN Institute ; The Research Information
                 Section for Life Sciences ; The Institute for Physical and
                 Chemical Research
                ADDRESS: 1-2, Hirosawa
                CITY: Wako-shi
                STATE/PROVINCE: Saitama-ken
                ZIP/POSTAL CODE: 351
                COUNTRY: Japan
                TELEPHONE NUMBER: 0484-62-1111
                TELEX NUMBER: 2962818 RIKEN J (telex)
                ELECTRONIC MAIL NUMBER: DIALCOM: 42:CDT0007
GENERAL DESCRIPTION          TYPE OF RESOURCE: database; directory; factual;
                             listing of hybridomas and monoclonal antibodies
                             providing comprehensive background information on
                             the developer, availability, methodology, and
                             materials used to produce the hybridoma; online
                             product ordering
GENERAL DESCRIPTION          CONTENT: hybridoma technology; immunology
SPECIAL KEYWORDS             ORDERING
SPECIAL KEYWORDS             CYTOKINES
SPECIAL KEYWORDS             FACTUAL DATABASE
SPECIAL KEYWORDS             CUSTOM SERVICE
MESH HEADINGS                ONLINE SYSTEMS
MESH HEADINGS                DATABASES
MESH HEADINGS                HYBRIDOMAS
MESH HEADINGS                ANTIBODIES, MONOCLONAL
MESH HEADINGS                LYMPHOKINES
MESH HEADINGS                BIOTECHNOLOGY
MESH HEADINGS                DIRECTORIES

DATABASE/NETWORK
 INFORMATION
                DATABASE STRUCTURE: Individual records; field headers.
                AVAILABILITY: Staff search; online (accessible through the
                 CODATA/MSDN Network on DIALCOM, internationally available
                 through the International and National Packet Switch Stream
                 (PSS) service).
                UPDATE FREQUENCY: Daily.
                NUMBER OF RECORDS: 10,000.
                SOFTWARE NOTES: (CODATA/MSDN Network): text-based; flat file;
                 Boolean logic; case-insensitive searching; right-hand
                 truncation; menu-driven searching; update search capabilities;
                 (in-house DBMS): text-based; numeric-based; flat file; online
                 thesaurus.
                LANGUAGE: English.
TITLE ABBREVIATION           ND
```

Figure 2B

Serials Update

INDEXED TITLES UPDATE, FEBRUARY 1989

The following titles cited in MEDLINE, HEALTH, and POPLINE have recently been selected for indexing, undergone a title change, or ceased publication. This list is not cumulative; the information provided is only for titles whose status has changed since the last UPDATE. More detailed information may be found in SERLINE. For further information, please contact MMS or Ms. Esther Baldinger, (301) 496-1276, Technical Services Division, NLM.

TITLES SELECTED FOR INDEXING, JANUARY 1989

HLI HOSPITAL LAW NEWSLETTER
HOSP LAW NEWSL
1,1983?--
ASPEN PUBLISHERS
FREDERICK MD UNITED STATES
INDEXING BEGAN WITH V6N1,NOV 1988.
ON ORDER
SR0064875 JC: HLN

HLI JOURNAL OF QUALITY ASSURANCE
J QUAL ASSUR
1,1979?--
NATIONAL ASSOCIATION OF QUALITY ASSURANCE PROFESSIONALS
DEERFIELD IL UNITED STATES
CALLED ALSO: JQA, SUMMER 1987?- .
INDEXING BEGAN WITH V9N2,SPRING 1987.
W1 JO863
SR0059293 JC: HQQ

IDL ODONTOLOGIA
ODONTOLOGIA
1N1,FEB 1980--
SOCIETE D EDITIONS DES CAHIERS DE PROTHESE
PARIS FRANCE
INDEXING BEGAN WITH V9N1,FEB 1988.
W1 OD368 0244-9331
SR0051554 JC: PCD

TITLE CHANGES, JANUARY 1989

IM ALLERGY PROCEEDINGS
ALLERGY PROC
9N5,SEP-OCT 1988--
OCEANSIDE
PROVIDENCE RI UNITED STATES
CONTINUES: NEW ENGLAND AND REGIONAL ALLERGY PROCEEDINGS. INCLUDES MINUTES OF MEETINGS OF STATE, REGIONAL AND LOCAL ALLERGY SOCIETIES.
W1 AL5632L 0742-2814
SR0064748 JC: FNX

HLI AMRO
AMRO
29N3,NOV 1988--
ASSOCIATION OF HEALTH CARE INFORMATION AND MEDICAL RECORDS OFFICERS
TRURO ENGLAND
CONTINUES: MEDICAL RECORD AND HEALTH CARE INFORMATION JOURNAL.
W1 AM924
SR0064822 JC: AMR

IM ARCHIVO MONALDI PER LE MALATTIE DEL TORACE
ARCH MONALDI MAL TORACE
42N1,JAN-FEB 1987--
IDELSON
NAPOLI ITALY
CONTINUES: ARCHIVO MONALDI PER LA TSIOLOGIA E LE MALATTIE DELL APPARATO RESPIRATORIO.
W1 AR596QV
SR0064886 JC: 7YR

IM COMPLEMENT AND INFLAMMATION
COMPLEMENT INFLAMM
6N1,JAN-FEB 1989--
KARGER
BASEL SWITZERLAND
CONTINUES: COMPLEMENT.
W1 CO451V 1012-8204
SR0064887 JC: DOQ

IM HEAD AND NECK
HEAD NECK
11N1,JAN/FEB 1989--
JOHN WILEY AND SONS
NEW YORK UNITED STATES
CONTINUES: HEAD AND NECK SURGERY.
W1 HE115 0148-6403
SR0064750 JC: G1P

HLI HEALTHTEXAS
HEALTHTEXAS
44N7,JAN 1989--
TEXAS HOSPITAL ASSOCIATION
AUSTIN TX UNITED STATES
CONTINUES: TEXAS HOSPITALS.
IN PROCESS
SR0064837 JC: G2B

HLI HOSPITAL STRATEGY REPORT
HOSP STRATEGY REP
1N1,NOV 1988--
ASPEN PUBLISHERS
FREDERICK MD UNITED STATES
CONTINUES: HOSPITAL ENTREPRENEURS NEWSLETTER.
IN PROCESS
SR0064796 JC: HSR

IDL MEIKAI DAIGAKU SHIGAKU ZASSHI [JOURNAL OF MEIKAI UNIVERISTY SCHOOL OF DENTISTRY]
MEIKAI DAIGAKU SHIGAKU ZASSHI
17N1,1988--
MEIKAI DAIGAKU SHIGAKUBU
SAKATO JAPAN
CONTINUES: JOSAI SHIKA DAIGAKU KIYO.
IN PROCESS
SR0064854 JC: MDS

IM MOLECULAR AND CHEMICAL NEUROPATHOLOGY
MOL CHEM NEUROPATHOL
8N1,FEB 1988--
HUMANA PRESS
CLIFTON NJ UNITED STATES
CONTINUES: NEUROCHEMICAL PATHOLOGY.
ON ORDER
SR0064824 JC: MCN

TITLES NO LONGER INDEXED AS OF JANUARY 1989

IM BEITRAGE ZUR HYGIENE UND EPIDEMIOLOGIE
BEITR HYG EPIDEMIOL
N1,1943-N25,1982
JOHANN AMBROSIUS BARTH
LEIPZIG GERMANY, EAST
INDEXING FOR ONLINE FILES BEGAN WITH V19,1965.
W1 BE341 0067-5083
B03320000 JC: 9LS

IM CLINICAL REPRODUCTION AND FERTILITY
CLIN REPROD FERTIL
1N1,MAR 1982-5N6,DEC 1987
BLACKWELL SCIENTIFIC PUBLICATIONS
MELBOURNE AUSTRALIA
OFFICIAL PUBLICATION OF THE FERTILITY SOCIETY OF AUSTRALIA. QUARTERLY 1982-1985; BIMONTHLY, 1986- .
INDEXING BEGAN WITH V1N1,1982.
W1 CL774F 0725-556X
C26830000 JC: CLF

IDL FACIAL ORTHOPEDICS AND TEMPOROMANDIBULAR ARTHROLOGY
FACIAL ORTHOP TEMPOROMANDIBULAR ARTHROL
1,1984-5,1988
FOUNDATION FOR ADVANCED RESEARCH AND TRAINING
EVANS GA UNITED STATES
INDEXING BEGAN WITH V2N1,1985.
W1 FA1853F 0749-0399
SR0053453 JC: ERO

CHANGE OF ADDRESS FORM
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User ID Code _____ (Must be included)

Check here _____ if you purchased GRATEFUL MED.
The new address information will be forwarded to NTIS.

New Billing Address: (please print or type)

Name: _____

_____

_____

_____

_____

Telephone: _____

New NLM Technical Bulletin/GRATEFUL MED Address:

Name: _____

_____

_____

_____

_____

Telephone: _____

NOTE:
This form **DOES NOT** change the address of Automatic SDIs or your stored address for offline prints. Call the MMS Service Desk for information on changing these addresses.

_____
Signature

_____
Printed Name

_____
Date

Please affix current address label here:

Please mail this form to:

MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

ISSN 0146-3055
FEBRUARY 1989

Supplement No. 1

The NLM Technical Bulletin

MEDLARS UPDATE

SPECIAL ISSUE

Introduction

This *Special Issue* of the *NLM Technical Bulletin* presents information on important changes made to the Medical Subject Headings vocabulary for 1989 as well as significant changes made to the MEDLARS® software and databases.

In its second year, the *Special Issue* replaced the "NLM Online Services Updates," which previously were held in major cities throughout the U.S. each fall. It represents an overall improvement in the transmission of annual update information because it reaches a much larger portion of the 25,000 individuals and organizations with online codes than the few hundred searchers who attended the "in-person" Updates in the past.

All articles have been prepared specifically with the MEDLARS searcher in mind. Much of the information has been derived from materials provided to the NLM indexers during their annual orientation to the new Medical Subject Headings vocabulary. Also, NLM staff and other persons have contributed information from their areas of specialization. Because of the large number of contributors, there is a variety of writing styles and search techniques.

Continued on page 3.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service • National Institutes of Health
National Library of Medicine

TABLE OF CONTENTS

ADMINISTRATIVE INFORMATION

Introduction. . . . . .Cover, 3
GRATEFUL MED. 3
MEDLINE on CD-ROM 4
Codes for GRATEFUL MED Training 5

ELHILL/MEDLINE & MeSH/INDEXING INFORMATION

MEDLINE and Its Backfiles 6
ELHILL 3.3 Capabilities 11
1989 MeSH Vocabulary File 21
Short Forms 25
More Abstracts Online 25
New MEDLINE Field: Comments 26
Retracted Publication and Retraction of Publication . . . 27
One Pre-Explosion Name Change 29
New Dental Journal Subset Tag 30
Indexing Policy Changes 31
Infections Caused by Human Immunodeficiency Viruses or Simian Immunodeficiency Viruses. 31
Combined Antibiotics. 33
Changes in the Subheading Surgery 34
Extended Subheadings. 35
New and Changed Subheadings 39
New Review Indexing Policy - Results One Year Later . . . 42
Highlights of 1989 MeSH Headings in Selected Fields . . . 43
Ophthalmology and Optometry Vocabulary. 43
1989 Leukemia Tree Changes. 44
Tree Changes. 45
The Basics of Searching MEDLINE 46
NLM Student Code Program. 47
Survey of Individual Users of MEDLINE on the NLM System . 48
AIDS Bibliography to Become a Monthly 50

OTHER DATABASE INFORMATION

BIOETHICSLINE Update. 51
National Cancer Institute Update. 53
CHEMLINE Update 54
HEALTH PLANNING & ADMINISTRATION. 55
TOXLINE Regeneration Status 57
SERLINE Update. 58
TOXNET Update 60
PC User Aids. 61
Fact Sheets 62

SAMPLE FORMS

NLM Online Services Application 65
NLM Automatic SDI Service Request Form. 69
Change of Address Form. 71
Suggestion for Medical Subject Headings Change. 72
Searching Aids with NTIS Order Form 73
Request for NLM Online Training & 1989 Schedule 77
Request for Online Training Code(s) 79
Participant's Profile/Training Code Use 81

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GRATEFUL MED®

GRATEFUL MED Version 4.0 was released in December 1988. This version was sent to all purchasers of previous versions. Version 4.0 includes the 1989 Medical Subject Headings and, this year, explanations have been added for selected terms. Other enhancements with this version include: access to input form screens for two additional databases, AIDSLINE and SDILINE®; improved SETUP; Save Search feature; and a log to record search statistics. These and other new features were described in detail in the November 1988 issue of the *NLM Technical Bulletin*.

GRATEFUL MED Version 4.0 can be ordered from:

National Technical Information Service
5285 Port Royal Rd.
Springfield, VA 22161
Telephone: (703) 487-4660

Order number: PB86-158482/GBB

Price: $29.95 prepaid, plus $3.00 shipping & handling.

To order GRATEFUL MED by mail use the NTIS order form which is included in the Appendix of this issue.

New orders will include the program on both 5 1/4-inch and 3 1/2-inch disks. Replacement copy mailings did not include the 3 1/2-inch disk. If you received an upgrade and require the 3 1/2-inch disk, send a mailing label to:

Federal Computer Products Center
Attn: Lois Grooms
National Technical Information Service
5285 Port Royal Rd.
Springfield, VA 22161

Please indicate that you have received the GRATEFUL MED Version 4.0 upgrade and are requesting the 3 1/2-inch disk.

The Macintosh version of GRATEFUL MED is being tested. It is expected to be available some time this year, probably in June.

****

Introduction
Continued from page 1.

A special effort has been made to analyze past *NLM Technical Bulletin* articles, to develop material for this issue on items which warranted elaboration. Certain items about new system capabilities that have already been covered in the *Bulletin* are not repeated. Actual search instructions and examples have been prepared, whenever possible and appropriate, to provide the searcher with a better understanding of the various changes.

Further clarification on any of these changes may be obtained by calling the MEDLARS Service Desk at 800-638-8480 (or in Maryland, 301-496-6193).

Carolyn B. Tilley
Head, MEDLARS Management Section
February, 1989

MEDLINE® ON CD-ROM

As part of a one-year experimental license agreement, companies who were developing MEDLINE CD-ROM products received MEDLINE data for one year without charge. NLM required in exchange that each company place three of their products, including equipment, in institutions for evaluation purposes. Each site conducted its own evaluation. Results of these 21 evaluations were heard on September 23, 1988 at the CD-ROM Forum held at NLM.

A publication scheduled for release in Spring of 1989 will contain the report of the evaluation studies, presented by panelists and guest speakers at the event, and a "features checklist" for eight MEDLINE CD-ROM products. It will be published by:

Learned Information, Inc.
143 Old Marlton Pike
Medford, NJ 08055

NLM has recently released copies of videocassettes of the meeting. The videotapes are available for loan from the Regional Medical Libraries. All have been issued in both 3/4" and 1/2" (VHS) formats, so be sure to specify the desired format in your request. Call numbers are listed below for your convenience.

- Rose Marie Woodsmall, Becky Lyon-Hartman. MEDLINE on CD-ROM: introduction. Z 699.5.M39 VC no.4.1 1988
- Nancy K. Roderer. CD-ROM in the health sciences library: users and uses. Z 699.5.M39 VC no.4.2 1988
- Prudence W. Dalrymple. CD-ROM in the clinical setting: users and uses. Z 699.5.M39 VC no.4.3 1988
- Paul B. Kantor. Assessing the costs. Z 699.5.M39 VC no.4.4 1988
- Nancy N. Woelfl. Systems: features and capabilities. Z 699.5.M39 VC no.4.5 1988
- William David Penniman. Vendors: lessons learned and future plans here and abroad. Z 699.6.M39 no.4.6 1988
- William David Penniman. Putting it all in perspective. Z 699.5.M39 VC no.4.7 1988

The following organizations have licensed MEDLINE and make all or portions of the database available on CD-ROM.

Aries Systems Corporation
79 Boxford Street
North Andover, MA 01845

BRS Information Technologies
1350 Avenue of the Americas
Suite 1802
New York, NY 10019

Cambridge Scientific Abstracts
7200 Wisconsin Avenue
Bethesda, MD 20814

Dialog Information Services, Inc.
3460 Hillview Avenue
Palo Alto, CA 94304

Digital Diagnostics
1050 46th Street
Sacramento, CA 95819

EBSCO Electronic Information
P.O. Box 13787
Torrance, CA 95053

NEJM (New England Journal of Medicine)
1440 Main Street
Waltham, MA 02254-0803

Online Research Systems, Inc.
951 Amsterdam Ave., Apt. 2C
Suite 2C
New York, NY 10025

SiverPlatter Information, Inc.
37 Walnut Street
Wellesley Hills, MA 02181

Codes for GRATEFUL MED Training

Trainers may obtain non-billed codes for use when teaching database searching using NLM's GRATEFUL MED software package. If you are teaching health professionals or other individuals how to use the GRATEFUL MED program, you may request by writing (see forms in Appendix) or by telephone some non-billed codes for GRATEFUL MED use from the MEDLARS Management Section. Trainers may also use one of these codes for a few hours in preparation for the actual training. They may then provide other codes to the trainees to practice searching using GRATEFUL MED. In the future, NLM expects to issue a short training workbook for self-study purposes or to be used as the course workbook for GRATEFUL MED training.

Information is included elsewhere in this issue regarding codes which may be obtained by students who wish to access NLM databases at the reduced student rates. Another article discusses the availability of non-billed codes for use by persons who are learning to search using the manual, *The Basics of Searching MEDLINE*, either through self-study or during a short course. The March 1989 issue of the *NLM Technical Bulletin* will contain information on the PC-based tutorial for GRATEFUL MED, *HowTo*.

MEDLINE and Its Backfiles

FILE SEGMENTATION

The 1989 configuration of MEDLINE and its backfiles is shown in Figure 1. Note the creation of a new backfile, MED86, which contains 2 years of data.

SIZE

For the first time, MEDLINE is a one-year file growing to two years. This rearrangement of the data was done primarily for two reasons, given that an ELHILL® database has certain maximum limits on its size:

1. NLM will increase the number of journals indexed for MEDLINE by several hundred titles over the next few years, and

2. NLM will add abstracts for more citations beginning with 1989 journal issues, notably the Special List Nursing and Dental journals and certain non-English journals. The percentage of MEDLINE citations with abstracts is predicted to increase from about 60% to over 75%.

There will be larger SDILINE updates during 1989 of 30,000 or more citations per month, up from the 25-26,000 citations per month in 1988. NLM is estimating a total of about 350,000 citations in MEDLINE for 1989. This increase is a result of adding more indexed journal titles. New titles are listed in the "Serials Update" section in each issue of the *NLM Technical Bulletin*. This is also the reason for publishing each month's issue of 1989 *Index Medicus*® in a two-volume set.

UPDATE SCHEDULE

MEDLINE itself is updated two times a month now at NLM. The update schedule is republished at the end of this article. These more frequent updates mean that the data are online for your use more quickly. SDILINE remains on a monthly update schedule (also republished at the end of the article) as do the SDILINE Automatic SDIs. For the most current data, you'll want to search MEDLINE. For example, the update schedule shows the following information for the May 1989 update:

ENTRY MONTH	UPDATED MEDLINE/AIDSLINE	DATE OF ENTRY (DA) RANGE
8905 (EM)		
Part 1	MAR 11	FROM 890224 TO 890309(DA)
Part 2	MAR 25	FROM 890310 TO 890323(DA)

If you do a search on March 13 and want citations from the most recent update, simply combine your strategy with: 'AND 8905 (EM)'.

If you want to repeat that same search after March 25 and retrieve only the new 8905 (EM) citations added with the Part 2 semi-monthly update, then combine your strategy with: 'AND 8905 (EM) AND FROM 890310 TO 890323(DA)'.

You need to range on Date of Entry only if you are trying to isolate citations added with the second portion of an Entry Month.

YEARS OF COVERAGE

As part of this past year-end processing routine, NLM moved citations from MEDLINE into the appropriately named backfile on the basis of the year of publication (YR) of the cited article. We began this process in March 1988 when MED66 through MED83 were "re-leveled" by YR. Throughout the indexing year, though, NLM continues to index journal issues that were previously missed or delayed for various reasons. These citations are added to MEDLINE regardless of their year of publication. So, each December, NLM 're-levels' MEDLINE and moves the citations into the correct backfile for the year of publication. The advantages of this approach include:

1. Files are oriented by publication year (not year of indexing); and

2. Ability to pinpoint the file you need in order to search for a citation to an article you know you want to read or need to verify for an interlibrary loan request.

Newer MeSH headings will often find retrieval in older backfiles by virtue of citations being indexed with the current year's MeSH and then being moved into a backfile in December because of an older publication year. For example, ACQUIRED IMMUNODEFICIENCY SYNDROME (or AIDS) was introduced as a MeSH heading in 1983. Yet, the following interaction is reproduced from MED80:

YOU ARE NOW CONNECTED TO THE BACK80 (1980 - 82) FILE.

SS 1 /C?
USER:
aids
PROG:
SS (1) PSTG (24)

There is another important point here. While it's true that these 24 citations are indexed to AIDS and are on-target retrieval, there are undoubtedly more citations in this backfile on this subject. This is because most of the citations in MED80 were indexed using the 1980, 1981, or 1982 MeSH versions when AIDS was not an available MeSH heading. It is a good idea to research the terminology for your subject and note any time limitations on the MeSH headings. Adjust your strategy to include the headings used prior to the introduction of current headings. These precursor headings can be found in the PI (Previous Indexing) field in the online MeSH Vocabulary File.

For example:

file mesh
PROG:
YOU ARE NOW CONNECTED TO THE MESH VOCABULARY (1989) FILE.

SS 1 /C?
USER:
aids
PROG:
MM (AIDS) (2)
1 AIDS (NF)
2 AIDS (MH)
SPECIFY NUMBERS, ALL, OR, NONE-

USER:
2
PROG:
SS (1) PSTG (1)

SS 2 /C?
USER:
prt include pi
PROG:

1
MH - Acquired Immunodeficiency Syndrome
DE - ACQUIRED IMMUNODEFIC SYNDROME
DC - 1
MN - C2.782.815.483.23
MN - C2.800.801.100
MN - C20.673.483.23
FX - AIDS Serodiagnosis:3
FX - HIV Antibodies:3
FX - HIV Antigens:3
FX - HIV Seropositivity:3
PI - Immunologic Deficiency Syndromes (79-82)

In this case, the PI heading, IMMUNOLOGIC DEFICIENCY SYNDROMES, will probably result in too much non-related retrieval so it should be 'ANDed' with appropriate Text Words (TW).

To illustrate this example, let's search the AIDSLINE database which includes citations on AIDS from 1980 forward. NLM has already devised an AIDS search strategy to encompass the variations in terminology over time. So, a quick (YR) search should illustrate how much more directly related material we could find in MED80 on AIDS:

SS 2 /C?
USER:
file aidsline
PROG:
YOU ARE NOW CONNECTED TO THE AIDSLINE (1980 FORWARD, MEDLINE SUBSET) FILE.

SS 1 /C?
USER:
(yr) 80
PROG:
SS (1) PSTG (5)

SS 2 /C?
USER:
(yr) 81
PROG:
SS (2) PSTG (5)

SS 3 /C?
USER:
(yr) 82
PROG:
SS (3) PSTG (28)

SS 4 /C?
USER:
1 or 2 or 3
PROG:
SS (4) PSTG (38)

The (YR) search in AIDSLINE retrieves 38 citations as compared to the 24 citations found in MED80 using the search AIDS (MH). One of these additional citations just might be the important paper you were after! Of course, each search request must be evaluated in light of need versus time or cost. Not every search warrants intensive vocabulary research. The intent here is to let you realize some of the subtleties and sophisticated techniques of online searching.

ONE FINAL WORD

The grand total of files in the MEDLINE family is now 7. This exceeds the number of databases that can be searched in one OFFSEARCH, which is 6. The following options are available to you if you need to search all 7 files:

1. Use the new MFSEARCH command to conduct a multifile search.

2. Use SAVE or SAVESEARCH to record your strategy; then, access each file, run the search name, and print the results.

3. Do an OFFSEARCH connected to MEDLINE specifying only the backfile names for the FILES? question. Finish the OFFSEARCH and then order an offline print or print online for the MEDLINE retrieval.

4. Do 2 OFFSEARCHes and divide up the file names. Recommended only if your strategy is simple to type in.

Database Name	Database Alias	Dates of Coverage	Approximate Number of Records
MEDLINE	MED	1988-89	223,205 (as of Jan. 5)
MED86	M86, BACK86, B86	1986-87	639,512
MED83	M83, BACK83, B83	1983-85	889,211
MED80	M80, BACK80, B80	1980-82	803,271
MED77	M77, BACK77, B77	1977-79	775,193
MED72	M72, BACK72, B72	1972-76	1,175,527
MED66	M66, BACK66, B66	1966-71	1,310,396

Figure 1

1989 **SEMI-MONTHLY** UPDATE SCHEDULE FOR NLM DATABASES

ENTRY MONTH	UPDATED MEDLINE/AIDSLINE AVAILABLE	DATE OF ENTRY (DA) RANGE*
8901 (EM)	DEC 12	FROM 881028 TO 881123 (DA)
8902 (EM)	DEC 31	FROM 881124 TO 881222 (DA)
8903 (EM)		
Part 1	JAN 14	FROM 881223 TO 890112 (DA)
Part 2	JAN 28	FROM 890113 TO 890126 (DA)
8904 (EM)		
Part 1	FEB 11	FROM 890127 TO 890209 (DA)
Part 2	FEB 25	FROM 890210 TO 890223 (DA)
8905 (EM)		
Part 1	MAR 11	FROM 890224 TO 890309 (DA)
Part 2	MAR 25	FROM 890310 TO 890323 (DA)
8906 (EM)		
Part 1	APR 8	FROM 890324 TO 890406 (DA)
Part 2	APR 22	FROM 890407 TO 890420 (DA)
8907 (EM)		
Part 1	MAY 13	FROM 890421 TO 890511 (DA)
Part 2	MAY 27	FROM 890512 TO 890525 (DA)
8908 (EM)		
Part 1	JUN 10	FROM 890526 TO 890608 (DA)
Part 2	JUN 24	FROM 890609 TO 890622 (DA)
8909 (EM)		
Part 1	JUL 15	FROM 890623 TO 890713 (DA)
Part 2	JUL 29	FROM 890714 TO 890727 (DA)
8910 (EM)		
Part 1	AUG 12	FROM 890728 TO 890810 (DA)
Part 2	AUG 26	FROM 890811 TO 890824 (DA)
8911 (EM)		
Part 1	SEP 9	FROM 890825 TO 890907 (DA)
Part 2	SEP 23	FROM 890908 TO 890921 (DA)
8912 (EM)		
Part 1	OCT 14	FROM 890922 TO 891012 (DA)
Part 2	OCT 28	FROM 891013 TO 891026 (DA)

*See the March 1988 issue of the NLM Technical Bulletin, page 8, for an explanation of how to using ranging to isolate Part 2 of a monthly update. For routine **monthly** updates of selected other NLM databases see the "1989 Monthly Update Schedule for NLM Databases."

1989 **MONTHLY** UPDATE SCHEDULE FOR NLM DATABASES

ENTRY MONTH	UPDATED SDILINE AVAILABLE	UPDATED HEALTH AVAILABLE	UPDATED POPLINE AVAILABLE	UPDATED CANCERLIT AVAILABLE	UPDATED TOXLINE/ TOXLIT AVAILABLE
8901 (EM)	DEC 12	DEC 12	JAN 7	DEC 31	JAN 14
8902 (EM)	DEC 31	JAN 7	FEB 4	FEB 4	FEB 11
8903 (EM)	JAN 28	FEB 4	MAR 4	MAR 4	MAR 11
8904 (EM)	FEB 25	MAR 4	APR 8	APR 1	APR 8
8905 (EM)	MAR 25	APR 1	MAY 6	APR 29	MAY 6
8906 (EM)	APR 22	APR 29	JUN 10	JUN 3	JUN 10
8907 (EM)	MAY 27	JUN 3	JUL 8	JUL 1	JUL 8
8908 (EM)	JUN 24	JUL 1	AUG 5	AUG 5	AUG 12
8909 (EM)	JUL 29	AUG 5	SEP 9	SEP 2	SEP 9
8910 (EM)	AUG 26	SEP 2	OCT 7	SEP 30	OCT 7
8911 (EM)	SEP 23	SEP 30	NOV 4	NOV 4	NOV 11
8912 (EM)	OCT 28	NOV 4	DEC 18	DEC 11	DEC 18

December updates for POPLINE, CANCERLIT, and TOXLINE/TOXLIT are subject to change.

For MEDLINE and AIDSLINE updates see the "1989 Semi-monthly Update Schedule for NLM Databases."

ELHILL 3.3 Capabilities

Articles in the October and November issues of the *NLM Technical Bulletin* introduced the new ELHILL capabilities that became operational on November 27, 1988. These articles covered the technical details and also stepped through online interactions using the new commands TFILE, SPRINT, MFSEARCH, RETURN, and NEXT. In this article we are going to review the basic commands, show examples of the usefulness of MultiFile search in automatic mode, and highlight some new program messages. This article builds on the October and November articles. If you do not have copies of those *NLM Technical Bulletin* issues, call the MEDLARS Management service desk (301-496-6193 or 800-638-8480) to request copies of those articles.

EXAMPLE 1 - TFILE AND SPRINT

This example shows the use of both TFILE and SPRINT. SPRINT can be used to print citations from multiple search statements, which may belong to different databases as long as you have used the TFILE command to change files. Remember that printing is still performed one search statement at a time, but by using these commands printing can be done from several databases automatically in sequence. We have not included the mechanics of the SPRINT command here. Please see the previously mentioned NLM Technical Bulletin issues for these details.

```
YOU ARE NOW CONNECTED TO THE MESH VOCABULARY (1989) FILE.

SS 1 /C?
USER:
nbr ru 486
PROG:

SELECT #  POSTINGS  TERM
  1          1     RU 43-715 (SY)
  2          1     RU 43280 (MH)
  3          1     RU 486 (SY)
  4          1     RU 486 METHOCHLORIDE (SY)
  5          1     RU 486-6 (SY)
UP N OR DOWN N OR ENTER A SELECT COMMAND.

USER:
sel 3
PROG:
SS (2) PSTG (1)

SS 3 /C?
USER:
prt fu
PROG:

1
NM  - mifepristone
RN  - 84371-65-3
SY  - RU-486
SY  - RU-38486
SY  - 11 beta-(4-dimethylaminophenyl)-17 beta-hydroxy-17
      alpha-(prop-1-ynyl)estra-4,9-dien-3-one
SY  - RU 486-6
SY  - RU-486-6
SY  - R38486
SY  - R 38486
```

- **I will be able to use the Name of Substance (NM) to search for ru 486 online.**

```
SY  - R-38486
SY  - mifepriston
SY  - RU 486
SY  - ZK 95890
SY  - ZK-95890
SY  - RU 38486
N1  - Estra-4,9-dien-3-one,
      11-(4-(dimethylamino)phenyl)-17-hydroxy-17-(1-propynyl)-,
      (11beta,17beta)-
HM  - *ESTRENES
PA  - ABORTIFACIENT AGENTS, STEROIDAL
PA  - GLUCOCORTICOIDS/antag
PA  - MENSTRUATION INDUCING AGENTS
PA  - PROGESTATIONAL HORMONES/antag
II  - CONTRACEPTIVES, ORAL, SYNTHETIC
SO  - C R Seances Acad Sci (III) 1982;294(18):933
NO  - progesterone antagonist with great affinity for progesterone
      receptors; interrupts early pregnancy & regulates menstrual cycle

SS 3 /C?
USER:
file chem
PROG:
YOU ARE NOW CONNECTED TO THE CHEMLINE FILE.

SS 1 /C?
USER:
84371-65-3
PROG:
SS (1) PSTG (1)


SS 2 /C?
USER:
prt fu
PROG:

1
RN  - 84371-65-3
ON  - 83203-42-3 (CAS)
ON  - 83203-42-3 (TOXLIT)
MF  - C29-H35-N-O2
N1  - Estra-4,9-dien-3-one,
      11-(4-(dimethylamino)phenyl)-17-hydroxy-17-(1-propynyl)-,
      (11beta,17beta)- (9CI)
SY  - Mifepristone  [MESH:RTECS:USPDDN]
SY  - Mifepristone [INN]  [USPDDN]
SY  - R 38486  [MESH:RTECS]
SY  - RU 38486  [MESH:RTECS]
SY  - RU 486  [CAS:MESH:RTECS]
SY  - RU 486-6  [MESH:RTECS]
CC  - Hormone  [RTECS]
CC  - Reproductive Effect  [RTECS]
LO  - TOXLIT
LO  - TOXLINE
LO  - MEDLINE
LO  - MED83
LO  - MED80
LO  - CANCERLIT
LO  - RTECS

SS 2 /C?
USER:
file med
PROG:
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?
USER:
mifepristone (nm) or 84371-65-3
PROG:
SS (1) PSTG (79)
```

- **Printing full will give me the additional RNs (ON)s and also the locators (LO).**
- **The LO (locator) field in CHEMLINE identifies databases containing citations relevant to the chemical substance retrieved.**
- **I begin my search in MEDLINE using the RN and one of the synonyms.**

```
SS 2 /C?
USER:
tfile cancer

PROG:
YOU ARE NOW CONNECTED TO THE CANCERLINE (CANCERLIT) FILE.

SS 2 /C?
USER:
mifepristone (nm) or 84371-65-3
PROG:
SS (2) PSTG (70)

SS 3 /C?
USER:
3 and not medl (si)

SS 4 /C?
USER:
tfile toxlit

PROG:
YOU ARE NOW CONNECTED TO THE TOXLIT (1981 FORWARD, ROYALTY) FILE.

SS 4 /C?
USER:
84371-65-3 or 83203-42-3
PROG:
SS (4) PSTG (261)

SS 5 /C?
USER:
3 or mifepristone (nm)
PROG:
SS (5) PSTG (265)

SS 6 /C?
USER:
sprint

PROG:
SSNOS?
USER:
1,2,5
PROG:

READY TO PRINT FROM SEARCH STATEMENT 1, CONTAINING 79 ITEM(S) FROM
MEDLINE.

ENTER SPECIFICATIONS FOR PRINTING (E.G., BR, SD, FU, DL), OR 'SAME' (DO
NOT USE THE WORDS 'PRINT' OR 'PRT'):
```

- **Using TFILE, I change to CANCERLIT and execute the same search strategy.**
- **Remember that since I changed files using TFILE the search statement numbers will increase.**
- **This step will eliminate the MEDLINE citations.**
- **Using TFILE, I change to TOXLIT and execute a similar strategy enhancing it with an additional RN that was listed in the CHEMLINE record as an other registry number (ON) used in TOXLIT.**
- **Since I used TFILE to change databases, I can print from several files at one time using the the SPRINT command.**
- **I must answer the SPRINT prompts which will follow according to my needs. Remember that in SPRINT the program allows printing from one search statement at a time.**

EXAMPLE 2 - SEARCH FROM EXAMPLE 1 USING MFS AUTO MODE

This example shows a search similar to the one run in EXAMPLE 1, but this time executed in MFSEARCH AUTO mode. On the first line along with the MFS command we have named the files to be searched and entered the phrase MODE=AUTO. This is the preferred way to begin a MultiFile Search session as long as you are sure what files, mode, and even searchname you want to use. Also, in this second example, we have used the NEXT command in order to execute this strategy in a database that was not named initially.

```
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?
USER:
mfs medline, cancer, toxlit mode=auto
```

- **I am telling the system that I want to run an automatic MultiFile search in MEDLINE, CANCERLIT, and TOXLIT.**

```
PROG:
SEARCH TO BE RUN ALREADY EXISTS. DO YOU WISH TO REPLACE IT? (Y/N)

USER:
Y

PROG:
MULTIFILE SESSION ABOUT TO BEGIN
MODE: AUTO
SEARCHNAME: &-MFS-& (TO BE INPUT)
FILES TO BE SEARCHED:
** MEDLINE                    (1988 - 89)
** CANCERLINE                 (CANCERLIT)
** TOXLIT                     (1981 FORWARD, ROYALTY)
OK? (Y/N/C/LIST)

USER:
Y
PROG:
ENTER SEARCH-

*STS* SS 1 /C?
USER:
mifepristone (nm) or 84371-65-3 or 83203-42-3
PROG:
NP (83203-42-3)
SS (1) PSTG (79)

*STS* SS 2 /C?
USER:
finished
PROG:
SEARCH SET FROM SS 1 FORWARD SAVED AS '&-MFS-&'.
YOU ARE NOW CONNECTED TO THE CANCERLINE (CANCERLIT) FILE.
SS (2) PSTG (70)
YOU ARE NOW CONNECTED TO THE TOXLIT (1981 FORWARD, ROYALTY) FILE.
SS (3) PSTG (265)

READY TO PRINT FROM SEARCH STATEMENT 1, CONTAINING 79 ITEM(S) FROM
MEDLINE.

ENTER SPECIFICATIONS FOR PRINTING (E.G., BR, SD, FU, DL), OR 'SAME' (DO
NOT USE THE WORDS 'PRINT' OR 'PRT'):
.
.
.

SS 4 /C?
USER:
next pop
PROG:
YOU ARE NOW CONNECTED TO THE POPLINE FILE.
SOME ITEMS MAY NOT BE IN THE NLM COLLECTION;
PLEASE USE SERLINE OR CATLINE FOR AVAILABILITY INFORMATION.
SS (4) PSTG (11)

READY TO PRINT FROM SEARCH STATEMENT 4, CONTAINING 11 ITEM(S) FROM
POPLINE.

ENTER SPECIFICATIONS FOR PRINTING (E.G., BR, SD, FU, DL), OR 'SAME' (DO
NOT USE THE WORDS 'PRINT' OR 'PRT'):
.
.
.
```

- I enter a search strategy that encompasses the strategies that I used in EXAMPLE 1.
- One of the RNs did not post in the first file in my list of files to be searched, in this case MEDLINE. Because it should exist in TOXLIT, I have included it in this MultiFile search strategy.
- SPRINT prompts must be answered.
- Entering the NEXT command followed by a database name tells the system that I would like to run the MultiFile search strategy against another database. If necessary, several file names separated by commas can be entered.
- SPRINT prompts must be answered.

EXAMPLE 3 - WHEN TO USE MFS IN AUTO MODE

This includes three examples of using MFS in the AUTO mode. AUTO mode is especially useful when you need to search several files at one time and you expect that the entire retrieval will be needed. Remember that you must still answer both Multi Meaning and Time Overflow messages in each file.

EXAMPLE 3A - SEARCHING FOR A UI THAT SEEMS TO BE A RECENT ONE BUT ISN'T IN THE CURRENT MEDLINE FILE

We searched for a Unique Identifier (UI) that appeared to be a recent one but wasn't in the current MEDLINE file. We entered the MFS command, the files to be searched and the MODE=AUTO command all on the same line. The files were selected using a convention that has not been covered in previous articles: MEDGROUP@MED86 means that we want to search the MEDGROUP databases beginning with MED86 back through MED66 (the MEDLINE file would be excluded).

```
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.
SS 1 /C?
USER:
mfs medgroup@med86 mode=auto

PROG:
SEARCH TO BE RUN ALREADY EXISTS. DO YOU WISH TO REPLACE IT? (Y/N)

USER:
y
PROG:
MULTIFILE SESSION ABOUT TO BEGIN
MODE: AUTO
SEARCHNAME: &-MFS-& (TO BE INPUT)
FILES TO BE SEARCHED:
** BACK86                    (1986 - 87)
** BACK83                    (1983 - 85)
** BACK80                    (1980 - 82)
** BACK77                    (1977 - 79)
** BACK72                    (1972 - 76)
** BACK66                    (1966 - 71)
OK? (Y/N/C/LIST)

USER:
y
PROG:
ENTER SEARCH-

*STS*
SS 1 /C?
USER:
88275585 (ui)
PROG:
NP (88275585 (UI))
SS (1) PSTG (0)

*STS* SS 2 /C?
USER:
finished
PROG:
SEARCH SET FROM SS 1 FORWARD SAVED AS '&-MFS-&'.
YOU ARE NOW CONNECTED TO THE BACK83 (1983 - 85) FILE.
*NONE-
YOU ARE NOW CONNECTED TO THE BACK80 (1980 - 82) FILE.
*NONE-
YOU ARE NOW CONNECTED TO THE BACK77 (1977 - 79) FILE.
*NONE-
YOU ARE NOW CONNECTED TO THE BACK72 (1972 - 76) FILE.
*NONE-
YOU ARE NOW CONNECTED TO THE BACK66 (1966 - 71) FILE.
SS (1) PSTG (1)
```

- **I would like to do an MFsearch in auto mode beginning with MED86 moving back through MED66. At any USER: prompt, type EXPLAIN FILEGROUPS for an explanation of this convention. Using BACGROUP would have requested searching the same set of files.**

```
READY TO PRINT FROM SEARCH STATEMENT 1, CONTAINING 1 ITEM(S) FROM BACK66.

ENTER SPECIFICATIONS FOR PRINTING (E.G., BR, SD, FU, DL), OR 'SAME' (DO
NOT USE THE WORDS 'PRINT' OR 'PRT'):
.
.                          • SPRINT prompts must be answered.
.
```

EXAMPLE 3B - CREATING AN AUTHOR'S BIBLIOGRAPHY

We executed a MultiFile Search of the entire MEDGROUP in AUTO mode to produce an author's bibliography.

```
YOU ARE CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?
USER:
mfs mode=auto
PROG:
SEARCH TO BE RUN ALREADY EXISTS. DO YOU WISH TO REPLACE IT? (Y/N)

USER:
Y
PROG:
MULTIFILE SESSION ABOUT TO BEGIN
MODE: AUTO
SEARCHNAME: &-MFS-& (TO BE INPUT)
FILES TO BE SEARCHED:
** MEDLINE                    (1988 - 89)
** BACK86                     (1986 - 87)
** BACK83                     (1983 - 85)
** BACK80                     (1980 - 82)
** BACK77                     (1977 - 79)
** BACK72                     (1972 - 76)
** BACK66                     (1966 - 71)
OK? (Y/N/C/LIST)

USER:
Y
PROG:
ENTER SEARCH-
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

*STS* SS 1 /C?
USER:
all nashel d: (au)

PROG:
SS (1) PSTG (1)

*STS* SS 2 /C?
USER:
finished
PROG:
SEARCH SET FROM SS 1 FORWARD SAVED AS '&-MFS-&'.
YOU ARE NOW CONNECTED TO THE BACK86 (1986 - 87) FILE.
SS (2) PSTG (6)
YOU ARE NOW CONNECTED TO THE BACK83 (1983 - 85) FILE.
SS (3) PSTG (10)
YOU ARE NOW CONNECTED TO THE BACK80 (1980 - 82) FILE.
SS (4) PSTG (7)
YOU ARE NOW CONNECTED TO THE BACK77 (1977 - 79) FILE.
SS (5) PSTG (2)
YOU ARE NOW CONNECTED TO THE BACK72 (1972 - 76) FILE.
SS (6) PSTG (1)
YOU ARE NOW CONNECTED TO THE BACK66 (1966 - 71) FILE.
*NONE-
READY TO PRINT FROM SEARCH STATEMENT 1, CONTAINING 1 ITEM(S) FROM
MEDLINE.

ENTER SPECIFICATIONS FOR PRINTING (E.G., BR, SD, FU, DL), OR 'SAME' (DO
NOT USE THE WORDS 'PRINT' OR 'PRT'):
.
.                          • SPRINT prompts must be answered.
.
```

EXAMPLE 3C - SEARCHING FOR ARTICLES ON A PARTICULAR SUBJECT WRITTEN BY AN AUTHOR

We used MFS in AUTO mode to look for articles written by an author on a particular subject. Once again we entered the MFS command, the files to be search and the MODE=AUTO command all on the same line. By requesting MEDGROUP!B80, we are asking the system to search the MEDGROUP from the current MEDLINE file back through the MED80 file. Both of these FILEGROUP conventions can be used with any FILEGROUP and its component databases. Type EXPLAIN FILEGROUPS at any USER: prompt for an explanation of the FILEGROUPs and these highlighted conventions.

```
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?                          • I would like to begin an automatic
USER:                               MultiFile search in the MEDGROUP only back
mfs medgroup!b80 mode=auto          as far as MED80.

PROG:
SEARCH TO BE RUN ALREADY EXISTS. DO YOU WISH TO REPLACE IT? (Y/N)

USER:
y
PROG:
MULTIFILE SESSION ABOUT TO BEGIN
MODE: AUTO
SEARCHNAME: &-MFS-& (TO BE INPUT)
FILES TO BE SEARCHED:
** MEDLINE                    (1988 - 89)
** BACK86                     (1986 - 87)
** BACK83                     (1983 - 85)
** BACK80                     (1980 - 82)
OK? (Y/N/C/LIST)

USER:
y
PROG:
ENTER SEARCH-
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

*STS* SS 1 /C?
USER:
all higgins g: (au)               • I am looking for articles by George Higgins on
                                    cancer written since 1980.
PROG:
SS (1) PSTG (4)

*STS* SS 2 /C?
USER:
neoplasms (px)
PROG:
SS (2) PSTG (30638)

*STS* SS 3 /C?
USER:
1 and 2
PROG:
SS (3) PSTG (0)

*STS* SS 4 /C?
USER:
finished
PROG:
SEARCH SET FROM SS 1 FORWARD SAVED AS '&-MFS-&'.
YOU ARE NOW CONNECTED TO THE BACK86 (1986 - 87) FILE.
SS (1) PSTG (1)
YOU ARE NOW CONNECTED TO THE BACK83 (1983 - 85) FILE.
TIME OVFLW: CONT? (Y/N)

USER:
y
PROG:
SS (2) PSTG (16)
YOU ARE NOW CONNECTED TO THE BACK80 (1980 - 82) FILE.
TIME OVFLW: CONT? (Y/N)
```

```
USER:
Y
PROG:
SS (3) PSTG (16)

READY TO PRINT FROM SEARCH STATEMENT 1, CONTAINING 1 ITEM(S) FROM BACK86.

ENTER SPECIFICATIONS FOR PRINTING (E.G., BR, SD, FU, DL), OR 'SAME' (DO
NOT USE THE WORDS 'PRINT' OR 'PRT'):
.
.                          ● SPRINT prompts must be answered.
.
```

EXAMPLE 4 - PROGRAM MESSAGES

These examples highlight some program messages that were designed to help when using these new capabilities.

EXAMPLE 4A - SEARCH STATEMENTS FROM DIFFERENT DATABASES

This example reminds you that you cannot combine search statement numbers from different databases.

```
YOU ARE NOW CONNECTED TO THE MEDLINE (1988-89) FILE.

SS 1 /C?
USER:
lindberg da
PROG:
SS (1) PSTG (2)

SS 2 /C?
USER:
prt comp
PROG:

1
UI  - 88327236
AU  - Lindberg DA
TI  - The IAIMS opportunity: the NLM view.
SO  - Bull Med Libr Assoc 1988 Jul;76(3):224-5

2
UI  - 88162946
AU  - Porter JF ; Kingsland LC 3d ; Lindberg DA ; Shah I ; Benge JM ;
      Hazelwood SE ; Kay DR ; Homma M ; Akizuki M ; Takano M ; et al
TI  - The AI/RHEUM knowledge-based computer consultant system in
      rheumatology. Performance in the diagnosis of 59 connective
      tissue disease patients from Japan.
SO  - Arthritis Rheum 1988 Feb;31(2):219-26

SS 2 /C?
USER:
tfile b86
PROG:
YOU ARE NOW CONNECTED TO THE BACK86 (1986 - 87) FILE.

SS 2 /C?
USER:
artificial intelligence
PROG:
SS (2) PSTG (165)

SS 3 /C?
USER:
1 and 2
PROG:
'1' IS TREATED AS A SEARCH TERM HERE, NOT A SEARCH STATEMENT NUMBER.
NP (1)                     ● This message is a warning that search statement
*NONE-                       numbers from different databases cannot be
                             combined.  In this case '1' will be treated as
                             a search term rather than a search statement
                             number.
```

EXAMPLE 4B - THE RETURN COMMAND

This example reminds you that you can only return to a file if you already have search statement numbers existing in that file. You should use the TFILE command to change files if you want to RETURN to a database later.

```
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?
USER:
artificial intelligence
PROG:
SS (1) PSTG (44)

SS 2 /C?
USER:
file b86
PROG:
YOU ARE NOW CONNECTED TO THE BACK86 (1986 - 87) FILE.

SS 1 /C?
USER:
lindberg da
PROG:
SS (1) PSTG (7)

SS 2 /C?
USER:
return medline
PROG:
YOU CURRENTLY HAVE NO SEARCH STATEMENTS IN MEDLINE.  COMMAND IGNORED.
```

- **Remember that a FILE command erases all previously entered search statements.**

- **This message reminds me that I can only return to a file if I already have search statement numbers with retrieval existing in it. I should use the TFILE command if I want to RETURN to a database later. Remember that the RETURN command moves you back into a file at the point where you left. Previous retrieval in that file is kept, but retrieval from other files is not retained.**

EXAMPLE 4C - THE NEXT COMMAND

This example reminds you that you must enter 'FINISHED' after a MultiFile strategy has been entered before entering 'NEXT' to move into the next database to be searched.

```
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?
USER:
mfs
PROG:
SEARCH TO BE RUN ALREADY EXISTS. DO YOU WISH TO REPLACE IT? (Y/N)

USER:
y
PROG:
MULTIFILE SESSION ABOUT TO BEGIN
MODE: MANUAL
SEARCHNAME: &-MFS-& (TO BE INPUT)
FILES TO BE SEARCHED:
** MEDLINE                  (1988 - 89)
** BACK86                   (1986 - 87)
** BACK83                   (1983 - 85)
** BACK80                   (1980 - 82)
** BACK77                   (1977 - 79)
** BACK72                   (1972 - 76)
** BACK66                   (1966 - 71)
OK? (Y/N/C/LIST)

USER:
Y
```

```
PROG:
ENTER SEARCH-

*STS* SS 1 /C?
USER:
lindberg da
PROG:
SS (1) PSTG (2)

*STS* SS 2 /C?
USER:
artificial intelligence
PROG:
SS (2) PSTG (44)

*STS* SS 3 /C?
USER:
1 and 2
PROG:
SS (3) PSTG (1)

*STS* SS 4 /C?
USER:
next

PROG:
THE 'NEXTFILE' COMMAND IS NOT ALLOWED IN *STS* MODE; ENTER 'FINISHED'
FIRST.
                                  • In order to continue a MultiFile search
*STS* SS 4 /C?                      session, 'finished' must be entered after the
USER:                               search strategy has been completely input.
finished                            'NEXT' cannot be entered first.
PROG:
SEARCH SET FROM SS 1 FORWARD SAVED AS '&-MFS-&'.

READY TO PRINT FROM SEARCH STATEMENT 1 CONTAINING 1 ITEM(S) FROM
MEDLINE.
.                               • SPRINT prompts must be answered.
.
.

PROG:
SS 2 /C?
USER:
next                            • Now NEXT can be entered in order to continue.
PROG:
THE NEXT FILE TO BE SEARCHED IS BACK86.
OK? (Y/N/C/SKIP)
.
.
.
```

Once again it is our hope that this article and those in previously mentioned issues of the *NLM Technical Bulletin* will acquaint searchers with the ELHILL 3.3 capabilities. We have tried to cover many variations of these features, but have not been comprehensive. As announced in the October 1988 *NLM Technical Bulletin*, non-billed codes are available from MEDLARS Management Section so that you can try out these new features.

1989 MeSH Vocabulary File®

NEW VOCABULARY

Summary (from *MeSH Annotated Alphabetic List*, 1989, p. I-3):

319 descriptors (293 major, 26 minor) representing concepts with no directly corresponding headings in 1988 MeSH (i.e., new concepts and records); includes 5 geographic descriptors;

35 descriptors were replaced with more up-to-date terminology;

4 descriptors were deleted;

32 minor descriptors were elevated to majors;

3 changes in topical subheadings: 1 completely new, 2 replaced;

7 geographic subheadings added for cataloging;

12 form subheadings for cataloging;

767 see references (entry terms, print).

AIDS-RELATED TERMINOLOGY

The following are all AIDS related headings in 1989 MeSH, shown indented as they appear in the *MeSH Tree Structures*. New terms are marked with # and appear with scope notes in the introduction to the *MeSH Annotated Alphabetic List*.

HTLV Infections
Acquired Immunodeficiency Syndrome (AIDS, HTLV-III Infection, HIV Infection, etc.)
AIDS-Related Complex
HIV Seropositivity
HTLV-I Infections #
Leukemia-Lymphoma, T-Cell, Acute, HTLV-I-Associated #

HTLV-II Infections #
Leukemia, T-Cell, HTLV-II-Associated #
Paraparesis, Tropical Spastic #

HTLV Viruses (replaces T-Cell Leukemia Virus)
HIV (HTLV-III)
HIV-1 # (cause of most cases of AIDS)
HIV-2 #
HTLV-I
HTLV-II

Simian Retroviruses #
SIV # (said to induce AIDS on monkeys and apes) (STLV-III)
STLV-I #
STLV-II #

HTLV Antibodies #
HIV Antibodies (HTLV-III Antibodies)
HTLV-I Antibodies #
HTLV-II Antibodies #

HTLV Antigens #
HIV Antigens (HTLV-III Antigens)
HTLV-I Antigens #
HTLV-II Antigens #

AIDS Serodiagnosis

T4 Lymphocytes # (critical subpopulation of regulatory T-Lymphocytes; depletion of this subset is key element in immunopathogenesis of HIV infection)

BIOTECHNOLOGY AND MOLECULAR BIOLOGY

All terms below are new for 1989, except as noted, and thus appear with scope notes in the introduction to the *MeSH Annotated Alphabetic List*.

Biological Markers

Biosensors

Blotting, Southern Blotting, Northern Blotting, Western (Immunoblotting, Western; may be used to detect HIV infection.)

DNA Restriction-Modification Enzymes
DNA Modification Methylases
DNA Modification Methylases (Adenine-Specific)
DNA Modification Methylases (Cytosine-Specific)
DNA Restriction Enzymes [existing heading]
Deoxyribonucleases, Type I, Site-Specific
Deoxyribonucleases, Type II, Site-Specific
Deoxyribonuclease BamHI
Deoxyribonuclease EcoRI
Deoxyribonuclease HindIII
Deoxyribonucleases, Type III, Site-Specific

Gene Rearrangement (rearrangement of variable gene

regions, especially for antibody genes)
Gene Rearrangement, B-Lymphocyte
Gene Rearrangement, B-Lymphocyte, Heavy Chain
Gene Rearrangement, B-Lymphocyte, Light Chain
Gene Rearrangement, T-Lymphocyte
Gene Rearrangement, Alpha Chain T-Cell Antigen Receptor
Gene Rearrangement, Beta Chain T-Cell Antigen Receptor
Gene Rearrangement, Gamma Chain T-Cell Antigen Receptor

Genetic Engineering (replaces Genetic Intervention)
Gene Therapy (introduction of new genes into cells to treat disease, by restoring or adding gene expression)
Protein Engineering (changing structural genes in order to produce mutant genes)

Interferon Alfa, Recombinant (a type I interferon produced by recombinant DNA technology, having antiviral and antineoplastic activity)
Interferon Alfa-2A (produced by recombinant DNA technology, resembling interferon secreted by leukocytes)
Interferon Alfa-2B

Interferon Gamma, Recombinant

Molecular Probe Technics

Molecular Probes
Nucleic Acid Probes
DNA Probes
DNA Probes, HLA (specific for human leukocyte antigen genes)
DNA Probes, HPV (for identification of human papilloma virus)
Oligonucleotide Probes
RNA Probes

Restriction Mapping (use of restriction endonucleases to analyze and generate a physical map of genomes or genes)

EPIDEMIOLOGY

The subheading /epidemiology replaces the previously existing subheading /occurrence, but has been given a new scope note: "Used with diseases for the distribution of disease, factors which cause disease, and the attributes of disease in defined populations; includes incidence, frequency, prevalence, endemic and epidemic outbreaks; also surveys and estimates of morbidity in geographic areas and in specified populations. Excludes mortality for which /mortality is used."

Existing headings indented under Epidemiological Methods include: Clinical Trials; Data Collection; Health Surveys; and Study Design.

New Headings:

Cohort Studies (identification of subsets of a defined population)

Incidence Studies (study of the number of new cases of a disease)

Meta-Analysis (based on combining research results and synthesizing summaries)

Multicenter Studies (done by several cooperating institutions)

Prevalence Studies (study of the number of cases of a disease - old and new)

Reproducibility of Results (statistical reproducibility of measurements)

RETRACTED PUBLICATION

This heading is added to citations to original articles that have been retracted. It is the companion to the existing heading Retraction of Publication, identifying articles announcing retraction of earlier articles.

STOMATOGNATHIC DISEASES

The heading Mouth and Tooth Diseases (Non MeSH) was changed to Stomatognathic Diseases and made indexable. Two additional existing groups of headings are now indented under it: Jaw Diseases; Pharyngeal Diseases.

SUBHEADINGS

In addition to the subheading /epidemiology, noted above, two other changes have been made. A new subheading has been added:

/statistics & numerical data

"Used with non-disease headings for the expression of numerical values which describe particular sets or

groups of data; excludes manpower distribution for which /manpower is used; excludes supply or demand for which /supply & distribution is used."

Also, the subheading /familial & genetic was deleted, and replaced in all citations by the existing subheading /genetics, for which a new scope note has been written:

"Used for mechanisms of heredity and the genetics of organisms, for the genetic basis of normal and pathologic states, and for the genetic aspects of endogenous chemicals; includes biochemical and molecular influence on genetic material."

HN (history note) data element for subheadings

The HN data element for descriptors has existed for some time, giving the changes in the form of the heading and related terms. This is now available for subheadings, so that subheading replacements and other changes may be noted. The date in which the subheading appeared in its present form is also given. For example, the HN for /epidemiology is "89; was /occurrence 66-88." The HN is printed in the *Annotated Alphabetic List*.

MESH FILE CHANGES

Some of the following changes are due to the fact that NLM is using a new computer system for inputting data to the MeSH file; these were implemented January 30. Other changes have been made throughout the year.

AQ (Allowable Qualifiers) - descriptor records only

This element has been added to descriptor records to display all allowable subheadings permitted with that descriptor in indexing. For example, in the record for Analgesia, the AQ entry is:

AQ - AE CL EC ED HI IS MO MT NU PX SD
SN ST TD UT VE

Only those subheadings whose two-letter mnemonic appears in this list, may be used by indexers with Analgesia. If the mnemonic is not on the list, the subheading is prohibited. This element replaces the function of the TN (Tree Node Allowed) element in the corresponding Qualifier record, and provides greater flexibility. Also, since some entries in the EC (Entry Combination) element were used to prohibit a particular heading/subheading combination, these entries have been deleted as redundant.

The element is directly searchable; for example, to find all descriptors that can take the subheading /epidemiology, enter the two-letter abbreviation as follows:

SS 1 /C?
USER:
ep (aq)

BX - expanded non-print entry terms all marked with @

Many BX type 0 (non-print entry terms) entries are generated by the computer as expansions or permutations of the MH, BX type 1 (print entry term) and other BX type 0. Previously, these entries were marked either by trailing asterisks or @ signs. Now, however, all of these automatically-generated terms are marked with the @ sign. For example:

```
MH  - Ascitic Fluid
BX  - Peritoneal Fluid:0:00000000:0000000:830422
BX  - Peritoneal Effusion:1:00000000:0000000:830422
BX  - Fluid, Ascitic:0:00000000:0000000:@@@@@@@
BX  - Ascitic Fluids:0:00000000:0000000:@@@@@@@
BX  - Fluids, Ascitic:0:00000000:0000000:@@@@@@@
BX  - Fluid, Peritoneal:0:00000000:0000000:@@@@@@@
BX  - Peritoneal Fluids:0:00000000:0000000:@@@@@@@
BX  - Fluids, Peritoneal:0:00000000:0000000:@@@@@@@
BX  - Effusion, Peritoneal:0:00000000:0000000:@@@@@@@
BX  - Peritoneal Effusions:0:00000000:0000000:@@@@@@@
BX  - Effusions, Peritoneal:0:00000000:0000000:@@@@@@@
```

BX - expanded non-print entry terms follow type 1

Until now, the expanded entry terms have been displayed with other BX type 0 values. Now, however, regular BX type 0's (identified by having a date) are displayed first, then type 1's, then expanded. See above example.

DX and DY data elements rangeable and directly searchable

Before 1989 neither the DX nor the DY data element could be directly searched. Stringsearching was the only means available for retrieving all headings becoming majors or minors in a given year. Now both may be searched directly and by range.

The DX gives the six-digit date when a term was first available for searching as a major descriptor. The format is YYMMDD, e.g., 750101. (The month and day are usually 01 and 01.) Thus, for example, to find all

terms which were made available as major descriptors in 1985, you can enter:

SS 1 /C?
USER:
850101 (dx)

The DY gives the corresponding date when a term first became available as a minor descriptor and is searched similarly.

To search for all terms which were made available as minor descriptors after 1985, you would enter:

SS 1 /C?
USER:
7 (dc) and from 850101 to 999999 (dy)

MED86 POSTINGS DATA ELEMENT

MEDLINE (and backfile) postings are input annually into the corresponding data elements in the MeSH file. With the introduction of the MED86 backfile, there is a corresponding new data element for descriptors and qualifiers - M86 -which contains the number of postings in the citation file. A second occurrence may exist, containing the starred postings. These fields were updated for 1989 on December 20, 1988 after MEDLINE was regenerated and augmented with data through the 8901 (EM) update.

MR - ONLY ONE OCCURRENCE

In previous MeSH files the MR (Major Revision Date) may have had multiple occurrences, but there is now only one occurrence, which will be the date of the most recent modification to the record.

RO - O AND C SUBELEMENTS REQUIRED FOR EACH RECORD

Before now, the O (originator) and C (checker, i.e., authorizer) subelements were not required, but now must occur exactly once. For example, in the record for the descriptor HIV, the RO entries are:

RO - O:RC
RO - C:NLM
RO - M:PLS

In cases where the individual's initials are not known for a given subelement, "NLM" is used.

RO - ONLY ONE OCCURRENCE FOR EACH SUBELEMENT

In previous versions of the MeSH file, the M (maintainer) subelement sometimes had multiple occurrences, while now only one is allowed.

TH - VALUE IN ALL DESCRIPTOR RECORDS

When the entry for the MH or BX type 0 or 1 matches an entry in one of a given set of external thesauri, the name of that thesaurus appears in the TH (Thesaurus ID) element. Beginning with 1989 MeSH, this value will be "NLM" if no other name has been entered. For example in the record for HIV, TH appears as:

TH - NLM

Short Forms

Many words or word roots that are frequently found as part of MeSH Headings (for example, CLASSIFICATION, DISEASE, INJUR-) have a Short Form (CLASS, DIS, INJ, respectively) which may be used for searching. For example, the MeSH Heading, EYE INJURIES may be searched as EYE INJ.

The new short forms added for 1989 are:

MOL
for MOLECULAR - as in MACROMOL SYSTEMS; MODELS MOL; MOL BIOLOGY; MOL SEQ DATA

ORG
for ORGANIC - as in CHEM ORG; CHEM INORG; METALLO ORG CPDS

REV
for REVIEW - as in REV REPORTED CASES; REV MULTICASE

SOL
for SOLUTIONS - as in HYPOTONIC SOL; OPHTHALMIC SOL

The entire list of short forms can be found on page I-10 of the *Annotated Alphabetic List, 1989*. One exception to the printed list is DIAG (short form for DIAGNOSIS). If the searcher tries to use this short form, the following will result:

SS 1/C?
USER:
diag oral
PROG:
STORED SEARCH 'ORAL; CANNOT BE FOUND.

The system is interpreting DIAG to be an alias for the command DIAGRAM. In order to get retrieval from a heading with the string DIAGNOSIS-, the searcher should type out the heading as it is listed in the *Annotated Alphabetic MeSH*.

SS 2/C?
USER:
diagnosis, oral
PROG:
SS (2) PSTG (4)

Note that short forms can be used with EXPLODE but not with PRE-EXPLOSIONS.

****

More Abstracts Online

Beginning with journals published in 1989, the National Library of Medicine will increase the number of abstracts added to the MEDLINE database. English abstracts will be taken from all indexed journals that publish them. Of noticeable importance is that there will be more abstracts online from special list journals in the fields of nursing and dentistry. The 250-word limit will still be followed. The percentage of abstracts online in the MEDLINE database is expected to increase from 60% to over 75%.

Please note that NLM does not edit any author abstracts. Users may, therefore, notice neologisms and stylistic peculiarities in English abstracts from some foreign language journals. We hope that the additional information provided by these abstracts will outweigh occasional grammatical shortcomings.

New MEDLINE Field: Comments

A broad range of items appears in the medical literature with the purpose of commenting on previously published articles. These comments are published in letters to the editor, editorials, or articles that update other articles. By citing these comments and including the reference of the original article, NLM will connect articles with subsequent, substantive comments. Therefore, beginning with 1989 journal issues, published comments will be cited in MEDLINE and a new field, Comments, abbreviated "CM", will be added to these citations. The field, when present in citations, will print in all standard PRT commands (SD, FU, DL, AR) after the Number of References (RF) field and before the Source (SO) field.

As a first phase in implementing this policy, NLM will be concerned primarily with citing comments that are published for the express purpose of adding substantive information to that published in the original article. Of special interest will be instances where an author has not retracted an article, but an editor, for example, issues a comment alerting readers to questionable data in the published article.

The Comments field will appear on records that comment about another article previously published in the same journal, and will also be added to the citation for the article to which the commenting article refers.

Comments will be indexed with MeSH terms as appropriate.

Both AIDSLINE and the HEALTH PLANNING & ADMINISTRATION file will also carry the Comments field.

An example of how both types of citations will look follows:

Commenting article:

TI - Notification to readers [comment]
CM - Comment on: Psychopharmacol Bull 1982 Jan;18(1):57-9
SO - Psychopharmacol Bull 1987;23(4):588

Original article:

AU - Breuning SE
TI - An applied dose-response curve of thioridazine with the mentally retarded: aggressive, self-stimulatory, intellectual, and workshop behaviors--a preliminary report [see comments]
CM - Comment in: Psychopharmacol Bull 1987; 23(4):588
SO - Psychopharmacol Bull 1982 Jan;18(1):57-9

Notice that the rubric, [comment] appears in the title of the commenting article and, [see comments] appears in the title of the original article. (Because rubrics appear in the title, they are Text Word (TW) searchable.)

Some comments may not merit indexing as a separate citation. If NLM indexed the original article, the CM field will be added to that citation linking it to the comment although the comment itself is not indexed.

Retracted Publication and Retraction of Publication

RETRACTED PUBLICATION is a new MeSH heading for 1989. It is used to identify an article previously cited in *Index Medicus* or MEDLINE as having been retracted by a later article.

Titles of articles indexed with this heading carry one of the following rubrics:

[Retracted by author A, author B. In: Journal A citation]

[Retracted in: Journal A citation]

During 1988 Year-End processing, this heading was added to appropriate citations retrospectively in MEDLINE and its backfiles, HEALTH, and CANCERLIT®. Usually this heading will be added to an existing citation through an editing action. Therefore this heading will appear in the annual *Cumulated Index Medicus* but is unlikely to appear in the monthly *Index Medicus* issues. The citations needing this new heading were identified by searching on the MeSH heading RETRACTION OF PUBLICATION explained in the second illustration.

When searching for articles that have been retracted, use RETRACTED PUBLICATION as in Figure 1.

```
YOU ARE NOW CONNECTED TO THE BACK86 (1986 - 87) FILE.

SS 1 /C?
USER:
retracted publication

PROG:
SS (1) PSTG (5)

SS 2 /C?
USER:
prt -3 full
PROG:

3
UI  - 86225991
AU  - Milanese C
AU  - Siliciano RF
AU  - Schmidt RE
AU  - Ritz J
AU  - Richardson NE
AU  - Reinherz EL
TI  - A lymphokine that activates the cytolytic program of both
      cytotoxic T lymphocyte and natural killer clones. [Retracted by
      Reinherz EL. In: J Exp Med 1987 Jan 1;165(1):275]
LA  - Eng                                  ● Note that the citation
MH  - Antibodies, Monoclonal/IMMUNOLOGY      still includes the original
MH  - Clone Cells/DRUG EFFECTS               subject headings used to
MH  - Comparative Study                      index the article in
MH  - Cytotoxicity Tests, Immunologic        addition to RETRACTED
MH  - HLA Antigens/IMMUNOLOGY                PUBLICATION.
MH  - Interleukin 2/ISOLATION & PURIFICATION/PHARMACOLOGY
MH  - Killer Cells, Natural/*DRUG EFFECTS/IMMUNOLOGY
MH  - Lymphocyte Transformation/*DRUG EFFECTS
MH  - Lymphokines/*PHARMACOLOGY
MH  - *Retracted Publication
MH  - Support, Non-U.S. Gov't
MH  - Support, U.S. Gov't, P.H.S.
MH  - T Lymphocytes, Cytotoxic/CLASSIFICATION/*DRUG EFFECTS/IMMUNOLOGY
RN  - 0 (HLA-B7)
SO  - J Exp Med 1986 Jun 1;163(6):1583-8
```

Figure 1

RETRACTION OF PUBLICATION which has been a MeSH heading since 1984, is used for the citation to an article that is retracting an article or part of an article previously indexed in *Index Medicus* or MEDLINE. This heading is used exclusively for the notice of a specific retraction. For an article discussing the subject of "retraction of fraudulent data" the correct MeSH heading for indexing and retrieval is PUBLISHING.

Titles of articles indexed to this heading carry the rubric:

[Retraction of author A, author B. In: Journal a citation]

To search for retractions, use RETRACTION OF PUBLICATION as seen in Figure 2.

By using these two MeSH headings you will be able to find the article that has been retracted and/or the article announcing its retraction. It is not unusual for one retraction notice to retract several previously published papers. Another item to remember is that the retraction citation may appear in MEDLINE while the retracted citation(s) may be in an earlier backfile. These reasons explain why the postings for two related MeSH headings do not match up in any one file segment. The NLM practice of linking the related citations by enhancing the Title (TI) field specifies the relationship.

The following chart reflects the number of postings in MEDLINE and its backfiles, HEALTH, and CANCERLIT for these headings through the Entry Month (EM) of 8902.

	RETRACTED PUBLICATION	RETRACTION OF PUBLICATION
MEDLINE	0	2
MED86	5	14
MED83	27	24
MED80	20	8
MED77	14	0
MED72	0	0
MED66	0	0
HEALTH	3	1
CANCERLIT	2	2

```
YOU ARE NOW CONNECTED TO THE BACK86 (1986 - 87) FILE.

SS 2 /C?
USER:
retraction of publication

PROG:
SS (2) PSTG (14)

SS 3 /C?
USER:
prt -7 full
PROG:

7
UI  - 87197057
AU  - Reinherz EL
TI  - Retraction: A lymphokine that activates the cytolytic program of
      both cytotoxic T lymphocyte and natural killer clones.
      [Retraction of Milanese C, Siliciano RF, Schmidt RE, Ritz J,
      Richardson NE, Reinherz EL. In: J Exp Med 1986 Jun 1;163(6):1583-8]
LA  - Eng                                   • Note that the only heading
MH  - *Retraction of Publication              assigned to this "article" is
SO  - J Exp Med 1987 Jan 1;165(1):275         RETRACTION OF PUBLICATION.  No
                                              other subject headings are added
                                              because only the retraction is
                                              discussed
```

Figure 2

One Pre-Explosion Name Change

One Pre-explosion has changed its name for 1989: MOUTH AND TOOTH DISEASES is now STOMATOGNATHIC DISEASES. The tree number, C7, remains the same. NLM made this change retrospectively in all databases that use Pre-explosions, effective December 12. The old name will not map; the new name must be used in searching. You should edit any saved or stored searches containing the old name.

Pre-explosions (PX) are MeSH Headings (MH) that have already been EXPLODEd and stored to facilitate the retrieval of large numbers of citations. The list of Pre-explosions was published in the October issue of the *NLM Technical Bulletin*. No new Pre-explosions were added for 1989. The search shown below uses the new Pre-explosion name to retrieve all articles on stomatognathic diseases (includes diseases of the mouth, teeth, jaws, and pharnyx) in the newborn infant.

```
WELCOME TO THE NATIONAL LIBRARY OF MEDICINE'S ELHILL RETRIEVAL SYSTEM.
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?
USER:
stomatognathic diseases (px)
PROG:
SS (1) PSTG (2988)

SS 2 /C?
USER:
1 and infant, newborn
PROG:
SS (2) PSTG (31)

SS 3 /C?
USER:
print 1 include mh
PROG:                          (In the reference below, the MeSH
                                Heading, SALIVARY GLAND NEOPLASMS,
1                               indented under STOMATOGNATHIC
UI  - 89011289                  DISEASES, was retrieved by the
AU  - Fraser GC                 Pre-Explosion.)
AU  - Blair GK
AU  - LeBlanc JG
AU  - Scott LA
TI  - The use of cardiopulmonary bypass and circulatory arrest in
      the resection of massive tumors.
MH  - *Cardiopulmonary Bypass
MH  - Child
MH  - Child, Preschool
MH  - Female
MH  - *Heart Arrest, Induced
MH  - Human
MH  - Infant
MH  - Infant, Newborn
MH  - Liver Neoplasms/PATHOLOGY/*SURGERY
MH  - Male
MH  - Salivary Gland Neoplasms/PATHOLOGY/*SURGERY
SO  - J Pediatr Surg 1988 Aug;23(8):777-8
```

Figure 1

New Dental Journal Subset Tag

A new value for the Journal Subset (SB) field in MEDLINE, its backfiles, AIDSLINE, and HEALTH has been defined. The letter "D" has been placed in the Subset (SB) field on citations from all dental journals, regardless of whether the journal is an *Index Medicus* journal or not. This new tag is added not only to appropriate new records as they are created and indexed for MEDLINE, but it also has been added retrospectively to all records from dental journals. Therefore, it is now possible to limit any MEDLINE search to articles from dental journals by combining your strategy with AND D (SB).

This is not to be confused with the more restrictive Special List Indicator (LI) designation. A value of D in the LI field on MEDLINE records indicates that the article comes from a non-*Index Medicus* journal in the field of dentistry. D (SB) is more inclusive; it includes these records as well as the records from the more than 60 currently indexed *Index Medicus* dental journals. Searching on D (LI) limits your retrieval to non-*Index Medicus* records only while D (SB) limits your retrieval to any dental journal. This is illustrated in Figure 1.

Now searchers may delete the dental journal saved searches they have created and free up more of their saved search space. Limiting retrieval to citations from the dental journal literature is as easy as typing:

...AND D (SB)

SERLINE® also contains this new D (SB) tag. The strategies found in Figure 1 can be used in SERLINE to see which dental journals have been or are currently indexed.

NLM is considering the removal of the D value in the LI field in MEDLINE due to its limited usefulness.

```
IN MEDLINE:

SS 1 /C?
USER:
exp hepatitis
PROG:
SS (1) PSTG (1399)

SS 2 /C?
USER:
1 and d (li)
PROG:
SS (2) PSTG (13)

SS 3 /C?
USER:                                  • Note the larger retrieval. These
1 and d (sb)                             articles are likely to discuss various
                                         aspects of hepatitis in relation to
PROG:                                    dentistry; a quick-and-easy way to get
SS (3) PSTG (29)                         relevant articles without having to
                                         build a hedge of dental MeSH headings.

IN SERLINE:

SS 1 /C?
USER:
d (sb)                                 • All dental journals indexed over time.

PROG:
SS (1) PSTG (896)

SS 2 /C?
USER:
d (sb) and 1 (xs)                      • All currently indexed dental journals,
                                         both Special List D and Index Medicus.
PROG:                                    (XS = indexing status)
SS (2) PSTG (405)

SS 3 /C?
USER:
d (sb) and 1 (xs) and im (ai)          • All currently indexed dental journals
                                         that are Index Medicus journals. (Also
PROG:                                    included in SS2 above.)
SS (3) PSTG (64)
```

Figure 1

Indexing Policy Changes

The following presentations reflect changes in indexing policy for 1989.

Infections Caused by Human Immunodeficiency Viruses or Simian Immunodeficiency Viruses

Because of the significance of both human immunodeficiency viruses and simian retroviruses in AIDS and related research, there has been a change in the indexing of infections caused by these viruses. Beginning with 1989 indexing, both the organism and the infection will be indexed as the main point of the article and will appear online with an asterisk (*). Note that this is an exception to the usual rule of indexing the organism as "NIM" (without an *) and the infection as "IM" (with an *). The MeSH headings effected by this indexing change include: HTLV INFECTIONS, HIV, HTLV-I, HTLV-II, SIV, STLV-I, and STLV-II.

You would search both with an asterisk :

```
YOU ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?
USER:
*siv
PROG:
SS (1) PSTG (17)

SS 2 /C?
USER:
*retrovirus infections
PROG:
SS (2) PSTG (67)

SS 3 /C?
USER:
1 and 2
PROG:
SS (3) PSTG (9)

SS 4 /C?
USER:
prt 2 fu
PROG:
```

Figure 1A

1
UI - 89101458
AU - Baskin GB
AU - Murphey-Corb M
AU - Watson EA
AU - Martin LN
TI - Necropsy findings in rhesus monkeys experimentally infected with cultured simian immunodeficiency virus (SIV)/delta.
LA - Eng
MH - Animal
MH - Bone Marrow/PATHOLOGY
MH - Female
MH - Immunohistochemistry
MH - Lymph Nodes/PATHOLOGY
MH - *Macaca
MH - *Macaca mulatta
MH - Male
MH - Monkey Diseases/MICROBIOLOGY/*PATHOLOGY
MH - Opportunistic Infections/ETIOLOGY
MH - Retrovirus Infections/COMPLICATIONS/MICROBIOLOGY/PATHOLOGY/*VETERINARY
MH - Support, U.S. Gov't, P.H.S.
MH - SIV/*PATHOGENICITY
MH - Thymus Gland/PATHOLOGY
MH - Virulence
MH - Weight Loss
SO - Vet Pathol 1988 Nov;25(6):456-67

2
UI - 89097275
AU - Watanabe M
AU - Reimann KA
AU - DeLong PA
AU - Liu T
AU - Fisher RA
AU - Letvin NL
TI - Effect of recombinant soluble CD4 in rhesus monkeys infected with simian immunodeficiency virus of macaques.
LA - Eng
MH - Animal
MH - Antigens, Surface/ADMINISTRATION & DOSAGE/*IMMUNOLOGY
MH - Bone Marrow/MICROBIOLOGY/PATHOLOGY
MH - Cells, Cultured
MH - Hematopoietic Stem Cells/CYTOLOGY/MICROBIOLOGY
MH - Human
MH - Immunotherapy
MH - Macaca mulatta
MH - Receptors, Virus/*IMMUNOLOGY
MH - Recombinant Proteins/ADMINISTRATION & DOSAGE/*IMMUNOLOGY/THERAPEUTIC USE
MH - Retrovirus Infections/IMMUNOLOGY/*THERAPY
MH - Support, Non-U.S. Gov't
MH - Support, U.S. Gov't, P.H.S.
MH - SIV/*ISOLATION & PURIFICATION
RN - 0 (HIV receptor)
SO - Nature 1989 Jan 19;337(6204):267-70

• **Please note the virus and infection indexing on these citations.**

Figure 1B

Combined Antibiotics

The new 1989 MeSH heading ANTIBIOTICS, COMBINED is defined as two, sometimes three, antibiotics given simultaneously or sequentially, not necessarily in the same dosage form. The individual antibiotics are indexed as "IM" (which means for *Index Medicus*, using a *) and ANTIBIOTICS, COMBINED is indexed as "NIM" (which means not for *Index Medicus*, without a *). ANTIBIOTICS, COMBINED is indexed as IM in articles discussing the formulation or other issues focusing on properties or modes of action of combination antibiotics.

To search for the combined administration of ampicillin and metronidazole, you would use the following search strategy:

```
IN MEDLINE:

SS 1 /C?
USER:
*ampicillin
PROG:
SS (1) PSTG (63)

SS 2 /C?
USER:
*metronidazole
PROG:
SS (2) PSTG (76)

SS 3 /C?
USER:
antibiotics, combined
PROG:
SS (3) PSTG (28)

SS 4 /C?
USER:
1 and 2 and 3
PROG:
SS (4) PSTG (1)

SS 5 /C?
USER:
prt include mh
PROG:

1                                          • Here is the reference that the above
UI  - 89004396                               search retrieved.  It is included here
AU  - R:rbaek-Madsen M                       so that you can look at the indexing.
AU  - Toftgaard C
AU  - Graversen HP
AU  - Kristiansen JD
AU  - Lauesen N
AU  - Ranberg FA
AU  - Svane S
AU  - Thomsen H
AU  - Timm B
AU  - Ulbak S
TI  - Cefoxitin for one day vs. ampicillin and metronidazole for three
      days in elective colorectal surgery. A prospective, randomized,
      multicenter study.
MH  - Aged
MH  - Ampicillin/*ADMINISTRATION & DOSAGE
MH  - Antibiotics, Combined/ADMINISTRATION & DOSAGE
MH  - Bacterial Infections/*PREVENTION & CONTROL
MH  - Cefoxitin/*ADMINISTRATION & DOSAGE
MH  - Colon/*SURGERY
MH  - Drug Administration Schedule
MH  - Female
MH  - Human
MH  - Male
MH  - Metronidazole/*ADMINISTRATION & DOSAGE
MH  - Multicenter Studies
MH  - Postoperative Complications/*PREVENTION & CONTROL
MH  - *Premedication
MH  - Prospective Studies
MH  - Random Allocation
MH  - Rectum/*SURGERY
SO  - Dis Colon Rectum 1988 Oct;31(10):774-7
```

Figure 1

Changes in the Subheading Surgery

Beginning with 1989, indexing policy regarding the subheading /surgery has changed. It was prior indexing policy to use the subheading /therapy for interventions on organs to cure certain diseases by interference with their function. For example, adrenalectomy in the treatment of breast cancer was indexed under *ADRENALECTOMY and BREAST NEOPLASMS/*th, not BREAST NEOPLASMS/*su.

From now on, any surgical intervention in treating a disease will be indexed under the subheading /surgery with the disease, whether or not the organ being operated on is involved in the disease or whether or not the purpose is to modify function. So in the example shown above, 1989 indexing is *ADRENALECTOMY and BREAST NEOPLASMS/*su.

Searchers should use both ways of searching when doing retrospective searches.

Figure 1 contains an example of a search in MEDLINE on castration in treating prostatic cancer.

```
WELCOME TO THE NATIONAL LIBRARY OF MEDICINE'S ELHILL RETRIEVAL SYSTEM. YOU
ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?
USER:
*orchiectomy and *prostatic neoplasms/su      • To retrieve 1989 citations.
PROG:
SS (1) PSTG (7)

SS 2 /C?
USER:
*orchiectomy and *prostatic neoplasms/th      • To retrieve older citations.
PROG:
SS (2) PSTG (16)

SS 3 /C?
USER:
1 or 2
PROG:
SS (3) PSTG (23)

SS 4 /C?
USER:
prt include mh
PROG:

1
UI  - 89107350
AU  - Bouffioux C
TI  - Total androgen blockade in advanced prostatic cancer. Critical review
      and personal experience.
MH  - Androgen Antagonists/*THERAPEUTIC USE
MH  - Buserelin Acetate/*ANALOGS & DERIVATIVES/THERAPEUTIC USE
MH  - Comparative Study
MH  - Cyproterone/ANALOGS & DERIVATIVES/THERAPEUTIC USE
MH  - Flutamide/THERAPEUTIC USE
MH  - Human
MH  - Male
MH  - Multicenter Studies
MH  - *Orchiectomy
MH  - Prostatic Neoplasms/DRUG THERAPY/SURGERY/*THERAPY
MH  - Time Factors
SO  - Eur Urol 1988;15(3-4):187-92
.
.
.
```

Figure 1

Extended Subheadings

More subheadings have been "extended" for 1989. This means that they may be used with even more MeSH headings than allowed to them before. The subheadings and the MeSH headings involved for 1989 are listed in Figure 1. As has been the custom for the last few years, many extensions are limited to specific nodes within a category. However, in addition, several subheadings are now extended to more entire categories for 1989 as shown.

Usually all MeSH annotations are altered or updated in the printed tools for the changes made in MeSH or indexing policy. However, for 1989, there is one large exception to this rule. All Category B2 (Organisms-Vertebrates) headings were opened up to two new allowable subheadings for 1989 indexing: /abnormalities, and /injuries. This change is indicated in the 1989 *Annotated Alphabetic MeSH* on pages I-95, I-98, I-103, I-104, and I-108. However, there was not enough time to update the annotation for each B2 heading in the body of the MeSH list. For example, the entry for HORSES reads as follows:

HORSES
B2.646.709.472
IM; when IM, only /anat /blood-csf-urine /class /embryol /genet /growth /immunol /metab /microbiol /parasitol /physiol /surg; does not include zebras nor mules (= PERISSODACTYLA); consider also terms under EQUINE

While /abnorm and /inj are not specifically listed, they are legal for 1989 indexing.

For example, the subheading /abnormalities may now be used with MeSH Headings in the B2 Category-Organisms-Vertebrates for all articles indexed for the 1989 system forward. The searching abbreviation for the abnormalities is AB. Before 1989, the AB subheading was not allowed with Category B2 terms. In order to retrieve articles indexed before and after this change, the strategy below could be used. This search retrieves articles about abnormalities of the portal system in a dog.

In this example, PORTAL SYSTEM was exploded to retrieve any specific terms indented under the term. Since the AB subheading has been extended to Category B2, search DOGS/AB AND PORTAL SYSTEM/AB to retrieve references indexed for the 1989 system forward. To retrieve references indexed before the 1989 system, use DOGS combined with PORTAL SYSTEM/AB. Because the current MEDLINE file contains articles indexed before and after the "extension" the example below combines both approaches.

```
WELCOME TO THE NATIONAL LIBRARY OF MEDICINE'S ELHILL RETRIEVAL SYSTEM. YOU
ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?                                For articles indexed for the
USER:                                   1989 system forward search:
dogs/ab                                       DOGS/AB
                                              PORTAL SYSTEM/AB
PROG:
SS (1) PSTG (3)

SS 2 /C?                                For articles indexed before
USER:                                   1989 search:
exp portal system/ab                          DOGS
                                              PORTAL SYSTEM/AB
PROG:
SS (2) PSTG (14)

SS 3 /C?
USER:
1 and 2
PROG:
SS (3) PSTG (1)
```

Figure 1A

```
SS 4 /C?
USER:
dogs
PROG:
SS (4) PSTG (4400)

SS 5 /C?
USER:
2 and 4
PROG:
SS (5) PSTG (2)

SS 6 /C?
USER:
3 or 5
PROG:
SS (6) PSTG (2)

SS 7 /C?
USER:
print ui, ti, so, ab
PROG:

1
UI  - 89012660
TI  - Successful surgical manipulation of portacaval shunt in a dog.
MH  - Animal
MH  - Case Report
MH  - Dogs/*ABNORMALITIES
MH  - Female
MH  - Portal System/*ABNORMALITIES/SURGERY
SO  - Nippon Juigaku Zasshi 1988 Aug;50(4):939-41

2
UI  - 88227590
TI  - Ultrasonographic findings associated with congenital hepatic
      arteriovenous fistula in three dogs.
AB  - Three dogs were determined to have hepatic arteriovenous
      fistulas. This condition is similar to a portosystemic shunt;
      however, cure necessitates hepatic lobectomy instead of a venous
      ligature. Because of this, it is useful to differentiate these 2
      conditions before surgery. Ultrasonography was found to be
      simple, sensitive, and specific in diagnosing hepatic
      arteriovenous fistulas and differentiating them from
      portosystemic shunts. MH  - Animal
MH  - Arteriovenous Malformations/DIAGNOSIS/*VETERINARY
MH  - Case Report
MH  - Celiac Artery/*ABNORMALITIES
MH  - Dog Diseases/CONGENITAL/*DIAGNOSIS
MH  - Dogs
MH  - Female
MH  - Male
MH  - Portal Vein/*ABNORMALITIES
MH  - Ultrasonic Diagnosis/*VETERINARY
SO  - J Am Vet Med Assoc 1988 Apr 15;192(8):1099-101
```

Figure 1B

Summary of Extended Subheadings for 1989

	SUBHEADING	SEARCHING ABBREV.	MeSH TERM EXTENSIONS
1.	ethnology	EH	ATTITUDE (F1.145.76+, F1.829.92+) especially these: ATTITUDE OF HEALTH PERSONNEL ATTITUDE TO DEATH ATTITUDE TO HEALTH PATIENT ACCEPTANCE OF HEALTH CARE FAMILY (F1.829.263+, i1.880.225+) especially these: ADOPTION FAMILY CHARACTERISTICS DIVORCE MARRIAGE FAMILY HEALTH ILLEGITIMACY NUCLEAR FAMILY HOMOSEXUALITY (F1.145.792.320)
2.	genetics	GE	ETHNIC GROUPS (I1.76.201.450.416+, M1.194+, I1.880.143.522+, N1.224.317) ASIAN AMERICANS ESKIMOS GYPSIES HISPANIC AMERICANS INDIANS, CENTRAL AMERICAN INDIANS, NORTH AMERICAN INDIANS, SOUTH AMERICAN JEWS RACIAL STOCKS (I1.76.368.763+) AUSTRALOID RACE CAUCASOID RACE MONGOLOID RACE NEGROID RACE
	Note:		BLACKS/genetics = NEGROID RACE/genetics WHITES/genetics = CAUCASOID RACE/genetics
3.	mortality	MO	ACCIDENTS (G3.850.110+) especially these: ACCIDENTAL FALLS ACCIDENTS, AVIATION ACCIDENTS, HOME ACCIDENTS, OCCUPATIONAL ACCIDENTS, TRAFFIC
4.	psychology	PX	HOMOSEXUALITY (F1.145.792.320)
5.	ultrastructure	UL	PROTEINS (D12.776+)

New Category Assignments for 1989 Subheadings

Several subheadings are allowed with entire new categories for 1989 as shown below. Remember also from the preceding list the addition of /AB and /IN to Category B2.

	SUBHEADING	SEARCHING ABBREV.	MeSH TERM EXTENSIONS
1.	radiography	RA	BEHAVIORAL AND MENTAL DISORDERS (F3+)
2.	radionuclide imaging	RI	BEHAVIORAL AND MENTAL DISORDERS (F3+)
3.	legislation & jurisprudence	LJ	HEALTH OCCUPATIONS (G2+) ENVIRONMENTAL AND PUBLIC HEALTH (G3+)
4.	organization & administration	OG	HEALTH OCCUPATIONS (G2+)
5.	abnormalities	AB	ORGANISMS-VERTEBRATES (B2+)
6.	injuries	IN	ORGANISMS-VERTEBRATES (B2+)

As is always true, use these new assignments - especially those for LJ and OG - in rational combinations. That is, in G3, CONSUMER PRODUCT SAFETY/LJ is fine, WATER MOVEMENTS/LJ is silly.

New and Changed Subheadings

The subheading /familial & genetics has been deleted and /genetics has taken its place. Last year the application of /genetics was extended. Two additional extensions are in the system for 1989: ETHNIC GROUPS+ and RACIAL STOCKS+. Please see the article on extended subheadings in this issue.

Two subheadings have been introduced for 1989 to replace the subheading /occurrence which was limited to use only with diseases. These are /epidemiology (for diseases) and /statistics & numerical data (for other concepts).

All references incorporating the deleted subheadings (/familial & genetic, /occurrence) have been changed from the old to the new versions in the MEDLINE, Backfiles, AIDSLINE, HEALTH and CANCERLIT databases.

/epidemiology

The subheading /occurrence has been deleted. In its place, a new subheading, /epidemiology, has been assigned to the same disease terms in Categories C and F3. The searching short form is /EP. /epidemiology includes incidence, frequency, prevalence, occurrence, statistics, etc., of diseases in Categories C and F3. An outbreak of a disease can be searched with the MeSH heading for the name of the disease with the subheading /epidemiology attached. This MeSH/subheading combination can be coordinated with DISEASE OUTBREAKS.

The field of epidemiology indexing has been enhanced. Not only have two new subheadings been created, but several new MeSH headings have been created as well. These new 1989 MeSH headings are:

COHORT STUDIES
MULTICENTER STUDIES
PREVALENCE STUDIES
INCIDENCE STUDIES

A new (NON MESH) term has also been added to gather citations easily for searchers: STUDY DESIGN (NON MESH)

To use this heading type in the following:

SS 1 /C?
USER:
exp study design (non mesh)

PROG:
SS (1) PSTG (5385)

By exploding STUDY DESIGN (NON MESH), searchers would retreive all citations indexed to the following headings:

CLINICAL PROTOCOLS
DOUBLE-BLIND METHOD
FEASIBILITY STUDIES
PILOT PROJECTS
RANDOM ALLOCATION
SAMPLING STUDIES

These new headings can be used along with the other epidemiologic concepts which include such headings as: FOLLOW-UP STUDIES, PROSPECTIVE STUDIES, and RETROSPECTIVE STUDIES. In general, an epidemiological study will be indexed:

- under the name of the disease with the subheading /EP

- under the old or new epidemiologic MeSH heading, with no subheading

Please see the examples in MEDLINE that follow in Figure 1.

/statistics & numerical data

A new subheading /statistics & numerical data has been assigned by MeSH to Categories E, F1-2, F4, G1-3, H-N. Pair /SN in sensible combinations. That means that while for Category I, DIVORCE/sn is reasonable, QUALITY OF LIFE/sn is not. The searching short form is /SN for 1989 forward.

There are now several subheadings (consider using these in a SUBS APPLY) that cover the concept of "statistics" as outlined in Figure 2.

These changes in subheadings will impact your saved and stored searches. If you have not already done so, examine each saved strategy for the presence of the old subheadings /OC and /FG. If the strategy contains one of these it should be deleted and a new strategy entered, incorporating the new subheadings /EP and /GE, respectively. You may also want to use the new subheading /SN in your saved and stored searches.

```
WELCOME TO THE NATIONAL LIBRARY OF MEDICINE'S ELHILL RETRIEVAL SYSTEM. YOU
ARE NOW CONNECTED TO THE MEDLINE (1988 - 89) FILE.

SS 1 /C?
USER:
*measles/ep and disease outbreaks
PROG:
SS (1) PSTG (24)

SS 2 /C?
USER:
prt include mh compr
PROG:

1
UI  - 89024715
TI  - Current trends measles--United States, 1987.
MH  - Adolescence ; Adult ; Child ; Child, Preschool ; Disease
      Outbreaks ; Human ; Infant ; Measles/*EPIDEMIOLOGY/MORTALITY/
      PREVENTION & CONTROL ; Seasons ; United States ; Vaccination
SO  - Arch Dermatol 1988 Nov;124(11):1627-8

2
UI  - 89015353
AU  - Porter J
TI  - Measles epidemic in New Jersey: 1985-1986.
MH  - Adolescence ; Adult ; Child ; Child, Preschool ; *Disease
      Outbreaks/PREVENTION & CONTROL ; Human ; Infant ; Infant,
      Newborn ; Measles/*EPIDEMIOLOGY/PREVENTION & CONTROL ; New
      Jersey ; Vaccination
SO  - N J Med 1988 Jul;85(7):593-7
 .
 .
 .
```

Figure 1A

```
SS 2 /C?
USER:
*clinical trials/sn
PROG:
SS (2) PSTG (8)

SS 3 /C?
USER:
prt include mh compr
PROG:

1
UI  - 89018586
AU  - Rockette HE ; Redmond CK
TI  - Limitations and advantages of meta-analysis in clinical trials.
MH  - Clinical Trials/*STATISTICS & NUMER. DATA ; Human ;
      *Meta-Analysis ; Models, Statistical ; Neoplasms/*THERAPY ;
      Random Allocation ; Support, Non-U.S. Gov't ; Support, U.S.
      Gov't, P.H.S.
SO  - Recent Results Cancer Res 1988;111:99-104

2
UI  - 89018582
AU  - Kay R
TI  - Competing risks, interactions and crossing hazards.
MH  - Aged ; Clinical Trials/*STATISTICS & NUMER. DATA ; Comparative
      Study ; Diethylstilbestrol/ADVERSE EFFECTS/*THERAPEUTIC USE ;
      Dose-Response Relationship, Drug ; Human ; Male ; Prostatic
      Neoplasms/*DRUG THERAPY/MORTALITY ; Random Allocation ; Risk
      Factors
SO  - Recent Results Cancer Res 1988;111:67-74
 .
 .
 .
```

Figure 1 B

Subheading		Categories Allowed	Year Introduced
SN	statistics & numerical data	E,F1-2,F4,G1-3,H-N	89
EP	epidemiology	C,F3,SMOKING+	66
MA	manpower	E6,F4,G1-2,H-J,L,N2-4	68
SD	supply & distribution	D,E,F4,H-J,L,N2-4	68
MO	mortality	C,E,F3-4,ACCIDENTS+,SMOKING+	67

Figure 2

New Review Indexing Policy - Results One Year Later

Last year, in the first edition of the "MEDLARS Update", a special issue of the *NLM Technical Bulletin* (Supplement No. 1, March 1988), NLM presented a major change in the indexing policy for review articles. The scope of what constitutes a review article was broadened, and specific types of review headings were introduced for 1988 indexing. Last March, NLM staff made the following prediction: "...it is projected that the REVIEW tag will be used on almost twice as many records during 1988 than it was during 1987!" One year later that prediction has proven to be true. See Figure 1 for details. In 1987, 4.4% of the citations added were indexed with REVIEW; in 1988, the percentage grew to 7.9%. We hope this expanded coverage has improved your searching for reviews. The new types of review headings are shown in Figure 2 with total postings for the 1988 indexing year. The most commonly used specific review heading by far was REVIEW, TUTORIAL. Please refer to the online MeSH Vocabulary File records or the GRATEFUL MED help screens if you need definitions for these review headings in Figure 2.

TABLE 1

REVIEW ARTICLES
1987 and 1988 Indexing Years

Entry Month	Review Articles	Total Citations	Percent	Entry month	Review Article	Total Citations	Percent
8701	847	24,364	3%	8701	1,516	23,790	6%
8702	889	21,636	4%	8702	1,716	24,946	7%
8703	1,168	25,110	5%	8703	2,173	26,727	8%
8704	971	23,055	4%	8704	2,352	28,756	8%
8705	1,159	26,609	4%	8705	2,304	27,159	8%
8706	1,143	26,992	4%	8706	2,602	27,874	9%
8707	1,144	26,794	4%	8707	2,012	28,967	7%
8708	1,285	27,448	5%	8708	2,098	28,030	7%
8709	1,187	27,125	4%	8709	2,545	29,206	9%
8710	1,298	27,915	5%	8710	2,401	28,616	8%
8711	1,397	26,788	5%	8711	2,162	25,566	8%
8712	1,318	26,786	5%	8712	1,876	26,894	7%
TOTAL	13,800	310,712	4.4%	TOTAL	25,757	326,531	7.9%

December 1988

Figure 1

SPECIFIC REVIEW HEADING	TOTAL POSTINGS FOR 1988 INDEXING*
REVIEW, ACADEMIC	3,660
REVIEW LITERATURE	512
REVIEW, MULTICASE	502
REVIEW OF REPORTED CASES	2,172
REVIEW, TUTORIAL	19,432

*Total does not add to 25,757 found in Table 1 because one citation may be given more than one of the specific review headings under the 1988 indexing policy for reviews.

Figure 2

Highlights of 1989 MeSH Headings in Selected Fields

The following pages contain hedges of related main headings (most of them new for 1989) in the areas of leukemia and ophthalmology. These lists were created to make you aware of some of the broad categories in the MeSH vocabulary that underwent major changes for 1989. They are not meant to be exhaustive; but to serve as reminders of areas in the MeSH Vocabulary that contain some enhancements.

****

Ophthalmology and Optometry Vocabulary

Suggestions from the Vision Science Librarians and Index Section resulted in the following new MeSH headings for 1989 indexing.

C11
- DRY EYE SYNDROMES
- GLAUCOMA, NEOVASCULAR
- OPTIC ATROPHY, HEREDITARY
- RETINAL ARTERY OCCLUSION
- SCLERAL DISEASES
  - SCLERITIS
- VISION, LOW

E1
- VISION SCREENING

E4
- EYE ENUCLEATION

G11
- VISION, BINOCULAR
- VISION, MONOCULAR
- CONTRAST SENSITIVITY
- VISION DISPARITY

1989 Leukemia Tree Changes

The 1989 leukemia terms (C4.557.337+) are now classified both morphologically and immunologically. The three primary features of the new arrays are:

1) the basic division into 4 main morphological components (hairy cell, lymphocytic, myeloid, and plasmacytic);

2) the incorporation of immunologic markers (B-cell, T-cell, mixed, and null); and

3) the explicit separation of the acute and chronic leukemias into distinct disease entities.

The 1989 leukemia terms are listed below. A heading enclosed in parentheses indicates an old (pre-1989) MeSH heading.

As you can see from this listing, the leukemia MeSH headings have been enhanced and expanded. This should make searching in this subject area more precise.

```
(LEUKEMIA)  C4.557.337+
     LEUKEMIA BY IMMUNOLOGIC MARKER (NON MESH)
          LEUKEMIA, B-CELL
               LEUKEMIA, B-CELL, ACUTE
               LEUKEMIA, B-CELL, CHRONIC
               LEUKEMIA, PRE B-CELL
          LEUKEMIA, MIXED CELL
          LEUKEMIA, NULL CELL
          LEUKEMIA, T-CELL
               LEUKEMIA, T-CELL, ACUTE
                    LEUKEMIA-LYMPHOMA, T-CELL, HTLV-I-ASSOCIATED
               LEUKEMIA, T-CELL, CHRONIC
               LEUKEMIA, T-CELL, HTLV-II-ASSOCIATED

(LEUKEMIA, EXPERIMENTAL)
     no changes here

(LEUKEMIA, HAIRY CELL)
     LEUKEMIA, T-CELL, HTLV-II-ASSOCIATED

(LEUKEMIA, LYMPHOCYTIC)
     LEUKEMIA, LYMPHOCYTIC, ACUTE
          LEUKEMIA, B-CELL, ACUTE
          LEUKEMIA, CALLA-POSITIVE
          LEUKEMIA, LYMPHOCYTIC, ACUTE, L1
          LEUKEMIA, LYMPHOCYTIC, ACUTE, L2
          LEUKEMIA, MIXED-CELL
          LEUKEMIA, NULL-CELL
          LEUKEMIA, T-CELL, ACUTE
               LEUKEMIA-LYMPHOMA, T-CELL, ACUTE, HTLV-I-ASSOCIATED
     LEUKEMIA, LYMPHOCYTIC, CHRONIC
          LEUKEMIA, B-CELL, CHRONIC
          LEUKEMIA, PROLYMPHOCYTIC
          LEUKEMIA, T-CELL, CHRONIC

     LEUKEMIA, MYELOID
          LEUKEMIA, MYELOID, CHRONIC
             (BLAST CRISIS)
               LEUKEMIA, MONOCYTIC, CHRONIC
               LEUKEMIA, MYELOID, AGGRESSIVE-PHASE
               LEUKEMIA, MYELOID, CHRONIC-PHASE
               LEUKEMIA, MYELOMONOCYTIC, CHRONIC
          LEUKEMIA, MYELOID, PHILADELPHIA-NEGATIVE
          LEUKEMIA, MYELOID, PHILADELPHIA-POSITIVE
          LEUKEMIA, NONLYMPHOCYTIC, ACUTE
               LEUKEMIA, BASOPHILIC, ACUTE
               LEUKEMIA, EOSINOPHILIC, ACUTE
               LEUKEMIA, ERYTHROBLASTIC, ACUTE
              (LEUKEMIA, MAST CELL)
               LEUKEMIA, MEGAKARYOCYTIC, ACUTE
               LEUKEMIA, MONOCYTIC, ACUTE
               LEUKEMIA, MYELOCYTIC, ACUTE
               LEUKEMIA, MYELOMONOCYTIC, ACUTE
               LEUKEMIA, PROMYLELOCYTIC, ACUTE
        (LEUKEMIA, PLASMACYTIC)
```

Tree Changes

As happens every year, MeSH improves the position of individual terms on various branches or twigs of Trees. "Trees" refers to the hierarchical arrangement of MeSH headings into one or more of 15 major subject categories. These changes in the Trees seldom affect indexers; searchers should probably peruse them more carefully.

As usual there are many Tree changes in the usual way for the usual reasons: repositions required because of the addition of the new terms, because of the deletion of some terms, because of the re-indention of still more.

Only a summary of the major Tree changes is given here. It is suggested that you routinely check the printed Tree Structures or use the TREE command online in order to view the categories and indentions.

CATEGORY B4

RETROVIRIDAE under both ONCOGENIC VIRUSES and RNA VIRUSES were expanded to accommodate the SIMIAN RETROVIRUSES.

Minor re-arrangements were made for the new HIV breakdown.

CATEGORY C1

SEXUALLY TRANSMITTED DISEASES was rearranged for the new SEXUALLY TRANSMITTED DISEASES, BACTERIAL.

CATEGORY C2

Likewise a change was made for the new SEXUALLY TRANSMITTED DISEASES, VIRAL.

CATEGORY C4

Major changes were made for the LEUKEMIA expansion morphologically, immunologically, and in greater specificity. See the article on the 1989 MeSH Vocabulary File also contained in this issue for details.

CATEGORY C7

Because MOUTH AND TOOTH DISEASES (NON MESH) was changed to STOMATOGNATHIC DISEASES which includes the jaws, JAW DISEASES was added to this tree while staying also in C5 with the bones.

PHARYNGEAL DISEASES will now appear in this tree as well as in C9 (OTORHINOLARYNGOLOGIC DISEASES).

CATEGORY C10 & CATEGORY C16

NEUROPATHIES, HEREDITARY SENSORY AND AUTONOMIC (a new name) and NEUROPATHIES, HEREDITARY MOTOR AND SENSORY (a new heading) required retreeing of existent locations in both of these trees.

CATEGORY D2

BIOGENIC AMINES had to be re-treed because of the creation of BIOGENIC MONOAMINES and BIOGENIC POLYAMINES.

CATEGORY D14

The new DOPAMINERGIC AGENTS required re-treeing of those chemicals not so named in 1988. About 20 headings now appear there.

CATEGORY D20

With the creation of ANTI-INFECTIVE AGENTS, QUINOLONE, agents formerly elsewhere now appear here.

CATEGORY D24

There are new indentions under TUMOR MARKERS, BIOLOGICAL. Also HISTOCOMPATIBILITY ANTIGENS has been re-treed to show the new antigens: HISTOCOMPATIBILITY ANTIGENS CLASS I; HLA-A ANTIGENS; HLA-B ANTIGENS; and HLA-C ANTIGENS.

CATEGORY E4

MASTECTOMY has merely been expanded to show the six new types of mastectomy for 1989.

CATEGORY E5 & CATEGORY G3

Although only five new epidemiologic terms were added, one Non-MeSH and four MeSH, a wholesale rearrangement of both these trees was made. Remember that the epidemiology terms - new and old - will be an exception to the rule of indexing only what is discussed. For most of the terms in these trees, the mere mention in the article that a given epidemiological study method was used, requires that the heading be indexed, usually "NIM" (not for *Index Medicus* or without an *).

The Basics of Searching MEDLINE

The training workbook *The Basics of Searching MEDLINE*, which is used in conjunction with the NLM health professional training program, was first released in 1985. The revised *Basics of Searching MEDLINE* can be ordered from the National Technical Information Service. The order number is PB89-146179/GBB and the cost is $20.50 per copy. The expected delivery date is March 1989. The following describes some of the major changes you can expect to find with the new edition.

Effective December 1988, the training database INTROMED® was discontinued on the NLM system. This database had been designed to be used with the *Basics* manual to provide a small subset of MEDLINE citations against which all of the search exercises could be performed. INTROMED contained approximately 20,000 records from the 1982 and 1983 publication years. Response from trainers using this database indicated that this number was too low to be able to perform a number of various online search techniques and strategies effectively. Combining several search terms with the Boolean operator AND generally resulted in a No Postings message. With this in mind and based on recommendations from regional and local trainers, the revised edition of the *Basics* now uses MEDLINE as its point of reference. All of the searches in the *Basics* have been performed in the MEDLINE database effective with the 1989 indexing changes. As a result, the numbers will change as the database is updated; however, using current MEDLINE will provide the searcher with a more accurate representation of the database content.

The new *Basics* also incorporates many system changes which have occurred in the past several years. These include the NEIGHBOR and SELECT commands, new system messages (e.g., COMMENT/DISPLAY commands, etc.), revised login procedures and terminal identifiers for TELENET and TYMNET, etc. It also includes additional information about the user-friendly program GRATEFUL MED. All MeSH headings, subheadings, and pre-explosion names are current for 1989 MeSH.

Included with each copy of the *Basics* manual is a request form to obtain a training code and password for use while practicing searches in MEDLINE online (see form in Appendix). Formerly, when the INTROMED database was used for practice, charges were billed at half the rate of MEDLINE. With this revision and the discontinuation of INTROMED, the intent is still to provide an economical basis for training. Therefore, special non-billed training codes will be assigned by MEDLARS Management upon request from trainers or searchers using the manual. Specific dates must be indicated on the request form before a code can be assigned. Trainers teaching the *Basics* should continue to send in completed "Profile of Participants" forms (see Appendix) at the conclusion of their training class. One form should be completed for each participant. We would also like a participant's form completed by searchers who use the non-billed training codes.

NLM Student Code Program

The National Library of Medicine (NLM) Student Code Program is designed to encourage the use of MEDLARS databases by students. While our previous "educational codes" program only allowed institutions to apply, this student code program also accepts applications from individual students. The major benefit of the student codes is reduced rates for MEDLARS computer system usage (about half of regular charges). Individual student codes are automatically converted to regular billed codes at the end of two years.

Individuals eligible for system access codes include those enrolled in undergraduate, graduate, residency, and fellowship programs. The particular discipline of study is not important. Educational institutions, including teaching hospitals, medical schools, and medical libraries, providing educational programs are examples of institutions obtaining student codes. Instructors can also apply for student codes to help prepare and teach courses that involve online searching by students. These codes are renewable every year and each may also be limited or "capped" to a certain amount of system usage semi-annually. Some institutions need to put a limit on the number of hours a code can be used for budgetary purposes. Effective January 1, 1989, institutional student codes were expanded beyond ELHILL databases (MEDLINE, CATLINE®, CANCERLIT, AIDSLINE, etc.) to include access to the TOXNET® databanks, the MEDLEARN® CAI program, and PDQ®.

The NLM student code program is highly successful. Over 670 individual and 3,200 institutional student codes have been activated since the beginning of the program in October 1987.

If you have any questions, or wish to receive a student code application, please call the MEDLARS Management Service Desk toll-free at 800/638-8480 or, in Maryland, 301/496-6193.

Survey of Individual Users of MEDLINE on the NLM System

In the latter part of 1987, NLM conducted a mail survey of the entire population of individual users of MEDLINE with codes for the NLM system as of July 1987. Questionnaires were mailed to 4,311 individuals early in October and returns were accepted until December 1987. Over 70% of the questionnaires were returned, and the usable return rate was 68% (2,716 responses).

The survey was prompted by several recent developments in NLM's online services. As more and more health professionals began to have access to personal computers, NLM took steps to encourage individuals to search NLM's databases directly. These steps include the provision of special short training courses in online searching and the development of GRATEFUL MED, a user-friendly interface to the NLM system.

As the population of individual users grew, NLM wanted to know more about these individuals, their information needs, and their level of satisfaction with MEDLINE as available on the NLM system. An NLM Study Team was convened, and this group, with the assistance of a contractor, Market Dynamics, Inc., developed a questionnaire that was designed to obtain the needed information. The survey was an initial attempt at determining the demographic characteristics of individual users of MEDLINE, their methods of access to the system, their reasons for searching, and their level of satisfaction with current system features and capabilities. A great deal of information has been gathered and will be used to identify system improvements that can provide a better level of information service to U.S. health professionals.

The survey data are now being made available as an NTIS Technical Report (PB89-133722/GBB; U.S. price $21.95; foreign $43.90, with a $3.00 handling charge per U.S. order; $4.00 for foreign orders). In addition, NLM plans to publish an article detailing the results.

NLM wishes to thank the many individuals who responded to the survey questionnaire.

A summary of the key points of the survey follows.

KEY POINTS

1. Nearly two-thirds of respondents identified themselves as physicians (65.5%) and more than a quarter (27.7%) as scientists.

-- Respondents were instructed to circle all professions that applied; 10.5% indicated that they were both physicians and scientists.

2. The majority of individual users of MEDLINE appear to be relatively young.

-- The majority received their highest degree within the past 18 years:

-40.1% during the 1970's
-27.1% during the 1980's

3. More than two-thirds of respondents (68.6%) indicated they do all searches themselves.

-- On an average, they perform 4.3 searches/month by themselves.

4. Lack of time was the most frequent reason given for having someone else perform MEDLINE searches (by 59.3% of those who have others search for them)

5. The two main reasons given for performing their own searches were:

-- greater familiarity with subject matter (47.9%)

-- ability to get search results faster (32.2%)

6. Among all reasons selected (regardless of rank assigned), two-thirds of the respondents (65.5%) indicated enjoyment of searching as a factor.

7. The majority of respondents have had their codes for two years or less (90.1%). The majority of the respondents also do not share their code with anyone else (82%).

8. The majority of respondents (84.5%) feel they are somewhat experienced or not very experienced in the use of online databases.

9. For over half of all respondents (57.7%), online usage has remained about the same since receiving their access codes.

-- 30% indicated usage has increased

-- 12.3% indicated usage has decreased

10. Cost seems not to be of overwhelming importance in individuals use' of MEDLINE. The majority (67.7%) indicated that cost considerations rarely (26.6%) or never (41.0%) keep them from performing a search.

11. The overwhelming majority (96.0%) say they most often search for a subject. 81.7% indicated they typically search to satisfy an immediate information need.

12. Those whose primary use of MEDLINE search information is in research/testing are more likely to want all relevant citations (61.7%) compared to those whose primary use of MEDLINE search information is in education (53.3%) or patient care (49.8%).

13. Those in group and private/solo practice are somewhat more likely to feel that less than half of the citations they typically retrieve are relevant. (63.4% of those in group practice and 61.1% of those in private/solo practice compared to 58.6% of all respondents).

14. Almost two-thirds of all respondents (60.8%) indicated MEDLINE citations are acceptable in their current form (i.e., answered "NO" to additional information needed in a citation).

-- Of the 39.2% who said additional types of information would be valuable, full text was overwhelmingly chosen as the single most valuable piece of information not presently available in MEDLINE citations.

15. Eighty percent of respondents expressed an overall satisfaction with MEDLINE.

16. Two-thirds of the respondents (64.1%) took less than 10 minutes on a typical search.

-- Majority of respondents (83.4%) feel that length of time to conduct a search on MEDLINE is reasonable.

17. Of the group of individuals who indicated research/testing as one of their uses of MEDLINE information, 61.5% ranked it as their most common use. Of those who indicated patient care, 52.8% ranked it as the most common use.

18. A somewhat larger portion of the physician group (30.1%) always use GRATEFUL MED form screens as compared to the other professional groups (other health professional 24.8%, scientist 21%, nurse 18.5% and student 17.1%).

-- One-third of respondents in private/solo group practice always use GRATEFUL MED form screens to search.

AIDS Bibliography to Become a Monthly

The National Library of Medicine has been producing a bibliographic series on AIDS on a quarterly basis since 1983, first as part of the Literature Search Series and then as the separate *AIDS Bibliography* beginning in 1988. Because the volume of literature on AIDS in MEDLINE alone is growing at the rate of over 500 citations per month, the Library has decided to begin publishing the *AIDS Bibliography* on a monthly basis with vol. 2, no. 1, in January 1989.

Initially, the bibliography will continue the current practice of including references from NLM's AIDSLINE (MEDLINE citations on AIDS), CATLINE, and AVLINE® databases. In 1989 AIDSLINE will be expanded to include citations from two other NLM databases, Health Planning & Administration and CANCERLIT. The increased coverage will be reflected in the *AIDS Bibliography*.

The *AIDS Bibliography* contains citations to all preclinical, epidemiologic, diagnostic, and prevention areas added to NLM's AIDSLINE, CATLINE, and AVLINE databases in a given month. Arrangement of the bibliography is by publication type. Journal article citations (no abstracts are included) are printed alphabetically by MeSH heading, similar to *Abridged Index Medicus*. Monographs and audiovisuals, arranged alphabetically by main entry, follow. The bibliography now includes an author index to the journal citations.

The *AIDS Bibliography* may be ordered from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (GPO List ID: AID89) for an annual subscription price of $43.00. Individual issues may be ordered at $4.00 per copy. International customers should add 25% to the subscriptions price.

BIOETHICSLINE® Update

As of the end of 1988, the BIOETHICSLINE (short name: BIOETHICS) file contained 26,399 citations to journal articles, books, legal documents, and other publications concerned with ethical and related legal and public policy issues in health care and biomedical research. The file is updated bimonthly, usually during the second week of the month, in February, April, June, August, October, and December.

NEW KEYWORDS

Four new Keywords have been added to the *Bioethics Thesaurus*, the controlled vocabulary of terms used to index and search BIOETHICS. They are:

ANENCEPHALY
(1988; was BRAIN PATHOLOGY and NEURAL TUBE DEFECTS; MeSH map = same)
SN Congenital absence of all or a major part of the brain
BT Brain pathology
Neural tube defects

CESAREAN SECTION
(1988; was CHILDBIRTH and SURGERY; MeSH map = same)
SN Extraction of the fetus by means of a surgical incision of the abdomen and uterus
BT Childbirth
Surgery

HIV SEROPOSITIVITY
(1988; MeSH map = same)
SN Development of neutralizing antibodies in persons who have been exposed to the human immunodeficiency virus (HIV/HTLV-III/LAV); linked to development of the acquired immunodeficiency syndrome (AIDS) and AIDS-related complex (ARC)
BT Acquired immunodeficiency syndrome

QUARANTINE
(1988; was MANDATORY PROGRAMS and (COMMUNICABLE DISEASES or PUBLIC HEALTH or name of a particular disease); MeSH map = same)
SN Limitation of the freedom of movement of persons who have been exposed to a communicable disease (and, loosely, of patients and infected persons), for the purpose of preventing the spread of disease.
BT Mandatory programs
RT Communicable disease
Public health

NEW PUBLICATIONS

Volume 14 of the *Bibliography of Bioethics*, the print version of BIOETHICS, was published in November 1988. The largest volume to date in the annual series, Volume 14 contains 579 pages and 2,400 citations, many with abstracts. It is available for $35 from the *Bibliography of Bioethics*, Kennedy Institute of Bioethics, Georgetown University, Washington, DC 20057.

The current edition of the *Bioethics Thesaurus* (1988; 45 pages) is included in Volume 14 of the *Bibliography*. It can also be purchased separately, for $5, (U.S. and non-U.S.) from the Kennedy Institute of Ethics (address as above). (Prices include shipping and handling for prepaid orders; add $2 per order if payment is not enclosed.)

PHONE NUMBERS

Questions about the content of the BIOETHICS file or about subject searching strategies should be addressed to Joy Kahn, Cecily Orr, or Frances Abramson of the Bioethics Information Retrieval Project, which is responsible for producing the BIOETHICS file. They can be contacted via the National Reference Center for Bioethics Literature, which is based at the Kennedy Center for Bioethics. The National Reference Center's telephone number is: (202) 687-3885. Its toll-free number, for inquiries from the continental United States outside the District of Columbia, is (800) MED-ETHX.

The Document Delivery Service for the BIOETHICS database can be reached by calling either its toll-free number, (800) MED-ETHX, or its regular phone number: (202) 687-6738.

SEARCH STRATEGIES

The following search strategies are suggested for retrieving citations on topics of growing interest in the field of bioethics. During the past year, there has been a marked increase in the literature on these subjects.

A. To retrieve citations on issues involving anencephaly:

1 (KW) ANENCEPHALY or ALL ANENCEPHAL: (TW)

2 (KW) *BRAIN PATHOLOGY and *NEURAL TUBE DEFECTS

3 (KW) *FETUSES or *NEWBORNS

4 2 and 3

5 1 or 4

B. To retrieve citations on the right of pregnant women to refuse Cesarean sections:

1 (KW) *PREGNANT WOMEN and *TREATMENT REFUSAL

2 (KW) CESAREAN SECTION or ALL C:ESAREAN (TW)

3 (KW) CHILDBIRTH AND SURGERY

4 2 or 3

5 1 and 4

To retrieve citations on the broader subject of maternal versus fetal rights, other than in the abortion context:

1 (KW) *FETUSES and *PREGNANT WOMEN

2 (KW) ALCOHOL ABUSE or *BRAIN DEATH or CESAREAN SECTION or CHILDBIRTH or DRUG ABUSE or FETAL THERAPY or MOTHER FETUS RELATIONSHIP or PRENATAL INJURIES or *TREATMENT REFUSAL or ALL C:ESAREAN (TW)

3 1 and 2

C. To retrieve citations on the use of mandatory public health measures, such as quarantine, to control the spread of AIDS or other communicable diseases:

1 (KW) *ACQUIRED IMMUNODEFICIENCY SYNDROME or *COMMUNICABLE DISEASES or *HIV SEROPOSITIVITY or *PUBLIC HEALTH

2 (KW) *MANDATORY PROGRAMS or QUARANTINE or ALL QUARANTIN: (TW)

3 1 and 2

D. To retrieve citations on the use of fetal tissue for research or transplantation:

1 (KW) *ABORTED FETUSES or *FETUSES

2 (KW) *HUMAN EXPERIMENTATION or *ORGAN DONATION or *ORGAN DONORS or *ORGAN TRANSPLANTATION or *TRANSPLANTATION

3 1 and 2

National Cancer Institute Update

PDQ

This spring NCI plans to add searching by exclusion criteria (Choice 10 on the Protocol file menu, currently inactive). Exclusion criteria are search criteria which exclude protocols from the current search, improving the precision of the retrieval.

An example of an exclusion criterion is the following: Find all protocols for breast cancer involving the use of the drug MTX, in patients who have had no prior chemotherapy. "Prior chemotherapy" is the exclusion criterion, while "MTX" and "breast cancer" are normal criteria. This is equivalent to the hypothetical ELHILL search statement: "Breast neoplasms and methotrexate and not prior chemotherapy", although "prior chemotherapy" is not a MeSH heading.

Choosing option 10, "Exclusion Criteria", will retrieve another menu which will allow you to exclude protocols by drug, drug combination, treatment modality, phase of protocol, disease parameters, prior therapy, performance status, and pregnancy. Many of the choices from these menus will lead to submenus. For example, "disease parameters" will lead to "metastatic disease present", "no measurable disease present", and "unresectable disease present". A choice of "metastatic disease present" leads to another submenu - "metastatic disease to the brain," "metastatic disease to the liver," "metastatic disease to the bone marrow," "malignant pleural effusion," and "malignant ascites".

Information will also be added to the "disease specific criteria" menu option in the Protocol file (choice 11 on the menu). For example, disease specific criteria for breast cancer include stage, menopausal status, hormone receptor status and lymph node status. This will permit very narrow and specific retrieval but may lack comprehensiveness.

The PDQ ACCESS software that interfaces stored CANCERLIT searches with PDQ will be enhanced to include author searching in CANCERLIT. Also, there are plans to produce a Macintosh version of PDQ ACCESS (currently limited to IBM and compatibles) by Summer 1989.

Additional commands will be phased in to permit bypassing more menus. For example drug searching in the Protocol file now requires selecting item 2 on the menu (drug) then typing in a drug name: 2;methotrexate. It will become possible to type: drug;methotrexate. A user at the PDQ main menu currently has to type: 7;1;2;methotrexate. It will become possible to type: prot;drug;methotrexate. These new commands should make command stacking easier to use.

CANCERLIT

In December 1988, the search default for the CANCERLIT database was changed from text word (TW) to MeSH heading (MH). This has made searching CANCERLIT nearly identical with searching MEDLINE. The NCI decided to make this change because most MEDLARS searchers are more comfortable with the MEDLINE approach, and now over 70% of the CANCERLIT file (all entries since 1980) is indexed with MeSH. Approximately 450,000 CANCERLIT records now have MeSH terms. Many searchers of CANCERLIT already use only MeSH terms in their strategy, and therefore are only searching the MeSH-indexed portion of the database. For more information, see the *NLM Technical Bulletin*, October 1988.

CHEMLINE® Update

In 1988, efforts continued to improve access to CHEMLINE by tagging important data, as well as providing links between records in the file of potential relevance to users. The emphasis continues to be on making CHEMLINE an easy to use biomedical/regulatory chemical directory serving all MEDLARS databases.

A unique aspect of CHEMLINE is that many substance names are tagged with acronyms in square brackets showing that they are "official" names from various national or international compendia of drugs or pesticides. These tags allow a user to pick an appropriate generic name rather than a brand name, for purposes such as publication and labelling, as well as to carry forward for further searching. Following are some examples:

Diazepam [USAN:INN]

The tag for this name shows that it is a United States Adopted Name (USAN), as well as an International Nonproprietary Name (INN). "Diazepam" will give more retrieval in searching literature files than the substance's more commonly known trade name of "Valium". The following name:

Mequitazine [INN:BAN:DCF]

is a British Approved Name (BAN) and French Approved Name (DCF), in addition to being an INN. The next pesticide name:

Diflubenzuron [ANSI:BSI:ISO]

is the official name for this pesticide according to the American National Standards Institute (ANSI), the British Standards Institution (BSI), and the International Organization for Standardization (ISO).

Because users are often faced with a variety of synonyms for a substance, tags such as these can be extremely effective as a guide to choosing the most useful designation. Users of CHEMLINE should become accustomed to looking for one or more of these tags appended to names within a retrieved record, since they are truly "value-added" information.

Another unique feature of CHEMLINE is the machine-generated Related Registry Number (RR) field. It is used to link the records of certain salts and hydrates for the convenience of searchers. For 1988, the label "(Parent)" is now appended to the Registry Number in the RR field pointing to the record among a set of Related Numbers which is NOT a salt or hydrate. For instance in the record retrieved for the drug "Duricef," the RN and RR fields show:

RN - 66592-87-8
RR - 42284-83-3 (NA)
RR - 50370-12-2 (Parent)

If the user retrieved the "Parent" record using the RN of 50370-12-2, it will lead to CHEMLINE Locators pointing to additional MEDLINE and RTECS data not seen in the Duricef record. Using this parent RN will give about 50% more citations in the TOXLIT file as compared to the RN of Duricef. It is an additional step in searching that is usually well worth taking.

The regeneration of CHEMLINE for 1989 is scheduled for April. In this regeneration, the many locator changes caused by changes in the MEDLINE files, the split of TOXLINE/TOXLIT, and the advent of the AIDSLINE file will be reflected. Efforts will continue to enhance the file with international data of biomedical interest, and thus to improve the retrieval capabilities of searchers with chemically-oriented questions.

HEALTH PLANNING & ADMINISTRATION

DATABASE UPDATE

At the close of 1988, the Health Planning & Administration database (HEALTH), produced cooperatively by the National Library of Medicine and the American Hospital Association (AHA) Resource Center, contained 434,888 citations to worldwide literature concerned with all aspects of health care delivery. The file is updated monthly, one week following the MEDLINE update usually at the beginning of each month.

NEW VOCABULARY

Several of the 1989 Medical Subject Headings are particularly relevant for searching HEALTH:

HEALTH CARE RATIONING
HOSPITAL-PATIENT RELATIONS
HOTLINES
INSURANCE POOLS
INSURANCE SELECTION BIAS
INTENSIVE CARE UNITS, PEDIATRIC
MEDICARE ASSIGNMENT
NURSING ADMINISTRATION RESEARCH
NURSING EVALUATION RESEARCH
ORGANIZATIONAL CULTURE
PHYSICIAN PAYMENT REVIEW COMMISSION
PROGRAM EVALUATION

Also, the addition of more regions and cities within the United States is especially significant for searching HEALTH, as is the new subheading, /statistics & numerical data.

DOCUMENT COVERAGE

Each issue of the *NLM Technical Bulletin* contains a 'Serials Update' section that lists title changes, drops, and additions for indexed journals. Special List Health journal titles are preceded by 'HLI'. These journal titles are also listed in the NLM publication, *List of Serials Indexed for Online Users*. In addition, occasional issues of *Hospital Literature Index* contain inserts that list new, changed, and dropped Special List Health titles for specific time periods along with publisher, publisher's address, frequency, and volume, number, and date of issue in which indexing begins or ends. Since October 1987, Special List Health updates include 8 new titles, 14 title changes, 1 title change from H (LI) to N (LI), i.e.: Special List Health status change to Special List Nursing Status, and 33 titles dropped from indexing or ceased publication.

PRODUCTS

The *Hospital Literature Index*, produced from HEALTH and published quarterly by the AHA Resource Center, completed its 44th consecutive year of publication in 1988. In addition to Subject, Name, and Journal sections derived from HEALTH, each issue also lists the books, audiovisuals, theses, and new journals acquired by the Resource Center, grouped by Medical Subject Headings. The last issue for 1988, Volume 44, contains 14,184 citations, and is a hardbound annual cumulation that includes citations for the fourth quarter. A 1989 subscription is available for $160 for AHA members and $200 for non-members.

The revised brochure on HEALTH, developed by the AHA Resource Center, is still available from AHA. Ten folded pages in length, it is available in lots of 50 to AHA members for $8.00 and to non-members for $12.00. The brochure is ideal for use as a library services orientation tool.

The AHA Resource Center offers a half-day seminar on searching the HEALTH database. The course can be taught at local sites, with or without online demonstrations. It has been approved for 3.2 contact hours of MLA CE credit. For additional information on this seminar or products mentioned above, write to the AHA Resource Center, 840 North Lake Shore Drive, Chicago, IL 60611, or call the Center at 312/280-6263.

HEALTH searching using a user-friendly INPUT FORM SCREEN became available on Version 3.0 of GRATEFUL MED, at the end of 1987.

CHANGES IN SEARCH/PRINT CAPABILITIES IN 1988

- The Number of References (RF) field was added to HEALTH standard print formats. However, only articles indexed with the check tag REVIEW include the number of references.

- The Address (AD) field was added to HEALTH citations to articles from substantial MEDLINE-derived *Index Medicus* journals.

- A new value was added to the Journal Subset (SB) field in HEALTH, N (SB). This tag defines all nursing journals, whether or not the journal has *Index Medicus* status or Special List status. For 1989, the

corresponding Journal Subset (SB) field was also added for dentistry to the HEALTH file citations. D (SB) identifies all dental journals, whether or not *Index Medicus*.

TOXLINE® Regeneration Status

Reconfiguration of the TOXLINE family of databases is underway at NLM, with public release of the new files currently planned for late February 1989. At that time, we will offer a regenerated TOXLINE file in order to provide Class Maintained (1989) MeSH on the Toxicity Bibliography (TOXBIB) portion of TOXLINE. Also, the TOXLINE file will be divided into a front and back file. The front file will continue to be known as TOXLINE, and will cover publication years 1981 forward. The new backfile will be known as TOXLINE65, and will cover publication years 1980 and earlier.

In addition, NLM has decided to return to the practice of including bibliographic information in toxicology from the BioSciences Information Service (i.e., the Toxicological Aspects of Environmental Health subfile, known as the BIOSIS subfile) and from the American Society of Hospital Pharmacists (the International Pharmaceutical Abstracts subfile, with the subfile acronym IPA) in the TOXLINE and TOXLINE65 databases. At present these subfiles are contained in the TOXLIT and TOXLIT65 databases. This transfer is possible because NLM has negotiated licenses with the suppliers of these proprietary files that allow payment of flat fees by NLM for all online use of their data in the TOXLINE files without any additional royalty charges based on usage. This means that the charge to users for accessing the new TOXLINE and TOXLINE65 files will be the same as that for searching MEDLINE and most other MEDLARS files.

Thus, beginning approximately March 1, 1989, the newly reconfigured TOXLINE files will include all the current subfiles in the collection of toxicologic bibliographic information except the subfile from Chemical Abstracts Service (CAS). This subfile, known as Chemical-Biological Activities (CA), will constitute the entire content of the TOXLIT and TOXLIT65 files. The 1989 prices for the TOXLIT files, which will continue to have royalty fees included in their use charges, were announced in the January 1989 *NLM Technical Bulletin*. Prices also were posted in the NLM Online News at the time the files were made public. The list of TOXLINE subfiles shown in Table I reflects the changes in the upcoming regeneration.

Other new features to look for in the regenerated TOXLINE files are:

The BIOSIS subfile records will now contain the Biosystematic Codes and Concept Codes from BIOSIS in the TOXLINE keyword (KW) field. See the February issue of the *NLM Technical Bulletin* for a detailed article on this.

The TSCATS subfile will be reloaded in order to make the EPA submission numbers searchable. These numbers will appear in the Classification Code (CC) data field.

Contrary to what was projected in the September 1988 *NLM Technical Bulletin*, the MEDLINE assigned molecular sequence data bank accession numbers will be reported in TOXLINE's ID Number (ID) data field. The Secondary Source ID (SI), which serves as the unique identifier for records in TOXLINE, will continue to have only a single occurrence per record.

The CRISP subfile (Toxicology Research Projects) will be replaced during the regeneration with a new version of this subfile that will contain Public Health Service toxicology research projects for fiscal years 1986, 1987, and 1988.

SERLINE Update

The following represents the major changes in the SERLINE database:

PRESERVATION MICROFILMING RECORDS ADDED

In the Fall of 1986, NLM awarded a four-year contract to microfilm 35 million pages of brittle monographs and serials. This effort is a major part of the initiative NLM has undertaken to preserve the biomedical literature. The first phase of the project entails microfilming serial titles. In April 1988, NLM began recording in SERLINE all serial titles microfilmed and planned for microfilming under the current contract. By making this information available, NLM hopes to prevent other research libraries from duplicating NLM's efforts in their preservation microfilming projects.

NLM staff test serials for brittleness and refer brittle volumes to the microfilmer on an ongoing basis. As brittle volumes are identified, they are "queued" for microfilming. "Queuing" means scheduling titles for inclusion in the microfilming project. While NLM intends to microfilm the volumes in the order that they have been added to the queue, titles will not be microfilmed immediately if the runs are incomplete. To obtain complete runs of titles, NLM borrows from other libraries volumes and issues that are missing from its collection, and incorporates the borrowed pieces into the microfilming process.

Data that indicate the volume and years queued for microfilming and the date a title was added to the queue are now a part of the existing serial record in SERLINE.

After a title has been microfilmed, the SERLINE record will be updated to reflect the addition of archival microfilm to the Library's holdings. The microfilmed holdings data consist of volumes and years microfilmed, the date of completion, and the date of any major changes to the holdings record. These new fields have also been added to SERLINE. (See the *NLM Technical Bulletin*, March 1988, for a complete description of each field).

After a serial title is determined to be brittle, it should always be searched in SERLINE before a decision is made to microfilm it. While most often SERLINE will be used to determine if NLM has microfilmed or plans to microfilm a particular title, there are several ways to use SERLINE to locate microfilming data.

Microfilming data will only be displayed in the PRINT DETAILED or the new PRINT FILM or PRT FI commands. PRT FILM includes the following data elements: TI, FL, PL, PU, GN, QDA, QV, QY, FDA, FMR, FV, FY, FNO, UI.

Figure 1 contains a sample SERLINE record printed using the PRINT FILM command. Please note the Film Date of Entry (FDA) and Film Revision Date (FMR) fields.

FIRST/LAST ISSUE (FL) FIELD ADDED TO PRINT INDEX (PRT ID) COMMAND

The First/Last Issue (FL) field now appears when the Print Index (PRT ID) command is used. The FL contains the date and volume of the first issue published for open serials and of the first and the last issues for serials which have ceased publication or have been continued or superseded by another title.

INDEXING INFORMATION (II) FIELD

Indexing history notes have been added for approximately 1,000 Special List (Nursing, Dental, HEALTH and POPLINE) titles. The notes indicate the first and/or last issue indexed for MEDLINE, the Backfiles, HEALTH and POPLINE.

NEW LIST OF JOURNALS INDEXED SUBJECT HEADINGS (JD) VALUES

Two new headings used to group titles in the subject section of the *List of Journals Indexed in Index Medicus* have been added: Acquired Immunodeficiency Syndrome and Biotechnology. These headings are directly searchable in SERLINE using the qualifier (JD).

SUBSET (SB) TAG FOR DENTISTRY

A new value of D in the SB field has been added to tag all Dental titles currently or previously indexed for MEDLINE or HEALTH. This subset can be used to limit searches to all "dental" journals in MEDLINE, the Backfiles, AIDSLINE, and HEALTH.

TITLE ABBREVIATIONS (TA)

A number of title abbreviations (TA's) were changed in order to conform with the American National Standard for Information Sciences - Abbreviation of Titles of Publications (ANSI Z39.5-1985). Most of the changes involved adding a space between the abbreviation of

two-word place names, e.g., NJ to N J (for New Jersey) and deleting the brackets from the TA when word for supplement is part of the title proper, e.g., Acta Physiol Scand [Suppl] to Acta Physiol Scand Suppl.

The changes in abbreviations will be reflected in the 1989 editions of the *List of Journals Indexed in Index Medicus* (LJI) and the *List of Serials Indexed for Online Users* (LSIOU). In addition, the citations affected in MEDLINE and the Backfiles were maintained during 1988 Year-End processing.

```
TI  - BRITISH MEDICAL JOURNAL
FL  - N1,JAN 1857-N6256,DEC 1980
PL  - LONDON
PU  - BRITISH MEDICAL ASSOCIATION
GN  - PART OF TITLE ON MICROFILM.  NO. 6206-6256 CALLED ALSO V. 280-281.
      SUPERSEDES THE ASSOCIATION MEDICAL JOURNAL.  JOURNAL OF THE BRITISH
      MEDICAL ASSOCIATION.  CONTINUED BY BRITISH MEDICAL JOURNAL [CLINICAL
      RESEARCH ED.]; AND BY BRITISH MEDICAL JOURNAL [PRACTICE OBSERVED
      ED.].  INCLUDES THE FOLLOWING SUPPLEMENTARY SERIALS (SOME BOUND WITH
      THE JOURNAL; SOME BOUND SEPARATELY BUT SHELVED WITH THE JOURNAL):
      WEEKLY EPITOME OF CURRENT MEDICAL LITERATURE, OCT. 1890-DEC. 1891;
      EPITOME OF CURRENT MEDICAL LITERATURE, JAN. 1892-DEC.1917, SEPT.
      1919-JUNE 1938; KEY TO CURRENT MEDICAL LITERATURE, JULY 1938-AUG.
      1939; SUPPLEMENT, FEB. 1903-1972.
FDA - 871124
FMR - 880718
FY  - 1858-1859,1865-1868,1869,1876-1877,1881,1884-1885,1890,1894,1897,
      1966-1970
FNO - S1276
UI  - B35880000
```

Figure 1

TOXNET Update

In 1988, the TOXNET system experienced continued growth in usage. Improved search software, the introduction of RTECS, and a greater awareness of the system's capabilities, have contributed to its popularity.

Several search system software enhancements implemented in 1988 are particularly noteworthy. A more sophisticated version of the TOXNET gateway permits users to switch to the PDQ file in addition to files on the ELHILL system. Also built into the Gateway is a simplified logoff procedure, allowing users to exit from NLM completely while in ELHILL and not requiring a return to TOXNET. Eight additional telecommunication ports allow access to more simultaneous users.

HSDB's new Review Status Tags permit users to more precisely identify the degree of peer review of HSDB data statements. The Tags are: Peer Reviewed, QC Reviewed, and Unreviewed. Figure 1 contains an example of an HSDB® citation that contains the "Peer Reviewed" tag.

Internal TOXNET software features facilitate staff entry of EXPRESS data culled from current literature, thus keeping the file current. A cooperative project with MICROMEDEX, Inc. will result in HSDB's augmentation with medical treatment data from that firm's POISINDEX database. HSDB has been applied to a number of chemical emergency response situations and even used in a simulation exercise by the Maryland Institute for Emergency Medical Services System.

RTECS® (Registry of Toxic Effects of Chemical Substances), produced and maintained by the National Institute for Occupational Safety and Health, became available for TOXNET searching in December 1987. Its newly structured unit record permits more precise searching than the version previously on ELHILL. NLM has continued to enrich the RTECS file with Chemical Abstracts Service (CAS) Registry Numbers. This project has resulted in approximately 20,000 enhanced RTECS records. RTECS now contains over 95,000 records.

The CCRIS (Chemical Carcinogenesis Research Information System) on TOXNET has been widely appreciated within the cancer research community. Several significant improvements have taken place in the past year. These include making the extensive references fully searchable and creating more online explanations for the CCRIS controlled vocabulary.

Among the most exciting developments which took place in 1988 and are ongoing, is the work on developing a new array of files to be phased into TOXNET over the next year. The Chemical Directory File (CDF) will be an online chemical dictionary and locator file. Its records will consist largely of identifying data such as chemical synonyms and CAS Registry Numbers. Records will also contain "locators," indicating both other TOXNET files containing data on the chemicals plus regulatory lists on which the chemicals may appear. The Oak Ridge National Laboratory's EMIC (Environmental Mutagenesis Information Center) and ETIC (Environmental Teratology Information Center) will be TOXNET's first foray into the world of bibliographic files. ETICBACK, a bibliographic database which includes references to articles on birth defects and reproductive and developmental toxicology from 1950-1988, became available on TOXNET on January 30, 1989. The Directory of Biotechnology Information Resources (DBIR), a multi-component databank containing information on a wide range of resources related to biotechnology, was mounted on the TOXNET system on January 23, 1989. EPA's TRI (Toxic Chemical Release Inventory), mandated by the Emergency Planning and Community Right-to-Know Act of 1986, part of the Superfund Amendments and Reauthorization Act, is also scheduled for 1989. It will contain data on the environmental releases of any of over 300 hazardous chemicals. Significant usage is expected by scientists, regulators, the health care community, and the general public. Other projected TOXNET files for which Unit Records were being designed in 1988 include EPA's IRIS (Integrated Risk Information System), EPA's GENE-TOX, and a data bank to contain summaries of the Toxicological Profiles prepared by the Agency for Toxic Substances and Disease Registry.

```
1    - HSDB
HSN  - 416
NAME - ETHYL NITRITE
RN   - 109-95-5
HTOX - MAY CAUSE METHEMOGLOBINEMIA & HYPOTENSION, &, IN HIGH
       CONCN.../PRC: CNS DEPRESSION/. [MERCK INDEX. 10TH ED 1983 , p.
       554] **PEER REVIEWED**
HTOX - THREE CASES OF ETHYL NITRITE INTOXICATION HAVE BEEN
       REPORTED...DURING SYNTHESIS OF HYDANTOIN (GLYCOLYLUREA). SYMPTOMS
       OF BOTH "NITRITE" EFFECT & METHEMOGLOBINEMIA WERE NOTED. IN
       ADDITION, THERE WAS A VASODILATOR EFFECT UPON BLOOD VESSELS OF
       THE SCLERAE, PRODUCING A PECULIAR REDNESS OF EYES... NO HEINZ
       BODIES WERE SEEN... [PATTY. INDUS HYG & TOX 3RD ED VOL2A,2B,2C
       1981-82 , p. 4203] **PEER REVIEWED**
HTOX - CONTACT WITH LIQUID IRRITATES EYES & SKIN. [CHRIS. HAZARD CHEM
       DATA MANUAL. 2 1978 ] **PEER REVIEWED**
```

PC User Aids

The Specialized Information Services Division released new versions for both the Toxicology Information Program Files Demo Disk and CHEMLEARN in 1988. The Demo Disk is an interactive microcomputer-based demonstration of CHEMLINE, TOXLINE, RTECS, HSDB, CCRIS, and DIRLINE files. It is designed to acquaint the new or potential users with the content and search capabilities of these databases. There is a brief description of and sample searches from each database.

CHEMLEARN is a fully comprehensive, interactive microcomputer-based training package for CHEMLINE based on a main-frame CAI program developed at the Library in 1979. CHEMLEARN is designed to teach medical and health professionals, as well as librarians and information scientists, how to effectively use CHEMLINE. It covers the content and use of the data elements as well as effective search strategies. It allows the enables user to learn about the basic aspects of CHEMLINE, such as the retrieval of Registry Numbers and synonyms, while allowing the skilled searcher to learn about the more complex aspects of the database, such as substructure searching. CHEMLEARN may be used in place of formal training, as a precursor to or a refresher following formal training, or for review of a particular concept.

As in the previous version, the new version of CHEMLEARN is organized into seven chapters which are divided into sections and subsections. The introduction is presented in Chapter one. Chapters two, four, and six contain discussions of the data elements in CHEMLINE, followed by multiple choice and/or fill-in-the-blank problems. Chapter two covers the basic data elements used when searching CHEMLINE. The fragmented data elements are covered in Chapter four and the ring data elements in Chapter six. Chapters three, five, and seven provide sample searches which simulate actual online sessions.

Many new features have been added to the new version of CHEMLEARN. They include SUMMARIES for every section, HELPS for every user interaction, a print option for the SUMMARIES, DICTIONARY, and MAP, a and scroll option for the DICTIONARY and MAP.

Both the Demo Disk and CHEMLEARN are currently available from the National Technical Information Service. The Demo Disk sells for $15 and CHEMLEARN for $25. (There is a $3 handling charge per order.) The Product Number for the Demo Disk is PB 88-195805 and for CHEMLEARN is PB 88-218144. Both run on IBM-PC, PC-XT, PC-AT, PS/2 and fully compatible computers. They require 256K RAM memory, one disk drive, and DOS 2.0 or higher. They support most monochrome, color graphics, or enhanced color graphics displays.

The address and phone number for NTIS are:
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
Phone: (703) 487-4650

Please direct any questions or comments regarding the Demo Disk, CHEMLEARN, or TOXLEARN to:

Miriam Perkins
Specialized Information Services
National Library of Medicine
Bethesda, MD 20894
Phone: (301) 496-1131

FACT SHEETS

The following information sheets on NLM Divisions, Programs, and Resources are available upon request.

ACCESS TO AUDIOVISUAL MATERIALS
(FEBRUARY 1989)

AIDSLINE
(OCTOBER 1988)

*ASSISTANCE FOR NEW INVESTIGATORS IN THE HEALTH INFORMATION SCIENCES AND MEDICAL INFORMATICS
(OCTOBER 1986)

BIBLIOGRAPHIC SERVICES DIVISION
(JULY 1988)

BIOETHICSLINE
(SEPTEMBER 1985)

**CCRIS (CHEMICAL CARCINOGENESIS RESEARCH INFORMATION SYSTEM)
(FEBRUARY 1988)

**CHEMLEARN
(JULY 1988)

**CHEMLINE (CHEMICAL DICTIONARY ONLINE)
(SEPTEMBER 1987)

**CHEM/TOX FILES DEMO DISK

COLLECTION DEVELOPMENT MANUAL
(APRIL 1987)

COMPUTER SCIENCE BRANCH
(FEBRUARY 1989)

**DIRLINE (DIRECTORY OF INFORMATION RESOURCES ONLINE)
(MARCH 1989)

DOCLINE
(MAY 1988)

ELECTRONIC DOCUMENT STORAGE AND RETRIEVAL PROGRAM
(OCTOBER 1988)

ERRATA AND RETRACTION POLICY
(OCTOBER 1988)

EXPERT SYSTEMS PROGRAM
(NOVEMBER 1988)

GRATEFUL MED, VERSION 4.0
(FEBRUARY 1989)

HISTLINE (HISTORY OF MEDICINE ONLINE)
(MAY 1988)

HISTORICAL PRINTS AND PHOTOGRAPHS VIDEODISC PROJECT)
(APRIL 1985)

HISTORY OF MEDICINE DIVISION
(MAY 1988)

**HSDB (HAZARDOUS SUBSTANCES DATA BANK)
(JUNE 1988)

*INTEGRATED ACADEMIC INFORMATION MANAGEMENT SYSTEMS (IAIMS) RESOURCE PROJECT GRANTS
(JUNE 1984)

INTERACTIVE VIDEODISC EXHIBIT - ARTIFICIAL INTELLIGENCE IN MEDICINE
(NOVEMBER 1988)

INTERLIBRARY LOAN POLICY
(APRIL 1988)

LEARNING RESOURCE CENTER
(MARCH 1989)

LISTER HILL CENTER VIDEODISC PROJECTS
(JULY 1987)

LISTER HILL NATIONAL CENTER FOR BIOMEDICAL COMMUNICATIONS
(OCTOBER 1988)

MEDINDEX PROJECT
(NOVEMEMBER 1988)

*MEDICAL LIBRARY RESOURCE IMPROVEMENT GRANT

*MEDICAL LIBRARY RESOURCE PROJECT GRANT

MEDICAL SUBJECT HEADINGS
(MAY 1988)

MEDLINE USE BY PHYSICIANS
(MARCH 1989)

**MICRO-CSIN WORKSTATION
(JUNE 1987)

NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION
(MARCH 1989)

NATIONAL LIBRARY OF MEDICINE
(MAY 1988)

NATURAL LANGUAGE SYSTEMS PROJECT
(NOVEMBER 1988)

**NLM CHEMICAL AND TOXICOLOGICAL FILES COST SHEET
(JUNE 1988)

*NLM GRANT ACTIVITIES
(OCTOBER 1988)

NLM INTERNATIONAL MEDLARS CENTERS
(MARCH 1988)

NLM ONLINE DATA BASES
(JULY 1988)

NLM ONLINE SERVICES PROGRAM POLICY STATEMENT
(MAY 1988)

*NLM PUBLICATION GRANT PROGRAM
(OCTOBER 1988)

NLM RESOURCES IN VETERINARY MEDICINE
(MAY 1988)

NLM RESEARCH TRAINING PROGRAM IN MEDICAL INFORMATICS - TRAINING DIRECTORS
(MAY 1988)

ONLINE INDEXING SYSTEM
(JUNE 1988)

PRESERVATION
(JUNE 1987)

PUBLIC SERVICES DIVISION
(OCTOBER 1988)

REGIONAL MEDICAL LIBRARIES
(MAY 1988)

RESOURCES FOR THE HISTORY OF NURSING IN THE NATIONAL LIBRARY OF MEDICINE HISTORY OF MEDICINE DIVISION
(JULY 1988)

**RTECS (REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES)
(FEBRUARY 1988)

SERHOLD
(JUNE 1988)

**TOXLINE (TOXICOLOGY INFORMATION ONLINE)
(AUGUST 1987)

**TOXNET (TOXICOLOGY DATA NETWORK)
(FEBRUARY 1988)

TECHNICAL SERVICES DIVISION
(MAY 1988)

**TIP FILES DEMO DISK

THE LEARNING CENTER FOR INTERACTIVE TECHNOLOGY
(OCTOBER 1988)

THE SPECIAL FOREIGN CURRENCY PROGRAM
(OCTOBER 1987)

THE TIME PROJECT (TECHNICAL INNOVATIONS IN MEDICAL EDUCATION)
(NOVEMBER 1988)

THE UNIFIED MEDICAL LANGUAGE SYSTEM
(DECEMBER 1988)

THE USE OF PERMANENT PAPER FOR BIOMEDICAL LITERATURE
(JANUARY 1989)

TOXICOLOGY INFORMATION PROGRAM
(JULY 1988)

*AVAILABLE FROM:
EXTRAMURAL PROGRAMS
NATIONAL LIBRARY OF MEDICINE
8600 ROCKVILLE PIKE
BETHESDA, MARYLAND 20894

**AVAILABLE FROM:
SPECIALIZED INFORMATION SERVICES
NATIONAL LIBRARY OF MEDICINE
8600 ROCKVILLE PIKE
BETHESDA, MD 20894

ALL OTHERS AVAILABLE FROM:
Office of Inquiries and Publications Management
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20894
Attn: FACT SHEETS

****

Sample Forms

Contained in the remainder of this *Special Issue* are various types of forms frequently requested by online searchers. It is recommended that you make photocopies of any of these that you feel will be used by you or your staff and keep the forms on hand for future use. The following are included:

1) NLM ONLINE SERVICES APPLICATION

2) NLM AUTOMATIC SDI SERVICE REQUEST FORM

3) CHANGE OF ADDRESS FORM

4) SUGGESTION FOR MEDICAL SUBJECT HEADINGS CHANGE

5) SEARCHING AIDS WITH NTIS ORDER FORM

6) REQUEST FOR NLM ONLINE TRAINING & 1989 SCHEDULE

7) REQUEST FOR ONLINE TRAINING CODE(S)

8) PARTICIPANT'S PROFILE/TRAINING CODE USE

NATIONAL LIBRARY OF MEDICINE (NLM)
ONLINE SERVICES APPLICATION

FORM A ONLINE APPLICATION FORM	Complete and return.
FORM B ONLINE BILLING AGREEMENT	Complete and return (see reverse).
MEMORANDUM OF UNDERSTANDING	Read carefully and retain.

Return forms A and B to:
MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

Questions? Contact the MEDLARS Service Desk:
Monday - Friday, 8:30 A.M. - 5:00 P.M. ET
Telephone: (800) 638-8480
(301) 496-6193 (Maryland residents)
Fax: (301) 496-0822

NLM ONLINE APPLICATION FORM

I am applying as an:
☐ Individual
☐ Institution

PERSONAL NAME:

_____

INSTITUTION NAME (if applicable):

_____

STUDENTS/SCHOOLS/COLLEGES:
The National Library of Medicine has a special program at reduced rates for MEDLARS® access for students. If you are: a college or university student; a college/university/educational institution offering online search instruction; or a resident, fellow, or intern and you would like to participate in this program, please call the MEDLARS® Service Desk to request the student code application forms: (800) 638-8480.

1. Please describe your organization or profession's primary function or major area of service. Be as specific as possible. Include your area of specialty if you are a health professional.

2. Please check the *one* administrative classification that best describes you or your organization:

   a.____ Federal Government

   b.____ State/multi-state government or state university

   c.____ County/local goverment

   d.____ Non-government, not-for-profit or nonprofit

   e.____ Non-government, for-profit or commercial

   f.____ Other. Please specify: _____

3. Please check this box ☐ if you plan to use NLM's GRATEFUL MED® software to search MEDLARS®.

FOR NLM USE ONLY:

Date Received_____ User Type_____ Telecommunications Type_____

NLM ONLINE BILLING AGREEMENT

Complete and sign this form, which authorizes the National Technical Information Service (NTIS), the billing agent for MEDLARS®, to bill you for use of NLM's online services. Return with Form A to:

MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

Include purchase orders or checks for deposit accounts. No advance payment is required if you select the credit card or direct payment option. Future rate changes may be announced; continued use of the services for 90 days after any announced rate change authorizes NTIS to bill at the changed rate. Government users must include a purchase order (PO) with these forms. NOTE: Interest will be charged on any account 60 days overdue. Federal, state, and local government users are exempt from interest charges.

User Address:

_____
Personal Name

_____
Institution/Organization (if applicable)

_____
Office (optional)

_____
Street Address

_____
City State Zip

(____)_____
Phone (include area code)

Billing Address (if different):

_____
Personal Name

_____
Institution/Organization (if applicable)

_____
Office (optional)

_____
Street Address

_____
City State Zip

(____)_____
Phone (include area code)

I/We elect to pay NTIS for use of the NLM's online services in the manner specified below (check one):

☐ **Direct Payment:** Payment is due upon receipt of monthly invoices. Make checks payable to NTIS.

☐ **Credit Card:** ☐ Visa ☐ MasterCard ☐ American Express *Card #*_____

*Expiration Date:*____/____/____ *Authorizing Signature*_____

☐ **Deposit Account:** This type of account requires an advance deposit of funds. The amount deposited should be sufficient to cover 3 month's online usage; a minimum of $25 is required to open an account. At present, charges for a 1-month period average $100 for a hospital library and $20 for a health professional. Users choosing this method will receive a monthly Statement of Account showing the monthly charges deducted from the deposit account balance. It is possible to use an existing deposit account which was established for obtaining other NTIS products or services. Federal users are permitted to use transfer of funds.

There are no subscription fees or minimum charges associated with MEDLARS® User ID Codes.

_____ _____ ____/____/____
Signature (required for all applicants) **Printed/Typed Name** **Date**

MEMORANDUM OF UNDERSTANDING

You should carefully read the following Memorandum of Understanding. The use of your assigned MEDLARS ® User ID Code for NLM online computer services indicates your acceptance of the following terms, conditions and responsibilities.

This Agreement between the National Library of Medicine (NLM) and the participating organization or individual is intended to assure a common understanding of the responsibilities of each party.

1. NLM agrees to provide:
   a. Access to its public online bibliographic databases as determined by NLM.
   b. Technical data and documentation detailing system usage and modifications, some of which are "for purchase" items.
   c. Assistance during normal business hours (8:30 a.m. - 5:00 p.m. Eastern Time, Monday-Friday) to resolve operating problems and difficulties.

2. The participating organization or individual agrees to:
   a. Purchase appropriate documentation materials (e.g., Manuals, etc.).
   b. Obtain and pay for equipment necessary to access the NLM computers, including telephone installation and rental, and rental or purchase of an appropriate terminal or microcomputer equipment.
   c. Protect the system from unauthorized use.
   d. Pay charges assessed by NLM for its online services (including royalty fees charged by database suppliers).
   e. Indicate clearly, if fees are charged to others for online services, the portion of the fee that is assessed by NLM for services.

3. Rate changes shall become effective 90 days after written notice, except that royalty charge changes for certain NLM databases may be passed on to the participating organization/individual without advance notice. Rate changes will be announced in the NLM Technical Bulletin, a publication that is sent monthly to each user organization/individual.

4. Some material in the NLM databases is from copyrighted publications of the respective copyright claimants. Users of the database are referred to the publication data appearing in the bibliographic citations, as well as to the copyright notices appearing in the original publication, all of which are incorporated by reference.

5. NLM databases shall not be issued for resale, republication, or redistribution in machine-readable or any other format, except as authorized under a signed NLM License Agreement to Lease NLM Databases in Machine-Readable Form.

6. Data obtained by downloading portions of the database (i.e., retrieving portions of a database online for subsequent storage on a personal computer) or as Subsets* for "personal" use may be retained in machine-readable form by those employing automated technology such as microcomputers.

7. Future revisions of this Memorandum of Understanding will be announced in a special section of the NLM Technical Bulletin.

8. This Agreement is effective for an indefinite period. It may be terminated at any time by either party by a 90-day written notice, or terminated at any time by the user by a 30-day written notice prior to the effective date of a change in rates. Failure of the participating organization or individual to adhere to the terms of this Agreement may result in an immediate termination or suspension of access to NLM's online databases. Online access to the databases by the participating organization or individual shall be severed upon termination of this Agreement in writing by either party.

9. Interest will be charged on any account 60 days overdue. Federal, state and local government users are exempt from interest charges.

* Subsets policy for portions of databases loaded for local re-use are covered in the NLM License Agreement to Lease NLM Databases in Machine-Readable Form.

OVER

10. NLM represents that data provided under this Agreement were formulated with a reasonable standard of care. Except for this representation, and as otherwise specifically provided in this Agreement, NLM makes no warranties, as to fitness for particular purposes, and will not be liable for consequential or incidental damages, or other claims or demands arising out of the use of MEDLARS®, MEDLINE®, GRATEFUL MED®, or any products, services, or documentation. Users are responsible for claims arising out of third-party use. Further, the National Library of Medicine reserves the right to revise programs, products, or publications and to make changes from time to time in the content without obligation to notify any person of such revisions or changes.

After NLM processes your application, you will receive:

- A User ID Code and passwords for accessing the MEDLARS® system. Each code (except student codes) comes with a $40.00 practice credit, which represents approximately two hours of MEDLINE® online searching.

- System documentation including access procedures, telephone access numbers, equipment settings, pocket cards, and general information about MEDLARS® and NLM.

- The monthly publication, the NLM Technical Bulletin, in which news about the NLM computer systems, databases, and price changes is published.

If you are restricted to ONE-YEAR AGREEMENTS only:

Indicate the month that you want the code to become effective and provide a typed name AND signature below. You must provide NLM with written notice of renewal within 30 days prior to the expiration date for each successive year that you intend to keep the code active.

PERSONAL NAME: _____

INSTITUTION (IF APPLICABLE): _____

REQUESTED EFFECTIVE DATE: _____/_____/_____

SIGNATURE: _____

NLM AUTOMATIC SDI SERVICE REQUEST FORM

Part I (To be completed by all users)

USER ID | | | | | |

Mailing address for printouts:

_____
Institution/Office/Name

_____ (No more than 50 characters per line; 1 line per item.)
Address

_____
City, State, Zip

Contact person for SDI service at your organization:

_____ _____
Name Telephone number

Part II (To be completed by all users)

_____ BEGIN service on the _____ database.*

_____ CHANGE a previously submitted form for the _____ database.*
_____ MAILING ADDRESS
_____ PRINT AND/OR SORT FORMATS (specify in PART III)

_____ CANCEL service on the _____ database.*

*Submit one copy for each database on which you have stored or intend to store searches. If SDI service is desired on both TOXLINE and TOXLIT, one form is sufficient; check the appropriate box:

TOXLINE	TOXLIT	BOTH

Part III To be completed if:

1. you are using the number range 701-801** on any database
2. You wish to substitute a print and/or sort format different from those shown on the reverse

DATABASE IDENTIFIER	NUMERICAL RANGE	ELEMENTS TO BE PRINTED	SORT FORMAT
Enter one of the letters shown on the reverse: A, C,B,H,P,S, or T	001-200	_____	_____
	201-400	_____	_____
	401-600	_____	_____
	601-700	_____	_____
	701-800**	_____	_____

**USERS NAMING SEARCHES IN THIS RANGE MUST SUPPLY PRINT ELEMENTS AND A SORT FORMAT. FOR EXAMPLE:

S	701-800	AU, TI, SO, LA	JNL

FOR COMPLETE STORESEARCH AND AUTOMATIC SDI INSTRUCTIONS SEE THE ONLINE SERVICES REFERENCE MANUAL 5.2 RETURN ONE COMPLETED FORM FOR EACH DATABASE TO:

MEDLARS MANAGEMENT SECTION
NATIONAL LIBRARY OF MEDICINE
8600 ROCKVILLE PIKE
BETHESDA, MARYLAND 20894

DATABASE NAME & IDENTIFYING LETTER	NUMBER RANGE	PRINT FORMAT OR ELEMENTS	SORT FORMAT	SORT ELEMENTS & DIRECTION
AVLINE A	A001-200 A201-400 A401-600 A601-700 A701-800*	STANDARD LOAN FULL DETAILED USER MUST SPECIFY	AUTI	PN A, CN A, TI A
CANCERLIT C	C001-200 C201-400 C401-600 C601-700 C701-800*	STANDARD FULL DETAILED AU,TI,AB,PT,SO USER MUST SPECIFY	JNL	TA A, YR A, TI A
CATLINE B	B001-200 B201-400 B401-600 B601-700 B701-800*	STANDARD ACQUISITIONS FULL DETAILED USER MUST SPECIFY	AUTI	PN A, CN A, TI A
HEALTH H	H001-200 H201-400 H401-600 H601-700 H701-800*	STANDARD FULL AU,TI,TT,LA, MH,AB,SO AR USER MUST SPECIFY	JNL	TA A, DP D, IM A, VI D, IP D
POPLINE P	P001-200 P201-400 P401-600 P601-700 P701-800*	STANDARD AR SD INCLUDE GN, LA AD, KW SD INCLUDE GN, AD USER MUST SPECIFY	AUTI	CN A, AU A, TI A
SDILINE (MEDLINE) S	S001-200 S201-400 S401-600 S601-700 S701-800*	STANDARD FULL INCLUDE AD AU,TI,TT,LA, MH,AB,AD,SO AU,TI,AB,SO USER MUST SPECIFY	JNL	TA A, DP D, VI D, IP D PG A
TOXLINE TOXLIT T	T001-200 T201-400 T401-600 T601-700 T701-800**	STANDARD FULL** DETAILED SI,AU,CN,TI, AD,SA,SO USER MUST SPECIFY	AUTI	AU A, TI A

*There are no default print and sort elements for searches named in the 701-800 range. Users must complete Part III of this form if this number range is used.

**The FULL format includes MeSH Headings for TOXBIB.

CHANGE OF ADDRESS FORM
(U.S. users only)

User ID Code _____ (Must be included)

Check here _____ if you purchased GRATEFUL MED.
The new address information will be forwarded to NTIS.

New Billing Address: (please print or type)

Name: _____

_____

_____

_____

_____

Telephone: _____

New NLM Technical Bulletin/GRATEFUL MED Address:

Name: _____

_____

_____

_____

_____

Telephone: _____

NOTE:
This form **DOES NOT** change the address of Automatic SDIs or your stored address for offline prints. Call the MMS Service Desk for information on changing these addresses.

_____
Signature

_____
Printed Name

_____
Date

Please affix current address label here:

Please mail this form to:
MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

MeSH USE ONLY
#_____
Date
Referred_____

SUGGESTION FOR MEDICAL SUBJECT HEADINGS CHANGE

1. Suggested change: (One or two sentence statement of what you feel is needed.)

_____

_____

_____

_____

_____

_____

2. How often have you encountered this concept? _____

_____

3. Reason for suggesting change: (If suggesting a new term, please mention the sense or context in which the term occurs if you cannot define it.)

_____

_____

_____

_____

_____

4. Citations: (One or more authoritative citations, either from MEDLINE or other sources, are requested particularly if the concept or term is quite new, or rarely written about.)

_____

_____

_____

_____

5. Name: _____ Date: _____

Address: _____

_____

Phone: ____/_____

SEARCHING AIDS

******ESSENTIAL FOR SEARCHING NLM ONLINE FILES******

NTIS Order Number	Title	Price/Copy
PB88-156252/GBB	Online Services Reference Manual, 1988	$55.00
PB89-100010/GBB	Medical Subject Headings - Annotated Alphabetic List, 1989	$28.50
PB89-100028/GBB	Medical Subject Headings - Tree Structures, 1989	$23.00
	****** OTHER HELPFUL AIDS ******	
PB89-100036/GBB	Permuted MeSH, 1989	$23.00
PB89-113054/GBB	Medical Subject Headings - Supplementary Chemical Records, 1989	$30.00
PB89-135610/GBB	List of Serials Indexed for Online Users, 1989	$20.50
	****** FOR HEALTH PROFESSIONALS ******	
PB89-146179/GBB	The Basics of Searching MEDLINE	$20.50
PB86-158482/GBB	GRATEFUL MED - A front-end software package for accessing MEDLARS via an IBM PC (or compatible) microcomputer and HAYES (or compatible) modem	$29.95
	****** FOR INFORMATION ABOUT INDEXING ******	
PB-254-270/GBB	MEDLARS Indexing Manual (Part I: Bibliographic Principles and Descriptive Indexing), 1977	$ 7.25
PB84-104280/GBB	MEDLARS Indexing Manual (Part II), 1983	$16.00
PB84-104298/GBB	Technical Notes: MEDLARS Indexing Instructions, 1984	$10.00
PB89-108013/GBB	Technical Notes: MEDLARS Indexing Instructions, Tumor Key Supplement, 1989	$12.00

ALL NLM SEARCHING AIDS LISTED ARE ORDERED FROM NTIS

MMS 3/89

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
SPRINGFIELD, VA 22161

NTIS ORDER FORM

TELEPHONE ORDERS TELEX 89-9405 Telecopier (703) 321-8547 Subscriptions: (703) 487-4630
Call (703) 487-4650 (See reverse side for RUSH and EXPRESS ordering options)

- HANDLING FEE: A handling fee is required for each order except for Express, Rush, Subscription, or Pickup orders.
- SHIPPING: **U.S.:** Printed reports and microfiche copies are shipped First Class Mail or equivalent.
  FOREIGN: Regular service: Printed reports and microfiche copies are shipped surface mail.
  Air Mail service to Canada and Mexico: add $3 per printed report; 75¢ per microfiche copy.
  Air Mail service to all other addresses: add $6 per printed report; 75¢ per microfiche copy.
  SUBSCRIPTIONS and standing orders are sent surface mail; contact NTIS for air mail rates.

1 *Address Information*

DTIC Users Code:_____ Contract No. ___ ___ (Last six digits)

PURCHASER: DATE: _____

Last Name First Initial

Title

Company/Organization

Address

City/State/ZIP

Attention

Telephone number

SHIP TO (Enter ONLY if different from purchaser):

Last Name First Initial

Title

Company/Organization

Address

City/State/ZIP

Attention

Telephone number

2 *Method of Payment*

☐ Charge my NTIS Deposit Account ___ ___ ___ ___ ___-___

Charge my ☐ Amer. Express ☐ VISA ☐ MasterCard

Account No. _____ Exp. _____

Signature: _____
(Required to validate all orders)

☐ Check/Money order enclosed for $ _____

☐ Please bill **ADD $7.50 per Order** (See below for restrictions)†

Purchase Order No. _____

Employer Identification No. ___ ___ ___ ___ ___ ___ ___ ___ ___

3 *Order Selection* (For Computer products, see reverse)

Enter NTIS order number(s) (Ordering by title only will delay your order)	Customer Routing†† (up to 8 digits)	QUANTITY Paper Copy	QUANTITY Micro-fiche	UNIT PRICE	Foreign Air Mail	TOTAL PRICE
1.						
2.						
3.						
4.						
5.						
6.						
7.						

☐ **OVER** - Order continued on reverse

SUBTOTAL From Other Side	
Regular Service Handling Fee per order ($3 U.S., Canada, Mexico; $4 others)	
Billing Fee if required ($7.50)	
GRAND TOTAL	

† Billing Service: This service is restricted to U.S. addresses for an additional $7.50 per order. Your business employer identification number plus phone number of the office paying the bill are required. A late payment charge will be applied to all billings more than 30 days overdue.

†† Customer Routing Code: NTIS can label each item for routing within your organization. If you want this service, put your routing code in this box.

Rev. 3/19/87

U.S DEPARTMENT OF COMMERCE
National Technical Information Service
SPRINGFIELD, VA 22161

NTIS ORDER FORM - Side 2

3 *Order Selection (Cont.)*

Enter the NTIS order number(s) (Ordering by title only will delay your order)	Customer Routing ††	QUANTITY: Paper Copy	QUANTITY: Micro-fiche	UNIT PRICE	Foreign Air Mail	TOTAL PRICE
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
					Subtotal	

ENTER this amount on the other side of this form.

4 *Computer Products Order Selection*

If you have questions about a particular computer product, please call our Computer Products Support Group at (703) 487-4763.

Enter the NTIS order number(s) (Ordering by title only will delay your order)	Customer Routing ††	TAPE DENSITY (9 track): 1600bpi	TAPE DENSITY (9 track): 6250bpi	TOTAL PRICE
20.				
21.				
22.				
23.				
			Subtotal	

All magnetic tapes are sent air mail or equivalent service to both U.S. and foreign addresses.

ENTER this amount on the other side of this form.

SPECIAL RUSH and EXPRESS ORDERING OPTIONS

Telephone: **(800) 336-4700**
in Virginia call
(703) 487-4700

RUSH SERVICE: Orders are processed within 24 hours and sent First Class or equivalent.
- Pick up at NTIS - $7.50 *per item*
- Delivery to U.S. addresses - $10 *per item*

EXPRESS SERVICE (U.S. Addresses Only): Orders are processed within 24 hours AND delivered by overnight courier for an additional $20 *per item*.

Rev. 3/19/87

REQUEST FOR NLM ONLINE TRAINING

DATE: ____/____/____

TRAINEE NAME: _____ PHONE: (____)_____X_____

ORGANIZATION: _____

ADDRESS: _____

CITY: _____ STATE:_____ ZIP:_____

User ID code: __ __ __ __ __ **OR** I am applying for a User ID code* /__/

***STOP!** If you are currently applying for a User ID code, be sure to include the complete "Application for Online Access" with your training request.*

TRAINING CLASS INFORMATION: You may apply for **either** the "Fundamentals" or the "Follow-Up" class but NOT both. Check all the modules you will attend.

1. **FUNDAMENTALS OF MEDLARS SEARCHING:**
   a. Module 1 - Intro to MEDLARS/MEDLINE (Monday-Wednesday) _____
   b. *Module 2 - Chemical/Toxicological Databases (Thursday) _____
   c. *Module 3 - Cancer Databases (Friday morning) _____
   * Must have attended Module 1 prior to attending these modules.

   DATES/SITES REQUESTED: _____ _____
   1st Choice 2nd Choice

2. **FOLLOW-UP TO THE FUNDAMENTALS:** (Requires familiarity with MEDLARS.)
   a. Module 1 - MEDLINE/MeSH/HEALTH Search Skills (Monday) _____
   b. Module 2 - Cancer Information Searching (Tuesday a.m.) _____
   c. Module 3 - POPLINE/BIOETHICS/HISTLINE (Tuesday p.m.) _____
   d. Module 4 - Technical Services Databases (Wednesday) _____
   e. Module 5 - CHEMLINE/TOXLINE/TOXLIT Searching (Thursday) _____
   f. Module 6 - Tips & Techniques for TOXNET (Friday) _____

   DATES/SITES REQUESTED: _____ _____
   1st Choice 2nd Choice

MAIL TRAINING REQUEST TO:
MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike, Bldg. 38A
Bethesda, MD 20894

QUESTIONS? Call:
800/638-8480 or 301/496-6193

****

NLM USE ONLY - Do not write in this area. DATE: _____

"FUNDAMENTALS"	"FOLLOW-UP"
Class Dates: _____	Class Dates: _____
MODULES: 1 ____ 2 ____ 3 ____	MODULES: 1 ____ 3 ____ 5 ____ 2 ____ 4 ____ 6 ____
Site: _____	Site: _____

9/88

1989
NATIONAL LIBRARY OF MEDICINE
ONLINE TRAINING CLASS SCHEDULE

FUNDAMENTALS OF MEDLARS SEARCHING

JANUARY	9-13	*	BETHESDA, MD
	23-27	*	INDIANAPOLIS, IN
FEBRUARY	6-10	*	NEW YORK, NY
	13-17	*	BETHESDA, MD
	13-17	*	LOS ANGELES, CA
MARCH	6-10	*	ST. LOUIS, MO
	13-17	*	SAN JOSE, CA
	13-17	*	BETHESDA, MD
APRIL	10-14	*	COLUMBIA, SC
	10-14	*	SEATTLE, WA
	24-28	*	BETHESDA, MD
MAY	1- 5		LOS ANGELES, CA
	8-12	*	BETHESDA, MD
	8-12	*	CHICAGO, IL
JUNE	19-23	*	BETHESDA, MD
JULY	10-14		PORTLAND, OR
	10-14		PORTLAND (GORHAM),ME
	17-21	*	BETHESDA, MD
	24-28		LITTLE ROCK, AR
AUGUST	7-11	*	NEW YORK, NY
	7-11		LOS ANGELES, CA
	21-25		BETHESDA, MD
SEPTEMBER	11-15		BETHESDA, MD
	25-29		OMAHA, NE
OCTOBER	2- 6		BETHESDA, MD
	16-20		NEW YORK, NY
	30- 3		BETHESDA, MD
NOVEMBER	13-17		LOS ANGELES, CA
DECEMBER	4- 8		ATLANTA, GA
	4- 8		SEATTLE, WA
	11-15		BETHESDA, MD
	11-15		DALLAS, TX

FOLLOW-UP TO THE FUNDAMENTALS

JANUARY	23-27	*	PORTLAND, OR
	30- 3	*	BETHESDA, MD
APRIL	3- 7	*	BETHESDA, MD
	24-28	*	COLUMBUS, OH
JUNE	5- 9		KANSAS CITY, KS
	12-16		LOS ANGELES, CA
JULY	31- 4		BETHESDA, MD
SEPTEMBER	11-15		NEW YORK, NY
OCTOBER	23-27		SAN JOSE, CA
NOVEMBER	13-17		MIAMI, FL
	13-17		DALLAS, TX
	27- 1		BETHESDA, MD

* This denotes that the class is filled or has been completed as of 3/22/89.

REQUEST FOR ONLINE TRAINING CODE(S)

FOR USE IN PRACTICING MATERIAL COVERED IN "BASICS" OR GRATEFUL MED TRAINING

CHECK ONE:

_____ I AM EITHER ENGAGING IN SELF STUDY OR TEACHING A COURSE USING THE MANUAL, "THE BASICS OF SEARCHING MEDLINE"

_____ I AM TEACHING A COURSE ON SEARCHING USING NLM'S GRATEFUL MED AND NEED CODES FOR STUDENTS

NAME OF REQUESTING INDIVIDUAL OR TRAINER _____

ORGANIZATION (IF APPLICABLE) _____

ADDRESS _____

_____

CITY/STATE/ZIP CODE _____

PHONE NUMBER (INCLUDE AREA CODE) _____

LOCATION OF TRAINING (IF A COURSE) _____

DATE(S) CODE(S) NEEDED _____

NUMBER OF CODES* _____

I agree to send the National Library of Medicine a profile sheet for myself or for persons trained after use of the training code(s).

SIGNATURE _____

DATE _____

*One code per terminal/microcomputer. No more than 10 codes for one course without written request for special consideration. Each code is limited to no more than six hours over a time period not to exceed 3 weeks total time.

Return this form to the MEDLARS Management Section. Fold as indicated on reverse and affix postage. Allow two weeks for return of code(s). Call the MMS Service Desk, M-F, 8:30 am - 5 pm, 1-800-638-8480, if you need code(s) for a special rush situation.

FOR NLM USE ONLY

DATE(S) CODE(S) NEEDED _____

CODE(S) ASSIGNED _____

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MEDLARS MANAGEMENT SECTION
NATIONAL LIBRARY OF MEDICINE
8600 ROCKVILLE PIKE
BETHESDA, MD 20894

... seal with tape

PARTICIPANT'S PROFILE / TRAINING CODE USE

A training code was used to practice searching for: (please check one):

☐ The Basics of Searching MEDLINE (either self-study or attendance at course) OR ☐ GRATEFUL MED training course

1. Name: _____

2. Organization (if applicable) _____

3. Address: _____

4. City/State/Zip Code _____

5. Daytime Telephone Number ( )_____ Ext. _____

6. Profession (general, such as):

____ Physician ____ Researcher ____ Medical Student

____ Dentist ____ Nurse ____ Librarian/Information Specialist

____ Other (please specify): _____

7. If a physician, please check your area of specialization:

____ ALLERGY AND IMMUNOLOGY
____ ANESTHESIOLOGY
____ COLON AND RECTAL SURGERY
____ DERMATOLOGY
____ EMERGENCY MEDICINE
____ FAMILY PRACTICE
____ INTERNAL MEDICINE
____ NEUROLOGICAL SURGERY
____ NUCLEAR MEDICINE
____ OBSTETRICS AND GYNECOLOGY
____ OPHTHALMOLOGY
____ ORTHOPAEDIC SURGERY
____ OTOLARYNGOLOGY
____ PATHOLOGY
____ PEDIATRICS
____ PHYSICAL MEDICINE AND REHABIL.
____ PLASTIC SURGERY
____ PREVENTIVE MEDICINE
____ PSYCHIATRY AND NEUROLOGY
____ RADIOLOGY
____ SURGERY
____ THORACIC SURGERY
____ UROLOGY

8. Date(s) of training/self study: ___/___/___ City/site of training (if course): _____

Thank you for providing this information and for returning the form. We hope you enjoyed your practice time on the MEDLARS databases. Fold along indicated lines on reverse and return to NLM.

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National Library of Medicine (#38/4N-421)
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GRATEFUL MED Users
Disabling SETUP - Page 10

The NLM Technical Bulletin

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No. 239

In This Issue:

"How To" for GRATEFUL MED 1

New CLINPORT Search Tools: CLINPROT To Merge into PDQ 5

New NLM Telecommunications Contracts for Access 8

BIOSIS Codes Mapped to MeSH 12

Monthly Search Hint:
New Comments (CM) Field 14

Regular Features:

Databases	2
Technical Notes	3
GRATEFUL MED	10
Serials Update	17

"How To" for GRATEFUL MED®

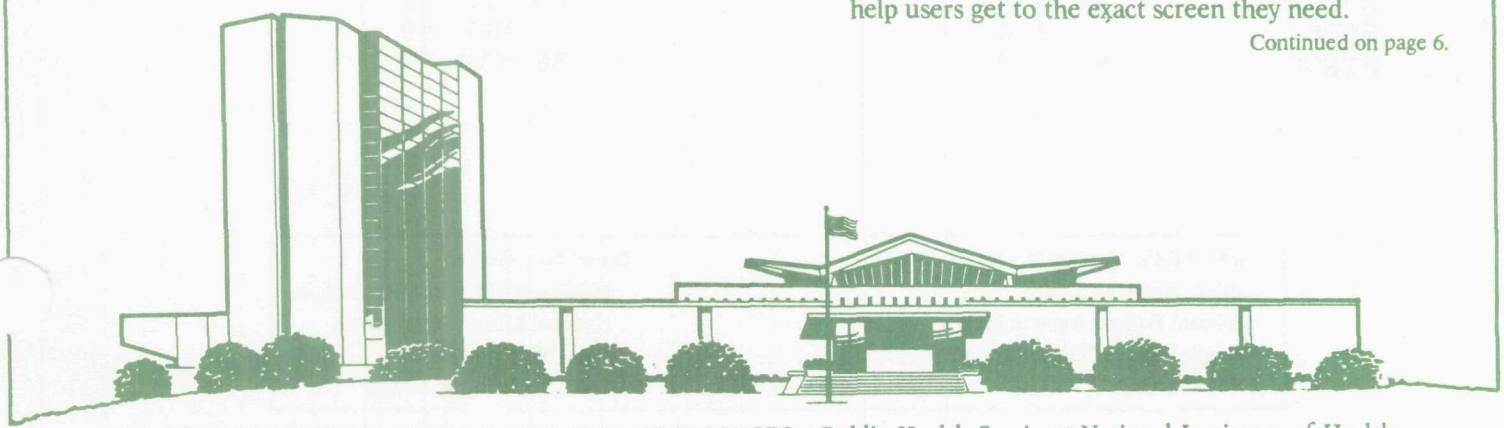
Bill Trefzger
MEDLARS Management Section, NLM

The National Library of Medicine has just released a PC-based tutorial for GRATEFUL MED. The program, titled "How To" A Tutorial for GRATEFUL MED, is an easy and enjoyable introduction to GRATEFUL MED and MEDLARS® searching. While designed to help get the novice started, "How To" will also be a valuable aid for the experienced user and for those involved with teaching end users how to search with GRATEFUL MED.

"How To" A Tutorial for GRATEFUL MED will be included, at no additional charge, with all new GRATEFUL MED orders. Users who have already purchased GRATEFUL MED can also obtain a copy free of charge. See the end of this article for ordering information.

"How To" presents information to the GRATEFUL MED user in a friendly, informal way, assuming little or no online searching or microcomputer experience. The program is organized into eight chapters, and several sub-chapters and help sections. This format allows more advanced users to select the specific areas in which they may need more assistance. There is also a detailed index, which will help users get to the exact screen they need.

Continued on page 6.



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service • National Institutes of Health
National Library of Medicine

MEDLARS DATABASE	TOTAL RECORDS	DATES COVERED	DATE LAST UPDATED	LATEST UPDATE TAG
ELHILL COMPUTER				
AIDSLINE*	17,316	JAN 80-MAY 89	25 MAR 89	8905(EM)
AVLINE	18,368	THROUGH 1989	24 MAR 89	
BIOETHICS	26,802	JAN 73-FEB 89	09 FEB 89	8902(EM)
CANCERLIT	643,588	JAN 63-MAR 89	04 MAR 89	8903(EM)
CATLINE	643,192	THROUGH 1989	24 MAR 89	
CHEMLINE	841,960		11 FEB 89	8902(EM)
CLINPROT	7,170		18 MAR 89	8903(EM)
DIRLINE	14,744		08 MAR 89	
DOCUSER	11,332		14 FEB 89	
HEALTH	446,327	JAN 75-APR 89	04 MAR 89	8904(EM)
HISTLINE	86,876		04 MAR 89	8903(EM)
MEDLINE*	304,657	JAN 88-MAY 89	25 MAR 89	8905(EM)
MED86	639,438	JAN 86-DEC 87	19 JAN 89	
MED83	889,211	JAN 83-DEC 85	18 FEB 89	
MED80	803,258	JAN 80-DEC 82	18 FEB 89	
MED77	775,192	JAN 77-DEC 79	18 MAR 89	
MED72	1,175,406	JAN 72-DEC 76	21 JAN 89	
MED66	1,310,377	JAN 66-DEC 71	09 JAN 89	
MESH VOC	67,238	1989	25 MAR 89	
NAME AUTH	320,232		18 MAR 89	
PDQ		THRU MAR 89	10 MAR 89	
POPLINE	166,744	1970-MAR 89	04 MAR 89	8903(EM)
SDILINE	28,324	MAY 89	25 MAR 89	8905(EM)
SERLINE	72,208	1989	08 MAR 89	
TOXLINE	669,738	1981-1989	13 MAR 89	8903(EM)
TOXLINE65	698,414	PRE 1965-1980	04 MAR 89	
TOXLIT	708,662	1981-1989	13 MAR 89	8903(EM)
TOXLIT65	586,405	1965-1980	01 SEP 87	

*N.B. FILE IS UPDATED SEMI-MONTHLY; THIS IS PART 2 OF 2.

TOXNET COMPUTER			
CCRIS	1,222		22 JUN 88
DBIR	340		15 MAR 89
ETICBACK	46,374		30 JAN 89
HSDB	4,200		01 MAR 89
RTECS	96,717		26 MAR 89

Head, MMS: Carolyn B. Tilley
Editor: Kathleen Stenger
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(301) 496-6193

Direct Inquiries to:
MEDLARS Management Section
National Library of Medicine
Bldg., 38A, Rm. 4N421
Bethesda, Maryland 20894

CONTENTS NOT COPYRIGHTED FREELY REPRODUCIBLE

Technical Notes

Whenever applicable, the heading of each Technical Note includes a reference to the section of the Online Services Reference Manual, 1988 that is considered most relevant to the item being discussed, e.g., (Manual 4.7.2). Users should keep in mind that the item may pertain to other sections as well.

NLM & PDQ® ONLINE USERS' MEETINGS

The NLM Online Users' Meeting will be held on Monday, May 22 from 12:30 to 1:30 p.m. at the Annual Meeting of the Medical Library Association in Boston. The meeting will be held in the Grand Ballroom of the Boston Marriott Copley Plaza Hotel. Users will be updated on MEDLARS and DOCLINE developments. The PDQ User Group Meeting will be held on May 23 from 7:30 am - 8:45 am in the Grand Ballroom of the Boston Marriott Copley Plaza.

SERLINE® SCI (AI) TAG REMOVED (Manual 11.3.2)

Due to a shortage of resources necessary to keep the Abstracting and Indexing tag (AI) for *Science Citation Index* (SCI) current, the value of SCI will no longer appear in the AI tag for any titles in the SERLINE database effective with the April 1989 update.

NEW DIRLINE® SUBFILE; & OTHER CHANGES (Manual 19+)

DIRLINE was updated on March 8. The Directory of Biotechnology Information Resources (DBIR) was added as a new subfile, bringing the number of component subfiles in DIRLINE to ten. DBIR is also available as a separate database on TOXNET® (see the February 1989 *NLM Technical Bulletin*).

In addition to the new subfile, several other changes were made. City (CITY) is now a separate searchable field, as is the Acronym (AC). These new fields are not used in every record at this time. The subfile producers will gradually modify their records to incorporate these new data elements. A new print format is also available in DIRLINE. This is PRINT DES (PRINT DESCRIPTION) which prints the following fields: Secondary Source Identifier (SI), Name (NA), Acronym (AC), Address (AD), Institution Contacts (IC), Telephone Number (TEL), and Abstract (AB).

CATLINE® PRINT COMMAND (Manual 8.5)

The KW (Keyword) field has been added to the PRINT CATCARD (PRT CC) print format for CATLINE effective March 6. The KW field exists only in retrospective CATLINE records. The KW field contains subject heading combinations in Retrospective CATLINE records which could not be mapped to current MeSH® terms or equivalents. In the PRINT CC format, the field will appear in the tracing area before the CA (Call Number), similar to where the MH field appears.

CHANGES TO PDQ

PDQ Release 89.1 was implemented on March 10, 1989, with two new features added:

1) The ability to retrieve a brief descriptive statement for selected rare tumors. The first statement is for Peripheral Neuroepithelioma, with others following in the coming months. These statements are available as option 5 from the Cancer Information menu.

2. Many users of PDQ like to set PAUSE ON before printing a long listing. In addition to setting this option from the print menus, the commands PAUSE ON and PAUSE OFF have been added to the list of valid PDQ commands. These commands can be entered from the main menu for Organizations, Physicians and Protocols instead of choosing as a menu option. When printing with PAUSE ON, the PAUSE OFF may be entered at the prompt.

TOXGROUP IN MFSEARCH

As shown in the February 1989 *NLM Technical Bulletin*, TOXLINE65, the new backfile of the TOXLINE® database, has been added to TOXGROUP effective March 13. TOXGROUP is a prespecified group of databases which may be searched using MFSEARCH (multifile searching capability). TOXGROUP now includes TOXLINE, TOXLINE65, TOXLIT, and TOXLIT65. Notice that TOXLINE65 is the second database searched in this group when using MFSEARCH.

CLASSIFICATION CODES FOR CHEMLINE® AVAILABLE

A listing of Classification Codes used in the CHEMLINE file is available. These codes describe the general category of use of drugs and other chemicals. This listing is available free of charge. It can be requested by contacting:

Specialized Information Services
8600 Rockville Pike
Bethesda, MD 20894
Telephone: (301) 496-1131

CLINPROT® INDEX TERM LISTING

The CLINPROT Index Term listing for April 1989 is now available. It may be requested by writing to the National Cancer Institute. Please include a self-addressed label with the request. No return postage is necessary. Please send requests to:

International Cancer Research Data Bank Branch
National Cancer Institute
R.A. Bloch Building (82), Room 103
Bethesda, MD 20892

Please access **FILE INFORM** *and type* **NEWS** *to see the most recent news items online!*

New CLINPROT Search Tools: CLINPROT to Merge into PDQ

Jim Carter
Database Manager, ICRDB, NCI

The National Cancer Institute (NCI) has developed a new set of user tools for CLINPROT. In addition to a listing of CLINPROT subject captions, a new user manual with the following appendices has been printed:

Drug Combination Subject Captions
Key to Drugs and Short Names Used in Drug Combination Subject Captions
Definition of Drug Combination Acronym Subject Captions
Drug Names & Synonyms - Acronyms - NSC Numbers
Protocol Sources

To receive a packet of the user tools, please send the request with a self-addressed label to:

International Cancer Research Data Bank Branch
National Cancer Institute
R. A. Bloch Building (82), Room 103
Bethesda, MD 20892

The NCI has decided to discontinue production of the CLINPROT database once its information content and functionality is fully duplicated within PDQ, probably in early 1990. There are several reasons for this decision. First, closed protocols can be of definite value to current users of PDQ since they represent a body of information as to "what has already been tried." Second, the "one-stop shopping" concept for cancer treatment information is more appealing than consulting two separate databases.

PDQ searchers will appreciate that the PDQ menus are much different than the command line used in CLINPROT. Additionally, while we provide the complete CLINPROT terminology in the search tools (see the Technical Note in this issue), no printed listing of PDQ terminology has been available previously. Text Word searching is available only on the protocol title in PDQ. Offline printing from PDQ is unavailable. During the next nine months, we plan to enhance PDQ in the following ways:

1. Provide printed search tools and terminology listings similar to the ones we currently provide for CLINPROT.

2. Enable an offline print capability.

We believe that these features must be available in PDQ prior to terminating the CLINPROT file. We plan to develop a command line interface to allow Boolean searching in PDQ; however this will not be available initially.

Since these changes will affect our CLINPROT users in a major way, we are giving as much notice as possible. NCI would be pleased to receive any comments or suggestions in written form. Send them to the address listed below. Thank you for your help.

"How To"

Continued from page 1.

After invoking the program, the user is presented with a whimsical graphic image of the NLM, and is asked "Have you used this tutorial before?" If "No," the user receives a quick "tutorial" in using the tutorial before moving to the "How To" Main Menu, which is presented here in Figure 1.

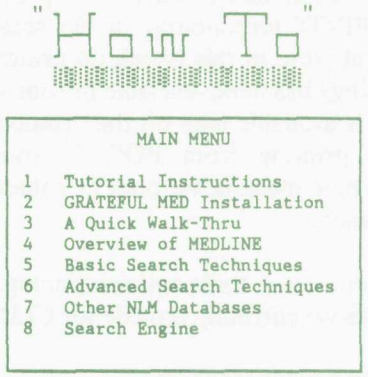

Figure 1

This screen is the "Table of Contents" for "How To." From here users can select the chapter that interests them, or go through them all in sequence. Each chapter contains detailed information on its subject. Most new users, after installing GRATEFUL MED, will find Chapter 3 "A Quick Walk-Thru," Chapter 4 "Overview of MEDLINE," and Chapter 5 "Basic Search Techniques" to be the most helpful in learning how to use GRATEFUL MED to find the information they need.

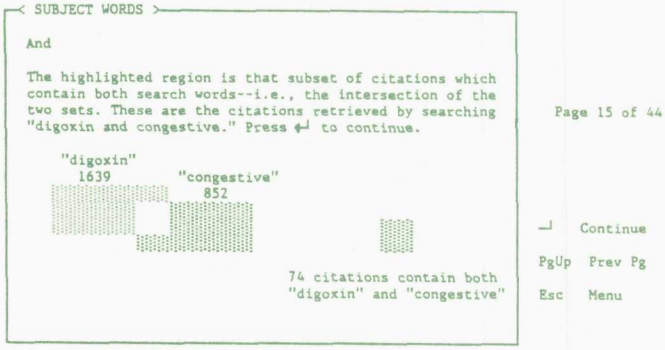

Figure 2

In these chapters, users can see a sample GRATEFUL MED MEDLINE"" search from start to finish, learn about the structure and contents of MEDLINE, and be introduced to the workings of GRATEFUL MED's Input Form screen. Each screen presents a small amount of information, without clutter. Often, dynamic graphics are used to demonstrate concepts. For example, in Chapter 5 "Basic Search Techniques," the screens (reproduced in this article as Figures 2 and 3) are part of the explanation of the way GRATEFUL MED combines terms entered on a subject line.

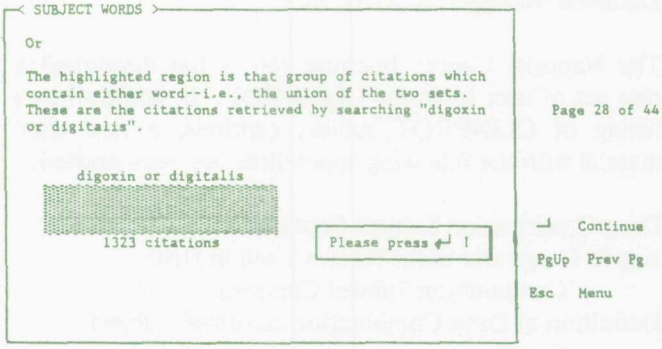

Figure 3

To enhance learning, users are also frequently prompted to interact with "How To," by typing in search terms or selecting menu choices. Most chapters or sections end with "Check it out !" screens which quiz the user on the concepts covered in the chapter. Of course, all right and wrong answers are explained. Figure 4 shows an example.

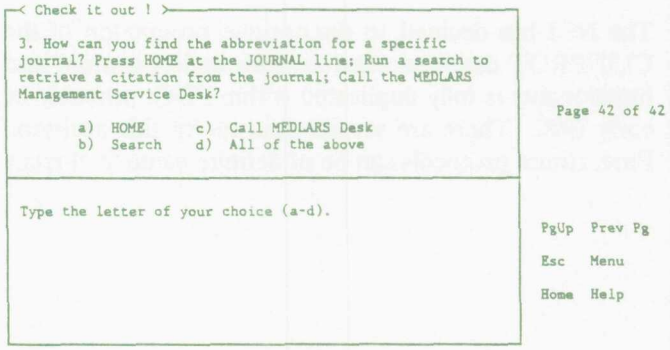

Figure 4

If you don't know the right answer, better order your copy of "How To" right away!

The last three chapters of "How To" contain additional information, such as details on all of the different databases and the Input Form screens used to search them on GRATEFUL MED. There is also information on many "advanced" features, such as the Search Engine. Even experienced users can learn quite a bit from these chapters. Figure 5 shows one of the hints, which is different ways to use subheadings on the Input form screen.

< ADDITIONAL SEARCH FEATURES >

Subheadings

SUBJECT WORDS /digoxin
and
2ND SUBJECT /therapeutic use (sh)

Page 8 of 42

This search shown above will retrieve the same citations as the one line search on the previous page--

/digoxin/therapeutic use

--and will also retrieve citations with the two terms appearing independently.

↵ Continue
PgUp Prev Pg
Esc Menu

Figure 5

Figure 6 has an example of some pointers on using DOS to maximize GRATEFUL MED's features.

< SCREEN SHORTCUTS >

MEDLINE - Search recent journals.
OTHER - Search other databases.

PDQ - Search PDQ directly.
TOXNET - Search TOXNET directly.
DIRECT - Search other MEDLARS databases directly

AGAIN - Rerun last search.
REVIEW - Redisplay results of last search.
USE - Retrieve User Search file.

EXPLAIN - See GRATEFUL MED system description.

Page 6 of 13

↵ Continue
PgUp Prev Pg
Esc Menu

For example, typing search/a at the DOS prompt is a shortcut to typing A at the Action screen. Both rerun the last search.

Figure 6

"How To's" convenient Main Menu and "Chapter" design, along with the detailed index, allow quick access to specific concepts, for both the GRATEFUL MED expert and newcomer. "How To" should become as valuable as the current *User's Guide* as a handy source for GRATEFUL MED information.

"How To" A Tutorial for GRATEFUL MED comes on three floppy (5-1/4") disks, or one 3-1/2" disk. It can be installed onto a hard disk, or run directly from the floppy drive. It requires a minimum of 256K available RAM, DOS 2.0 or higher and, of course, an IBM or compatible PC. "How To" is a "stand alone" program; it is completely independent of GRATEFUL MED itself. It is not even necessary to run GRATEFUL MED and "How To" on the same computer.

As mentioned above, "How To" will be made available, free of charge, to anyone who has already purchased any version of GRATEFUL MED. The publication number is PB89-167779. To order your copy, send a mailing label and the publication number to:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

It is not necessary to specify format; each copy of the tutorial will be mailed out on both 5 1/4" and 3 1/2" disks.

NOTE:

Installing and starting "How To" is simple--so simple in fact, the instructions are printed right on the disk jacket. However, even the simpliest things can get mixed up. The first several thousand "How To" disks produced have the first two steps reversed. Here is how the instructions for "How To" should read:

For floppy disk operation:
- Place Disk 1 in the floppy drive
- Set the DOS prompt to A or B
- Type howto and press <Enter>

For hard disk installation:
- Place Disk 1 in the floppy drive
- Set the DOS prompt to A or B
- Type hinstall and press <Enter>

Finally, the instructions on the 3.5" floppy disk refer to Disk 1. There is only one 3.5" disk included.

If you are using floppies, you will be prompted to insert other disks as necessary. Also, during a hard disk installation, you will be prompted to insert the other disks to complete the installation process.

New NLM Telecommunications Contracts for Access

Harry Bennett
Deputy Director for Operations, Office of Computer and Communications Systems, NLM

Carolyn B. Tilley
Head, MEDLARS Management Section, NLM

INTRODUCTION

In 1988 NLM managed a major procurement for telecommunications network services to meet the Department of Health and Human Services (DHHS) needs, including the needs of NLM for an eight year period through 1996. The entire procurement required over two years to complete and provides additional flexibility for our NLM online users. Multiple contracts were awarded so that, in addition to TYMNET (McDonnell Douglas) and TELENET (GTE - TELENET) who had been providing online access to NLM, access is now also available through CompuServe and INFONET (Computer Services Corporation). A fifth contractor, IBM Corporation, was selected to provide synchronous services only, which currently does not pertain to online MEDLARS access.

The following outlines the services of interest to NLM MEDLARS users that will be provided under the new contracts.

CURRENT MEDLARS ACCESS METHODS; NO CHANGE - TYMNET/TELENET

TYMNET and TELENET have been telecommunications contractors for NLM services since 1971 and 1976, respectively. These networks both offer asynchronous, full- or half-duplex telecommunications service via local numbers in hundreds of U.S. cities (and internationally) for terminal/modem operating speeds of 300, 1200, and 2400 baud. 2400 baud service is available in many cities but not all. GRATEFUL MED currently contains access protocols for both TYMNET and TELENET, as well as the half-duplex Direct Dial protocols for Washington D.C. metropolitan users. Also, TYMNET and TELENET support toll-free WATS access to NLM services for those users identified as remote from a local dial network number. This is true for GRATEFUL MED users as well as those who do not make use of the GRATEFUL MED software.

With the awarding of the new contracts, TYMNET and TELENET will continue to provide services to the NLM online community. No changes to either GRATEFUL MED or to scripts and macros created in telecommunications software packages such as CROSSTALK, SMARTCOM, etc., are necessary.

NEW MEDLARS ACCESS METHODS - COMPUSERVE AND INFONET

CompuServe is known as both a telecommunications and information services supplier. The new contract award is only for the provision of telecommunications services to NLM and NOT for the CompuServe Information Service. That is, NLM online services will not be a menu selection in the CompuServe Information Service.

CompuServe offers NLM database users an alternative method as well as the availability of local numbers in towns and cities that may not have other telecommunications services.

INFONET is the second telecommunications contractor new to NLM users. It offers NLM users another access method as well as local numbers in many towns and cities that may or may not have other network telecommunications service numbers.

CompuServe and INFONET network access have not been programmed into GRATEFUL MED. It is expected that access will be included with the Version 5.0 update of the software expected in the Winter of 1989. NLM is investigating whether or not CompuServe and INFONET access can be made available to GRATEFUL MED users before the next software update. Therefore, do not enter CompuServe or INFONET access numbers into Version 4.0 of GRATEFUL MED.

The access instructions and the list of phone numbers will be published in the next issue of the *NLM Technical Bulletin*.

NOTE FOR WATS USERS

If you are using GRATEFUL MED and cannot locate local TELENET or TYMNET numbers or if you do not use GRATEFUL MED but are remote from any of the four telecommunications vendor numbers, please contact the MEDLARS Management Service Desk about WATS service. NLM plans on contacting ALL WATS users regarding CompuServe and INFONET WATS access this spring. TELENET and TYMNET WATS service is an option with GRATEFUL MED and will continue to be supported. If you are using WATS services and a local network number becomes available with this addition of two more telecommunications providers, please switch to the local service. GRATEFUL MED users cannot switch to either CompuServe or INFONET WATS access with the present version of the software.

VERSION 4.0

[Editor's Note: Each month the NLM Technical Bulletin features a column concerning GRATEFUL MED, often consisting of questions/answers. Contributions for this column will be appreciated.]

For some reason, I am not getting the opportunity to print the citations after I review them. Why is this?

If you do not see the message, "Do you have a printer and want to print relevant citations?" it is because you have set the Special Application, "Write all printer ouput to BIB?" to "YES." This option is intended for users who want all their relevant retrieval written to a computer file which they can then import into other software such as a reference organizer program. Because these users generally do not want to directly print from GRATEFUL MED, the program does not offer printing with the BIB file activated. To change things back to the default settings so that you will be prompted for printing, select CHANGE from the ACTION screen and select Special Applications. From the Special Application Screen use the Ins (Insert) key to toggle the setting for "Write all printer output to BIB?" to "NO." Be sure to hit the End key twice in order to save this change.

We have GRATEFUL MED loaded on the hard disk of a multi-purpose computer in our library so students and staff can use it. We need to prevent them from accessing SETUP but the Special Application that restricts this causes a screen with a design to appear when the user quits the program. However, when our users have finished searching, it is necessary for them to return to a menu screen which offers the other services available on the computer - and the design screen makes this difficult. Is there any way we can prevent access to SETUP and still allow users to exit the program normally?

Yes. Rather than using the Special Application, however, you must disable the file that actually runs SETUP. To do this first select CHANGE from the ACTION screen, and then select Special Applications. On the Special Applications screen make sure you have the setting for "Disable SETUP from GRATEFUL MED," set for "NO." (That's right, "NO.") Be sure to hit the End key until you get back to the initial screen where you can hit the letter "Q" in order to quit the program. Once at the DOS prompt in the GRATEFUL MED subdirectory, you can disable SETUP using the DOS command to rename the file that runs SETUP (SETUP.EXE) to something else. For example:

C> ren setup.exe setup.dud

This will prevent SETUP from running even if a user selects CHANGE from the ACTION screen.

Note: If you ever need to change something in SETUP you should re-activate SETUP, by renaming SETUP.DUD to SETUP.EXE.

I saved a search using the MEDLINE Input Screen but now I want to use the strategy on the Health Planning & Administration database instead. Is there an easy way to change my saved search?

That depends on what you consider easy. For users who are not comfortable with editing computer files, the best advice is to re-enter the strategy using the Input Screen for each database in which you want the search to run. If you decide to copy a strategy from one database screen to another it may be helpful if you use Shift/PrtSc to print the Input Screen with the terms you want to copy. (Remember also, that you can save Input Screen strategies without running the searches.)

If you like tinkering with files, you can use EDLIN or any other text editor to alter a saved strategy so that it will run in another database available with GRATEFUL MED. For example, let's say you saved a strategy on the MEDLINE Input Screen and named it, "policy." The act of saving this strategy creates an ASCII file named, "policy.med" which contains, among other things, your search terms. You then decide that you would rather run this search in HEALTH. To make this change you must edit the first line of "policy.med" like this:

```
C> edlin policy.med      <- enter EDLIN command
End of file
*1                       <- enter line number "1"

 1*'MEDLINE'
 1*'HEALTH'              <- enter new database name
                            with single quotes

*e                       <- enter "e" to end edit
```

Now when you select "policy.med" for searching from the list of SAVED searches (see last month's column) it will appear on an Input Screen for HEALTH rather than MEDLINE.

Note: Section 5 of the *User's Guide*: GRATEFUL MED Search Engine has more tips on manipulating search files.

GRATEFUL MED users should also note the following articles and/or features in this issue:

"HOW TO" FOR GRATEFUL MED, p.1
TECHNICAL NOTES, p.3

BIOSIS Codes Mapped to MeSH

Dorothy Moore
Technical Information Specialist, Specialized Information Services, NLM

With the latest regeneration of TOXLINE, a subfile called Toxicological Aspects of Environmental Health, known by the acronym BIOSIS, had both a Keywords (KW) and a MeSH Headings (MH) field added. The keywords in the BIOSIS records, from 1985 forward, have been mapped to Mesh terms in an initial effort to make more of the TOXLINE subfiles MeSH-searchable. 129,092 BIOSIS records were affected. Some 535 Concept Codes and 824 Biosystematic Codes were mapped to MeSH. Concept Codes and Biosystematic Codes are the controlled vocabulary used consistently by the BioSciences Information Service, the publisher of Biological Abstracts, in indexing. The Concept Codes are used to index broad subjects, while the Biosystematic Codes, which represent taxonomic categories, are used to index organisms.

The mapping of the BIOSIS Codes to MeSH makes the subfile BIOSIS MeSH-searchable, but primarily for broad concepts. Although mapping was to Codes as applied by BIOSIS, it does not provide the same level of specificity as actual indexing of individual records with MeSH terms. In addition, because the scope of MeSH necessarily differs from that of the BIOSIS controlled vocabulary, many BIOSIS concepts, especially organisms, were mapped at broader levels in MeSH because more specific terms are unavailable. On the other hand, many of the BIOSIS Codes mapped to synonomous or near synonomous terms in MeSH.

In the sample TOXLINE record below, both the Keywords (KW) and MeSH Headings (MH) fields are displayed.

```
USER:
prt dl include mh

PROG:

1
SI  - BIOSIS/89/04111
AU  - PINO A
AU  - MAURA A
AU  - GRILLO P
AD  - Ist. di Farmacol., Univ. di Genova, Viale Benedetto
      XV, 2, 16132 Genoa.
TI  - DNA damage in stomach, kidney, liver and lung of rats
      treated with atrazine.
SO  - MUTAT RES; 209 (3-4). 1988. 145-148.
LA  - ENG
CD  - MUREA
AB  - BIOSIS  COPYRIGHT: BIOL ABS.  The genotoxic activity
      of atrazine, a widely used triazine herbicide, was
      assayed by the DNA alkaline elution technique in rats
      given orally a single high dose or repeated daily
      doses. DNA breaks (and/or alkalilabile lesions) were
      detected in cell suspensions obtained from stomach,
      kidney and liver, but not in those from lung.
KW  - Cytology and Cytochemistry-Animal
KW  - Genetics and Cytogenetics-Animal
KW  - Biochemical Studies-Nucleic Acids, Purines and
      Pyrimidines
KW  - Toxicology-General; Methods and Experimental
KW  - Pest Control, General; Pesticides; Herbicides
KW  - Muridae
RN  - 1912-24-9
EM  - 8903
MH  - Animals
MH  - Cytology
MH  - Histocytochemistry
MH  - Animals/*GENETICS
MH  - Nucleic Acids
MH  - Purines
MH  - Pyrimidines
MH  - Poisoning
MH  - Animals, Laboratory
MH  - Herbicides
MH  - Pest Control/METHODS
MH  - Pesticides
MH  - Muridae
```

Figure 1

Monthly Search Hint:

New COMMENTS (CM) Field

BACKGROUND

The Comments (CM) field became a part of MEDLINE®, its backfiles, AIDSLINE®, and HEALTH with the 8904 (EM) update. At present, linkages will be provided for comments in journals with a publication date of 1989 onward; the item(s) being commented upon must be published in the same journal title. Linkages will be provided for the following: 1) announcements or notices which serve as quasi retractions -- i.e., in lieu of an author's formally retracting previous work, an editor may issue a statement alerting readers to the questionable nature of the published article (if the statement does not meet NLM's definition of a retraction, it may be considered a comment); 2) letters to the editor that consist of a comment on another article (the bulk of comments will fall into this category); and 3) substantive articles whose primary contents consist of comments on another article. At this time, linkages will not be provided for editorials that introduce an article or series of articles in an issue, or for articles that update an earlier article. (An exception is the Consensus Conference for which linkages will be provided.) These will be phased in later. The field, when present in citations, will print in all standard print commands (SD, FU, DL, AR) after the Number of References (RF) field and before the Source (SO) field.

The Comments field can currently be found in one of two formats: 1) the introductory phrase "Comment on:" which indicates that the citation is to the published comment itself, or 2) the introductory phrase "Comment in:" which indicates that the citation is to the original article upon which comment is being made. The NLM comments policy will often result in two citations with the CM fields pointing to each other. It is possible, however, that the published comment will not merit indexing; in these cases, only the original citation with be updated to include "Comment in:" information. See Figure 1 for an example of two CM fields pointing to each other.

SEARCHING THE COMMENTS FIELD

Although it is anticipated that information in the CM field is largely for printing purposes as an alerting mechanism, certain pieces of the CM field are directly searchable in case you are intentionally looking for this kind of information. Both the phrases "comment on:" or "comment in:" are directly searchable, but to do this, you must prequalify the phrase with (CM). This should be done to avoid being put into the online COMMENT command mode. See Figure 2, for examples of searching the CM field vs. the COMMENT command.

The Journal Title Abbreviation contained in the Comments field is also directly searchable. Just enter the Title Abbreviation qualified with (CM). See Figure 3.

Another method for retrieving citations containing comments is to use the Neighbor (NBR) command and then Select (SEL) from that display. See Figure 4.

For additional information on the Comments field, see the supplement to the February 1989 *NLM Technical Bulletin* (the *Special Issue*).

```
UI  - 89038842
AU  - Babona DV
AU  - Nurse GT
TI  - HTLV-I antibodies in Papua New Guinea [letter][see comments]
CM  - Comment in: Lancet 1989 Jan 14;1(8629):108-9
SO  - Lancet 1988 Nov 12;2(8620):1148

UI  - 89082161
TI  - Need to confirm HTLV-1 screening assays [letter; comment]
CM  - Comment on: Lancet 1988 Nov 12;2(8620):1148
SO  - Lancet 1989 Jan 14;1(8629):108-9
```

Figure 1

```
IN MEDLINE:

SS 1/C?                                    • Right way to search.
USER:
(cm) comment on:
PROG:
SS (4) PSTG (9)

SS 2 /C?
USER:
prt
PROG:

1
UI  - 89086311
AU  - Smith N
AU  - Boughton BJ
TI  - Azathioprine as possible explanation of etiology of pure red cell
      aplasia in myasthenics [letter; comment]
CM  - Comment on: Am J Clin Pathol 1988 May;89(5):687-93
SO  - Am J Clin Pathol 1989 Jan;91(1):112
.
.
.

SS 2/C?
USER:
comment on: (cm)                           • Wrong way to search.
PROG:
DOES YOUR COMMENT REQUIRE A RESPONSE FROM NLM?  (YES/NO)

USER:

PROG:
CONTINUE YOUR COMMENT OR TYPE THE WORD FINISHED.

                                  • Depressing the space bar and then the
                                    return key in response to both of the above
                                    messages will get you out of COMMENT
                                    command mode and back to a USER: prompt.
```

Figure 2

```
IN MEDLINE:

SS 1 /C?
USER:
lancet (cm)
PROG:
SS (1) PSTG (6)

SS 2 /C?
USER:
prt
PROG:

1
UI  - 89038842
AU  - Babona DV
AU  - Nurse GT
TI  - HTLV-I antibodies in Papua New Guinea [letter][see comments]
CM  - Comment in: Lancet 1989 Jan 14;1(8629):108-9
SO  - Lancet 1988 Nov 12;2(8620):1148
.
.
.
```

Figure 3

```
IN MEDLINE:

SS 2 /C?
USER:
nbr am j clin pathol
PROG:

SELECT #  POSTINGS  TERM
  1         442     AM J CLIN NUTR (TA)
  2         141     AM J CLIN ONCOL (TA)
  3         355     AM J CLIN PATHOL (TA)
  4           4     AM J CLIN PATHOL (CM)
  5          36     AM J COMMUNITY PSYCHOL (TA)
UP N OR DOWN N OR ENTER A SELECT COMMAND.

USER:
sel 4
PROG:
SS (2) PSTG (4)


SS 3 /C?
USER:
prt
PROG:

1
UI  - 89086311
AU  - Smith N
AU  - Boughton BJ
TI  - Azathioprine as possible explanation of etiology of pure red cell
      aplasia in myasthenics [letter; comment]
CM  - Comment on: Am J Clin Pathol 1988 May;89(5):687-93
SO  - Am J Clin Pathol 1989 Jan;91(1):112
.
.
.


SS 3 /C?
USER:
nbr comment in: (sm)
PROG:

SELECT #  POSTINGS  TERM
  6           4     AM REV RESPIR DIS
  7           7     COMMENT IN:
  8           9     COMMENT ON:
  9           6     LANCET
 10           2     THER DRUG MONIT
UP N OR DOWN N OR ENTER A SELECT COMMAND.

USER:
sel 8
PROG:
SS (3) PSTG (7)

SS 4 /C?
USER:
prt
PROG:

1
UI  - 89038842
AU  - Babona DV
AU  - Nurse GT
TI  - HTLV-I antibodies in Papua New Guinea [letter][see comments]
CM  - Comment in: Lancet 1989 Jan 14;1(8629):108-9
SO  - Lancet 1988 Nov 12;2(8620):1148
.
.
.
```

Figure 4

Serials Update

INDEXED TITLES UPDATE, MARCH 1989

The following titles cited in MEDLINE, HEALTH, and POPLINE have recently been selected for indexing, undergone a title change, or ceased publication. This list is not cumulative; the information provided is only for titles whose status has changed since the last UPDATE. More detailed information may be found in SERLINE. For further information, please contact MMS or Ms. Esther Baldinger, (301) 496-1276, Technical Services Division, NLM.

TITLES SELECTED FOR INDEXING, FEBRUARY 1989

IM CANADA DISEASES WEEKLY REPORT
CAN DIS WKLY REP
1,1975--
HEALTH AND WELFARE CANADA
OTTAWA CANADA
FORMED BY THE UNION OF: EPIDEMIOLOGICAL BULLETIN, AND: BULLETIN EPIDEMIOLOGIQUE, WHICH IS NOT IN THE NLM COLLECTION.
SUPPLEMENTS ACCOMPANY SOME ISSUES.
INDEXING BEGAN WITH V14N1,1988.
W2 DC2 H3C 0382-232X
C03240000 JC: CWA
BUREAU OF COMMUNICABLE DISEASE EPIDEMIOLOGY,LABORATORY CENTRE FOR DISEASE CONTROL,TUNNEYS PASTURE,OTTAWA ONTARIO,CANADA K1A 0L2

INI CANADIAN JOURNAL OF NURSING RESEARCH
CAN J NURS RES
1,1969?--
SCHOOL OF NURSING, MCGILL UNIVERSITY
MONTREAL CANADA
INDEXING BEGAN WITH V20N1,SPRING 1988.
ON ORDER 0318-1006
SR0065057 JC: CJN

IM DOMESTIC ANIMAL ENDOCRINOLOGY
DOMEST ANIM ENDOCRINOL
1N1,JAN 1984--
DOMENDO
AUBURN AL UNITED STATES
INDEXING BEGAN WITH V4N1,1987.
W1 DO656 0739-7240
SR0052014 JC: DO1

IM ELECTROPHORESIS
ELECTROPHORESIS
1N1,APR 1980--
VCH PUBLISHERS
WEINHEIM GERMANY, WEST
OFFICIAL JOURNAL OF THE ELECTROPHORESIS SOCIETY.
INDEXING BEGAN WITH V9N1,1988.
W1 EL451T 0173-0835
E05370000 JC: ELE
VCH PUBLISHERS INC.,303 N.W. 12TH AVE.,DEERFIELD BEACH FL 33442-1788

IM GENE AMPLIFICATION AND ANALYSIS
GENE AMPLIF ANAL
1,1981--
ELSEVIER/NORTH-HOLLAND
NEW YORK UNITED STATES
INDEXING BEGAN WITH V1,1981.
W1 GE184N 0275-2778
G03750000 JC: GEF
ELSEVIER SCIENCE PUBLISHING CO.,52 VANDERBILT AVE.,NEW YORK NY 10017

IM GLIA
GLIA
1N1,1988--
ALAN R. LISS
NEW YORK UNITED STATES
INDEXING BEGAN WITH V1N1,1988.
W1 GL362R 0894-1491
SR0060244 JC: GLI

IM INTERNATIONAL REVIEWS OF IMMUNOLOGY
INT REV IMMUNOL
1N1,JAN 1986--
G+B/HARWOOD ACADEMIC
CHUR SWITZERLAND
ISSUES ALSO HAVE DISTINCTIVE TITLES.
INDEXING BEGAN WITH V1N1,1986.
W1 IN835DL 0883-0185
SR0055482 JC: IRI
STBS LTD.,1 BEDFORD STREET,LONDON WC2E 9PP,ENGLAND

IM JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES
J ACQUIR IMMUNE DEFIC SYNDR
1N1,1988--
RAVEN
NEW YORK UNITED STATES
INDEXING BEGAN WITH V1N1,1988.
W1 JO533PS 0894-9255
SR0060827 JC: JOF
RAVEN PRESS BOOKS LTD.,1185 AVENUE OF AMERICAS,NEW YORK NY 10036

IM JOURNAL OF THE AMERICAN MOSQUITO CONTROL ASSOCIATION. SUPPLEMENT
J AM MOSQ CONTROL ASSOC SUPPL
1988--
AMERICAN MOSQUITO CONTROL ASSOCIATION
FRESNO CA UNITED STATES
SUPPLEMENT TO: JOURNAL OF THE AMERICAN MOSQUITO CONTROL ASSOCIATION.
INDEXING BEGAN WITH SUPPLEMENT 1,DEC 1988.
W1 JO909TB 8756-971X
SR0064929 JC: JOO

IM JOURNAL OF HUMAN HYPERTENSION
J HUM HYPERTENS
1N1,JUN 1987--
MACMILLAN PRESS
HOUNDMILLS ENGLAND
INDEXING BEGAN WITH V1N1,JUN 1987.
W1 JO673VET 0950-9240
SR0061630 JC: JYT

IM JOURNAL OF ORTHOPAEDIC TRAUMA
J ORTHOP TRAUMA
1N1,1987--
RAVEN PRESS
NEW YORK UNITED STATES
INDEXING BEGAN WITH V1N1,1987.
W1 JO804SM 0890-5339
SR0057266 JC: JH4

IM JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY. B, BIOLOGY
J PHOTOCHEM PHOTOBIOL -B-
1N1,SEP 1987--
ELSEVIER SEQUOIA
LAUSANNE SWITZERLAND
CONTINUES IN PART: JOURNAL OF PHOTOCHEMISTRY.
INDEXING BEGAN WITH V1N1,SEP 1987.
W1 JO832BH 1011-1344
SR0061068 JC: JLI
ELSEVIER SEQUOIR S.A.,BOX 564,1001 LAUSANNE 1,SWITZERLAND

IM JOURNAL OF VETERINARY INTERNAL MEDICINE
J VET INTERN MED
1N1,JAN/MAR 1987--
J.B. LIPPINCOTT
PHILADELPHIA UNITED STATES
INDEXING BEGAN WITH V1N1,JAN-MAR 1987.
W1 JO97PC 0891-6640
SR0057157 JC: JVG

IM PAEDIATRIC AND PERINATAL EPIDEMIOLOGY
PAEDIATR PERINAT EPIDEMIOL
1N1,APR 1987--
BLACKWELL SCIENTIFIC PUBLICATIONS
OXFORD ENGLAND
VOLUME 1 CONSISTS OF 2 ISSUES ONLY.
INDEXING BEGAN WITH V1N1,APR 1987.
W1 PE163HN 0269-5022
SR0058338 JC: PA1

IM PHARMACEUTICAL RESEARCH
PHARM RES
1,JAN 1984---
PLENUM PUBLISHING
NEW YORK UNITED STATES
VOLS.1-2 (1984-85) PUBLISHED BY GEORG THIEME. BIMONTHLY, VOLS.1-4 (1984-87); MONTHLY, VOL.5 (1988)- .
INDEXING BEGAN WITH V4N1,FEB 1987.
W1 PH167H 0724-8741
P10510000 JC: PHS

IM PROTEIN ENGINEERING
PROTEIN ENG
1,OCT/NOV 1986--
IRL PRESS
OXFORD ENGLAND
INCLUDES AN ANNUAL SUBJECT AND AUTHOR INDEX. BIMONTHLY, VOL.1 (1987); 8Y VOL.2 (1988); MONTHLY, VOL.3 (1989)- .
INDEXING BEGAN WITH V1N1,1986.
W1 PR787P 0269-2139
SR0058757 JC: PR1
IRL PRESS.P.O. BOX 1,EYNSHAM OXFORD OX8 1JJ,ENGLAND

INI RECENT ADVANCES IN NURSING
RECENT ADV NURS
1,1981--
CHURCHILL LIVINGSTONE
EDINBURGH SCOTLAND
INDEXING BEGAN WITH V22,1988.
W1 RE105VN 0144-6592
R05995000 JC: RAN

IM RIVISTA EUROPEA PER LE SCIENZE MEDICHE E FARMACOLOGICHE
RIV EUR SCI MED FARMACOL
1N1,DEC 1979--
VERDUCI
ROMA ITALY
INDEXING BEGAN WITH V9N1,1987.
W1 RI661P 0392-291X
R50630000 JC: RIV
GENOESE V.M.D., EDITORIAL OFFICE, VIALE GORIZIA 24/A, 00198 ROMA, ITALY

IM SPORTVERLETZUNG SPORTSCHADEN
SPORTVERLETZ SPORTSCHADEN
1N1,APR 1987--
GEORG THIEME VERLAG
STUTTGART GERMANY, WEST
RUNNING TITLE: SPORTVERLETZUNG-SPORTSCHADEN.
INDEXING BEGAN WITH V1N1,1987.
W1 SP514 0932-0555
SR0060997 JC: VCL
GEORG THIEME VERLAG,RUDIGERSTRASSE 14,POSTFACH 732,7000 STUTTGART 1,WEST GERMANY

IM TRENDS IN BIOCHEMICAL SCIENCES
TRENDS BIOCHEM SCI
1,1976--
ELSEVIER
AMSTERDAM NETHERLANDS
ISSUED BY THE INTERNATIONAL UNION OF BIOCHEMISTRY. REFERENCE EDITION NOT COLLECTED BY NLM.
INDEXING BEGAN WITH V13N1,1988.
W1 TR3405 0376-5067
T20260000 JC: WEF

IM TRENDS IN GENETICS
TRENDS GENET
1N1,JAN 1985--
ELSEVIER SCIENCE PUBLISHERS
AMSTERDAM NETHERLANDS
ISSUED ALSO IN AN ANNUAL COMPILATION.
INDEXING BEGAN WITH V4N1,1988.
W1 TR341C 0168-9525
SR0052529 JC: WEK

IM TRENDS IN NEUROSCIENCES
TRENDS NEUROSCI
1,JULY 1978--
ELSEVIER/NORTH-HOLLAND BIOMEDICAL PRESS
AMSTERDAM NETHERLANDS
RUNNING TITLE: TINS.
INDEXING BEGAN WITH V11N1,1988.
W1 TR341D 0378-5912
T20340000 JC: WEL

IM TRENDS IN PHARMACOLOGICAL SCIENCES
TRENDS PHARMACOL SCI
1,1979--
PUBLISHED BY ELSEVIER IN ASSOCIATION WITH THE INTERNATIONAL UNION OF PHARMACOLOGY
AMSTERDAM NETHERLANDS
SUPPLEMENTS ACCOMPANY SOME VOLUMES.
INDEXING BEGAN WITH V9N1,1988.
W1 TR341F 0165-6147
T20350000 JC: WFT

IM VETERINARY SURGERY
VET SURG
7,JAN/MAR 1978--
LIPPINCOTT
PHILADELPHIA UNITED STATES
CONTINUES: JOURNAL OF VETERINARY SURGERY. OFFICIAL JOURNAL OF THE AMERICAN COLLEGE OF VETERINARY SURGEONS. ABSORBED VETERINARY ANESTHESIA IN 1985.
INDEXING BEGAN WITH V16N1,1987.
W1 VE938C 0161-3499
V06115000 JC: XBX

IM VIRUS GENES
VIRUS GENES
1N1,NOV 1987--
KLUWER ACADEMIC
BOSTON UNITED STATES
INDEXING BEGAN WITH V1N1,1987.
W1 VI834 0920-8569
SR0059914 JC: XEI

TITLE CHANGES, FEBRUARY 1989

IM ACADEMIC MEDICINE
ACAD MED
64N1,JAN 1989--
ASSOCIATION OF AMERICAN MEDICAL COLLEGES
WASHINGTON UNITED STATES
CONTINUES: JOURNAL OF MEDICAL EDUCATION.
W1 AC33NH 1040-2446
SR0065053 JC: ACM

IM CRITICAL REVIEWS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY
CRIT REV BIOCHEM MOL BIOL
24N1,1989--
CRC PRESS
BOCA RATON FL UNITED STATES
COVER TITLE: CRC CRITICAL REVIEWS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY.
CONTINUES: CRC CRITICAL REVIEWS IN BIOCHEMISTRY.
W1 CR216UCH 1040-9238
SR0064938 JC: DTM

IM DICP
HLI
DICP
23,1989--
HARVEY WHITNEY BOOKS COMPANY
CINCINNATI OH UNITED STATES
CONTINUES: DRUG INTELLIGENCE AND CLINICAL PHARMACY.
W1 DI279 0012-6578
SR0064947 JC: XS4

IM DRUG METABOLISM AND DRUG INTERACTIONS
DRUG METABOL DRUG INTERACT
6N1,1988--
FREUND
LONDON ENGLAND
CONTINUES: REVIEWS ON DRUG METABOLISM AND DRUG INTERACTIONS.
W1 DR533J 0334-2190
SR0065064 JC: DRM

IDL JOURNAL OF THE CALIFORNIA DENTAL ASSOCIATION
J CALIF DENT ASSOC
16N11,NOV 1988--
CALIFORNIA DENTAL ASSOCIATION
SACRAMENTO CA UNITED STATES
CONTINUES: CDA JOURNAL OF THE CALIFORNIA DENTAL ASSOCIATION.
IN PROCESS
SR0065098 JC: JDC

IM JOURNAL OF INTERNAL MEDICINE
J INTERN MED
225,1989--
BLACKWELL SCIENTIFIC PUBLICATIONS
OXFORD ENGLAND
CONTINUES: ACTA MEDICA SCANDINAVICA.
W1 JO716N 0954-6820
SR0064703 JC: I2G

IM RENAL PHYSIOLOGY AND BIOCHEMISTRY
RENAL PHYSIOL BIOCHEM
11N1/2,1988--
KARGER
BASEL SWITZERLAND
CONTINUES: RENAL PHYSIOLOGY.
IN PROCESS 1011-6524
SR0065069 JC: R37

TITLES NO LONGER INDEXED AS OF FEBRUARY 1989

IM ACTA MEDICA SCANDINAVICA. SUPPLEMENTUM
ACTA MED SCAND SUPPL
1,1921-730,1988
ALMQUIST AND WIKSELL
STOCKHOLM SWEDEN
INDEXING BEGAN WITH 500,1969.
W1 AC8552 0365-463X
A06735000 JC: 14K

IDL CAL
CAL
1,1938-50N8,FEB 1987?
COE LABORATORIES
CHICAGO UNITED STATES
INDEXING BEGAN WITH 28N3,SEP 1965.
W1 C114 0007-778X
C01880000 JC: CER

IM ARCHIWUM HISTORII I FILOZOFII MEDYCYNY
ARCH HIST FILOZ MED
48N3,1985--
PANSTOWY ZAKLAD WYDAWNICTW LEKARSKICH
WARSZAWA POLAND
CONTINUES: ARCHIWUM HISTORII MEDYCYNY.
INDEXING CEASED WITH V51N3,1988.
W1 AR7552 0860-1844
SR0057336 JC: 75F

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