Protein Data Bank

Quarterly Newsletter

Number 64 April 1993

New Software Development Group

We are very pleased to announce the appointment of David R. Stampf as head of PDB's new Software Development Group. Dave brings to this position an extensive background in computer programming and network services. As head of Network Services at Brookhaven over the past four years, Dave designed and built the Laboratory local area network connecting over 2000 computers including mainframes, workstations, and PC's. Two of Dave's goals at the PDB are to help make the structure deposition procedure more efficient and facilitate user access to data.

We welcome Dave to the PDB staff and wish him continued success.

Upcoming Scientific Meetings

The Protein Data Bank is preparing presentations and exhibits for several upcoming scientific meetings. Please plan to drop by and meet with us if possible. We are always interested in talking with depositors and users face-to-face so that we may demonstrate our latest procedures, answer questions and just keep in touch. Mark your calendars with the following:

1993 American Crystallographic Association Annual Meeting, Albuquerque, NM, May 23-28, 1993 - The PDB will sponsor an exhibition booth, organize a session on data interchange, and hold a User's Group Meeting. See the meeting program for scheduling information.

The Protein Society 7th Symposium, San Diego, CA, July 24-28, 1993 - The PDB will sponsor an exhibition booth. Now that PDB is included on the new CD-ROM issued by **Protein Science**, the journal published by the Protein Society, we expect to see even more PDB users in San Diego than at last year's very successful Symposium.

XVI Congress and General Assembly of the International Union of Crystallography, Beijing, China, August 21-29, 1993 - A workshop on the PDB will be held during the afternoon of August 25. This will consist of two talks plus general discussion. PDB Project Head Tom Koetzle will be on hand to talk with users from around the world about the many exciting new developments at Brookhaven.

April 1993 PDB Release

1110	fully annotated atomic coordinate entries (56 new full-release entries)
	982 proteins, enzymes and viruses
	107 DNA's
	2 RNA's
	9 tRNA's
	10 carbohydrates
556	prerelease atomic coordinate entries
283	structure factor entries
30	NMR experimental entries

The total size of the atomic coordinate entry database is 436 Mbytes, uncompressed.

Table of Contents

Internet Access to the PDB

Access by Gopher

The PDB is accessible using Gopher software which follows a simple protocol to “tunnel” through a TCP/IP Internet. It is recommended for obtaining information and files from the PDB. The following excerpts are from the Gopher FAQ listing.

Q: What is Gopher?

A: The Internet Gopher client/server provides a distributed information delivery system around which a world/campus-wide information system (CWIS) can readily be constructed. While providing a delivery vehicle for local information, Gopher facilitates access to other Gopher and information servers throughout the world.

Q: Where can I get Gopher software?

A: Via anonymous FTP to boombox.micro.umn.edu. Look in the directory /pub/gopher.

Q: What do I need to access Gopher?

A: You will need a gopher “client” program that runs on your local PC or workstation. There are clients for the following systems. The directories listed show the location of each client on the anonymous FTP site boombox.micro.umn.edu (134.84.132.2) in the directory/pub/gopher.

Unix Curses & Emacs :	/pub/gopher/Unix/gopher1.12.tar.Z
Xwindows (athena) :	/pubrs/gopher/Unix/xgopher.1.2.tar.Z
Xwindows (Motif) :	/pub/gopher/Unix/moog
Xwindows (Xview) :	/pub/gopher/Unix/xvgopher
Macintosh Hypercard :	/pub/gopher/Macintosh-TurboGopher/old-versions*
Macintosh Application :	/pub/gopher/Macintosh-TurboGopher*
DOS w/Clarkson Driver :	/pub/gopher/PC_client/
NeXTstep :	pub/gopher/NeXT/
VM/CMS :	/pub/gopher/Rice_CMS/ or /pub/gopher/VieGOPHER/
VMS :	/pub/gopher/VMS/
OS/2 2.0 :	/pub/gopher/os2/
MVS/XA :	/pub/gopher/mvs/

Many other clients and servers have been developed by others.

Gopher allows users easy access to various types of data residing on multiple hosts. The user is the "client" who makes queries to a "server" residing on another host on the Internet network. This system has been set up so that the users do not need to know the location of servers, as Gopher transparently handles the connections. The PDB Gopher server allows access, search, and downloading of the same information and coordinate files as does anonymous FTP, but through a windowed or menu environment. Merely choose "Protein Data Bank FTP Site" after opening Gopher. "Full-text search of PDB" allows one to search the PDB using either an ident code, author name, compound name, or any other term.

Information for setting up an Internet Gopher client including source files for different machines is available via anonymous FTP to boombox.micro.umn.edu (134.84.132.2) under the directory /pub/gopher. Users running a Gopher client can access the PDB server by including the following link:

Name	=	Protein Data Bank FTP site
Type	=	1
Host	=	pdb.pdb.bnl.gov
Port	=	70
Path	=	1/

For more information or help accessing the PDB via Gopher, send e-mail to oeder@bnl.gov.

Access by File Server

The PDB e-mail file server is available for all users. In addition to the atomic coordinate entry files, it is possible to request PDB general information and documentation via e-mail. For more information about the e-mail file server, send an e-mail message to:

fileserv@pb1.pdb.bnl.gov

with no subject line. Be sure to include the following text:

send info your_e-mail_address

Access by Anonymous FTP

The PDB has an anonymous FTP account on the system **pdb.pdb.bnl.gov** (Internet address **130.199.144.1**). Files may be transferred to and from this system using **anonymous** as the FTP user name and your real user name as the password. Besides downloading entries, data files, and documentation, it is possible to upload any files you may wish to send to the PDB. Please note that those using VMS may need to place quotes around file names.

How to Login Using FTP

To use the FTP command to transfer files to and from the PDB, you must first login to the PDB using FTP. This example shows how to use FTP to connect to the computer system pdb.pdb.bnl.gov.

Start the program by typing:

```
ftp pdb.pdb.bnl.gov
```

The screen display will be similar to this:

```
Connected to pdb.pdb.bnl.gov.
220-
220 pdb.pdb.bnl.gov FTP server ready.
```

If the user name prompt comes up, type anonymous as the user name for the prompt that appears. The user name anonymous must be used:

```
Name (pdb:your_name): anonymous
```

If the user name prompt does not come up automatically, type:

```
user
```

and it will come up.

Appearing next will be the password prompt. Type your name:

```
331 Guest login ok, type your name as password.
Password:joe_doe@foobar.crash.edu
```

You are logged in when the screen displays:

```
230 Guest login ok, access restrictions apply.
```

and prints the login README file to your screen.

File Transfers Using FTP

Once you are logged in to the PDB using FTP, you can transfer files to and from your system using the put and get commands.

This example shows how to transfer a file named jan93newsletter.txt to your machine. Type the following at the FTP prompt after you login using FTP:

```
ftp> ls -l
200 PORT command successful.
150 Opening ASCII mode data connection for '/bin/ls'.
total 602
-rw-r--r-- 1 root 3019   Mar 9  ADVISORY.NOTICE
-rw-r--r-- 1 root 1805   Mar 9  README
drwxr-xr-x 2 root 512    Feb 24 asn_1
drwxr-xr-x 2 root 512    Feb 24 bin
drwxr-xr-x 2 root 512    Mar 17 crystallographer_info
drwxr-xr-x 2 root 512    Feb 24 dihdrl
drwxr-xr-x 2 root 512    Feb 24 etc
drwxr-xr-x 4 root 512    Mar 5  fullrelease
drwxr-xr-x 2 root 512    Feb 24 hassp
drwxr-xr-x 2 root 512    Mar 8  index
-rw-r--r-- 1 root 281791 Apr 2  ls-lR
drwx-wx-wx 2 root 3584   Apr 9  new_uploads
drwxr-xr-x 2 root 1024   Mar 10 newsletter
drwxr-xr-x 4 root 10240  Mar 25 prerelease
drwxr-xr-x 6 root 1024   Mar 5  program_tape
drwxr-xr-x 2 root 512    Mar 29 pub
drwxr-xr-x 3 root 512    Mar 5  structure_factors
226 Transfer complete.
remote: -l
1111 bytes received in 0.16 seconds (6.6 Kbytes/s)
ftp> cd newsletter
250 CWD command successful.
ftp> ls -l
200 PORT command successful.
150 Opening ASCII mode data connection for '/bin/ls'.
total 1082
l--------- 1 root 18     Mar 5  ADVISORY.NOTICE
-rw-r--r-- 1 root 8549   Mar 16 README
-rw-r--r-- 1 root 1072   Jan 25 jan93avail_on_tape.txt
-rw-r--r-- 1 root 4408   Jan 25 jan93biblio.txt
-rw-r--r-- 1 root 2042   Jan 25 jan93corrections.txt
-rw-r--r-- 1 root 67979  Jan 25 jan93entries.txt
-rw-r--r-- 1 root 176090 Mar 5  jan93fulltables.txt
-rw-r--r-- 1 root 163990 Mar 10 jan93newsletter.ps
-rw-r--r-- 1 root 27096  Mar 29 jan93newsletter.txt
-rw-r--r-- 1 root 1850   Jan 25 jan93nmr.txt
-rw-r--r-- 1 root 5946   Jan 25 jan93onhold.txt
-rw-r--r-- 1 root 70478  Jan 25 jan93pending.txt
-rw-r--r-- 1 root 2205   Jan 25 jan93prog_misc.txt
-rw-r--r-- 1 root 19449  Jan 25 jan93struct_fact.txt
226 Transfer complete.
remote: -l
1049 bytes received in 0.12 seconds (8.7 Kbytes/s)
ftp> get jan93newsletter.txt
200 PORT command successful.
150 Opening ASCII mode data connection for
'jan93newsletter.txt'
(27096 bytes).226 Transfer complete.
local: jan93newsletter.txt remote: jan93newsletter.txt
27787 bytes received in 0.16 seconds (1.7e+02 Kbytes/s)
```

This copies the file named jan93newsletter.txt from the PDB to your computer.

To copy a file from your system to the PDB, login using FTP and type:

```
ftp> cd new_uploads
250 CWD command successful.
ftp> put dataFROMjoedoe
200 PORT command successful.
150 Opening ASCII mode data connection for
'dataFROMjoedoe'.
226 Transfer complete.
local: dataFROMjoedoe remote: dataFROMjoedoe
554 bytes sent in 0.0078 seconds (69 Kbytes/s)
```

This copies the file named dataFROMjoedoe from your system to the PDB file upload directory.

Be sure to include information in the header of the file stating what it is and who you are.

The FTP program has many options. See the FTP manual page ("man ftp") for further details.

CD-ROM Information

PDB releases are available on CD-ROM in *ISO 9660* format. The layout of the files on the CD-ROM mirrors that of the tape distribution and uses the tape1, tape2, ..., tapeN subdirectories. The entry files are ASCII format and are readable by any software able to read text files. The structure factor files are compressed using the standard UNIX compress command.

The CD-ROM also includes the MAGE and PREKIN structure display and manipulation software by D.C. Richardson and

J.S. Richardson [The Kinemage: A Tool for Scientific Communication. **Protein Science 1**, 3-9 (1992)] in both PC and Macintosh versions.

VAX/VMS systems currently do not directly support access to *ISO 9660* CD-ROMs. The PDB CD-ROM may be accessed on VAX/VMS systems by two approaches:

1. There is an *ISO 9660* compliant device driver available from Digital Equipment Corporation (DEC) that allows direct access to the CD-ROM (driver part number YT-GS001-01). Please contact your DEC sales representative for further information.

2. There is a public utility for accessing *ISO 9660* CD-ROMs, called CD_ACCESS, written by Peter Stockwell, University of Otago, New Zealand, that will allow all the files on the CD-ROM to be copied to a magnetic disk drive. This utility can be obtained from the EMBL e-mail server (for further information you may contact DataLib@EMBL-Heidelberg.DE). When copying files using CD_ACCESS, be sure to use the /BINARY qualifier to the copy command.

Depositing Data with the PDB

The PDB accepts depositions of atomic coordinates, bibliographic citations, primary sequence and secondary structure information, as well as crystallographic structure factors, and 2D-NMR experimental data on biological macromolecules. These may include proteins, RNA, DNA, viruses, and carbohydrates. Deposited data are processed with PDB verification and checking programs, converted to a standard format, archived, and distributed world-wide.

A deposition has three essential components which must be received before a submission can be processed: the completed deposition form, reprints and preprints, and the actual data in PDB format. The deposition form can be submitted electronically or on paper. Data must be submitted in machine-readable form *via* anonymous FTP, e-mail, magnetic tape, or floppy disk. A deposition form and more information on depositing entries is available in the FTP directory ***/pub*** and *via* the PDB e-mail fileserver. You can also request these items by phone, fax, or surface mail.

Obtaining Ident Code for New Entry

The ident code of a new entry will be issued only after the complete deposition is received and initial screening verifies the correctness and integrity of the entry. After processing is complete, a letter providing the ident code and requesting approval for release is sent to the depositor.

To facilitate assignment of an ident code, it is necessary that the deposition include all applicable information, including any preprints or reprints of journal articles referenced. Data must be in PDB format, and the deposition form legible and complete. Many depositors have found that by submitting their entry to the PDB at the same time that they submit their paper to the scientific journal, publication delays can be avoided.

In the future, the PDB will be implementing new procedures giving depositors direct access to PDB processing and checking programs *via* Internet. Depositors using these new procedures can expect to receive confirmation of their deposition along with the entry ident code within three days of submission. When implemented, further instructions will be available *via* anonymous FTP and future Newsletters.

Finding Ident Code for Entry

Each PDB entry is uniquely identified by an ident code. Therefore, retrieving the file of a particular structure requires this ident code. Lists of newly received entries are found in PDB Newsletters, published quarterly. Tables of all PDB entries can be obtained *via* anonymous FTP and e-mail server or by normal mail upon request.

Within the anonymous FTP account are two subdirectories which are useful for locating ident codes. The first is ***/index***. This contains the following files generated from the latest release:

author.lst	ident codes and authors
compound.lst	ident codes, resolutions, and compound names
crystal.lst	ident codes, unit cell dimensions, space groups, and Z's
resolu.lst	ident codes and resolutions
source.lst	ident codes and sources

The second useful subdirectory is ***/newsletter.*** This contains text (.txt) and PostScript (.ps) files of the full entry and pending tables. Retrieving files from these two subdirectories, as well as the directory listings which are in files named 'ls-lR', allows you to determine whether the molecule of interest is available, what its ident code is, and where it is located.

Please be aware that files can be downloaded while in FTP, but they cannot be viewed on the terminal while within this program. Therefore, it is sometimes helpful to download tables or directory listings, quit FTP, determine which additional files you want to retrieve, then reconnect to the FTP service to get them. If you are logged in from a UNIX computer, after retrieving the file you may view its contents by escaping to the shell with the command '***! cat filename***' or '***! more filename***', where cat and more are the UNIX commands.

```
ftp>  get ls-lR   (retrieves the file named ls-lR)
ftp>  !cat ls-lR  (types the local file 'ls-lR')
ftp>  !more ls-lR (types the local file 'ls-lR',
                   one page at a time)
```

The PDB fileserver, Gopher, or WAIS are other methods to locate PDB ident codes. Please see detailed information about these services on page 2. Finally, in some cases, journal articles reporting results of structural analyses of biological macromolecules provide the PDB ident code.

Newly Released Entries

IDENT CODE	MOLECULE	DEPOSITOR(S)	ACCESSION DATE
COORDINATE ENTRIES			
1ACP	ACYL CARRIER PROTEIN(NMR,2 STRUCTURES)	J.H.PRESTEGARD,Y.KIM	7/90
1D42	DNA(GTATATAC)(NMR,5 STRUCTURES)	U.SCHMITZ,T.JAMES	5/91
1D53	DNA(CGCICICG)	V.KUMAR ET AL.	11/91
1D54	DNA(TGTACA)/4'-EPIADRIAMYCIN	G.A.LEONARD,T.BROWN,W.N.HUNTER	1/92
1D59	DNA(GGGGTTTTGGGG)	C.KANG,A.RICH	2/92
1D60	DNA(CCAACITTGG)	A.A.LIPANOV,M.L.KOPKA, M.KACZOR-GRZESKOWIAK,R.E.DICKERSON	2/92
1D61	DNA(CCAACITTGG)	A.A.LIPANOV,M.L.KOPKA, M.KACZOR-GRZESKOWIAK,R.E.DICKERSON	2/92
1D66	GAL4(RESIDUES 1-65)/CCGGAGGACAGTCCTCCGG	R.MARMORSTEIN,S.HARRISON	3/92
1D68	DNA(GCGTATACGC)(NMR)	CHENG,CHOU,SALAZAR,REID	4/92
1D69	DNA(ATGAGCGAAT)(NMR)	CHOU,CHENG,REID	4/92
1D70	DNA(GTATAATG)(NMR,4 STRUCTURES)	U.SCHMITZ,T.L.JAMES	4/92
1D78	DNA(GTGTACAC)(A CONFORMATION,GROWN IN PRESENCE OF SPERMINE)	N.THOTA,X.H.LI,C.BINGMAN,M.SUNDARALINGAM	6/92
1D79	DNA(GTGTACAC)(A CONFORMATION,GROWN IN THE PRESENCE OF SPERMIDINE)	N.THOTA,X.H.LI,C.BINGMAN,M.SUNDARALINGAM	6/92
110D	DNA(CGGCCG)/DAUNOMYCIN	G.A.LEONARD,T.W.HAMBLEY, K.MCAULEY-HECHT,T.BROWN,W.N.HUNTER	1/93
116D	DNA(CCGTACGTACGG)	C.BINGMAN,M.SUNDARALINGAM	2/93
117D	DNA(GCGTACGTACGC)	C.BINGMAN,S.JAIN,M.SUNDARALINGAM	2/93
1DA3	DNA(CGATCGA(ME)TCG)	I.BAIKALOV,K.GRZESKOWIAK,K.YANAGI, J.QUINTANA,R.E.DICKERSON	11/92
1DA9	DNA(TGGCCA)/ADRIAMYCIN	G.A.LEONARD,T.W.HAMBLEY, K.MCAULEY-HECHT,T.BROWN,W.N.HUNTER	1/93
4RVE	ECO RV ENDONUCLEASE/DNA	F.K.WINKLER	2/93
1FER	FERREDOXIN I(PH 6.5)	E.A.MERRITT,G.H.STOUT,S.TURLEY,L.C.SIEKER, L.H.JENSEN,W.H.ORME-JOHNSON	9/92
1FXD	FERREDOXIN II(DESULFOVIBRIO GIGAS)	C.KISSINGER ET AL.	4/91
1HYP	HYDROPHOBIC PROTEIN FROM SOYBEAN	M.S.LEHMANN ET AL.	2/93
1IGI	IGG1 FAB(IGG2A,KAPPA) FRAGMENT(26-10)	P.D.JEFFREY,S.SHERIFF	2/93
1IGJ	IGG1 FAB(IGG2A,KAPPA) FRAGMENT(26-10)/DIGOXIN	P.D.JEFFREY,S.SHERIFF	2/93
2GF1	INSULIN-LIKE GROWTH FACTOR 1(NMR)	COOKE,HARVEY,CAMPBELL	1/91
3GF1	INSULIN-LIKE GROWTH FACTOR 1(NMR,10 STR)	COOKE,HARVEY,CAMPBELL	1/91
1ITL	INTERLEUKIN 4(HUMAN)(NMR)	C.DOBSON ET AL.	2/92
1APM	CAMP-DEPENDENT PROTEIN KINASE (CATALYTIC SUBUNIT)/PKI	D.R.KNIGHTON,S.M.BELL,J.ZHENG, L.F.TEN EYCK,N.XUONG,S.S.TAYLOR, J.M.SOWADSKI	1/93
1ATP	C-AMP-DEPENDENT PROTEIN KINASE/PKI/MNATP	J.ZHENG.E.A.TRAFNY,D.R.KNIGHTON, N.-H.XUONG,S.S.TAYLOR,L.F.TEN EYCK, J.M.SOWADSKI	1/93
1ZTA	LEUCINE ZIPPER(GCN4 TAP)(NMR)	A.PASTORE ET AL.	10/90
1L77	LYSOZYME(T4) MUTANT(M102L)	J.HURLEY,B.MATTHEWS	11/91
2L78	LYSOZYME(T4) MUTANT(V111I)	J.HURLEY,B.MATTHEWS	1/92
1L79	LYSOZYME(T4) MUTANT(L99F,V111I)	J.HURLEY,B.MATTHEWS	11/91
1L80	LYSOZYME(T4) MUTANT(L99F,M102L,V111I)	J.HURLEY,B.MATTHEWS	11/91
1L81	LYSOZYME(T4) MUT(L99F,M102L,V111I,F153L)	J.HURLEY,B.MATTHEWS	11/91
1L82	LYSOZYME(T4) MUTANT(L99F,M102L,F153L)	J.HURLEY,B.MATTHEWS	11/91
1PE6	PAPAIN/E-64-C PAPAYA FRUIT LATEX	D.YAMAMOTO ET AL.	5/91
1HSP	PHOSPHOLIPASE C(SH3 DOMAIN) (NMR 11 STRUCTURES)	D.KOHDA,H.HATANAKA,M.ODAKA,F.INAGAKI	12/92
2PIA	PHTHALATE DIOXYGENASE REDUCTASE	C.C.CORRELL,C.J.BATIE,D.P.BALLOU,M.L.LUDWIG	2/93
1GB1	PROTEIN G(B1 DOMAIN)(GROUP G STREPTOCOCCUS)(NMR,60 STRUCTURES)	A.M.GRONENBORN,G.M.CLORE	5/91
2GB1	PROTEIN G(B1 DOMAIN) GROUP G STREPTOCOCCUS (NMR,MIN AVERAGED STRUCTURE)	A.M.GRONENBORN,G.M.CLORE	5/91

Newly Released Entries (cont.)

IDENT CODE	MOLECULE	DEPOSITOR(S)	ACCESSION DATE
1STY	STAPHYLOCOCCAL NUCLEASE INSERTION MUTANT (126G127)	L.J.KEEFE,E.E.LATTMAN	2/93
2SIC	SUBTILISIN BPN'/SSI	Y.MITSUI ET AL.	4/91
1SOS	SUPEROXIDE DISMUTASE	H.E.PARGE,R.A.HALLEWELL,J.A.TAINER	2/92
3SOD	SUPEROXIDE DISMUTASE(BOVINE)	J.TAINER ET AL.	6/90
3SDP	FE SUPEROXIDE DISMUTASE(PSEUDOMONAS OVALIS)	S.L.STODDARD,D.RINGE,G.A.PETSKO	5/91
1TFD	TRANSFERRIN(N-TERMINAL HALF-MOLECULE)	R.SARRA,P.LINDLEY	8/90
2TGF	TRANSFORMING GROWTH FACTOR(NMR)	I.CAMPBELL ET AL.	1/91
3TGF	TRANSFORMING GROWTH FACTOR (NMR,4 STRUCTURES)	I.CAMPBELL ET AL.	1/91
3YPI	TRIOSE PHOSPHATE ISOMERASE (SACCHAROMYCES CEREVISIAE) MUTANT (H95Q)/PGH	E.LOLIS,G.PETSKO	12/90
1XIM	D-XYLOSE ISOMERASE(A.MIS.)/XYLITOL/CO	J.JANIN ET AL.	5/91
2XIM	D-XYLOSE ISOMERASE(A.MIS.)/XYLOSE/MG	J.JANIN ET AL.	5/91
3XIM	D-XYLOSE ISOMERASE(A.MIS.)/SORBITOL/CO	J.JANIN ET AL.	5/91
1PAI	PROTEIN C INHIBITOR MODEL 1	L.KUHN,C.FISHER,J.TAINER	7/90
2PAI	PROTEIN INHIBITOR C MODEL 2	L.A.KUHN	7/90
1BST	SOMATOTROPIN(BOVINE GROWTH HORMONE)	CARLACCI,CHOU,MAGGIORA	2/91

NMR ENTRIES

IDENT CODE	MOLECULE	DEPOSITOR(S)	ACCESSION DATE
R1D42MR	DNA(GTATATAC)(NMR,5 STRUCTURES)	U.SCHMITZ,T.JAMES	5/91
R1D70MR	DNA(GTATAATG)(NMR,4 STRUCTURES)	U.SCHMITZ,T.L.JAMES	4/92
R2GF1MR	INSULIN-LIKE GROWTH FACTOR 1(NMR)	COOKE,HARVEY,CAMPBELL	1/91
R1ITLMR	INTERLEUKIN 4(HUMAN)(NMR)	C.DOBSON ET AL.	2/92
R1HSPMR	PHOSPHOLIPASE C(SH3 DOMAIN) (NMR,11 STRUCTURES)	D.KOHDA,H.HATANAKA,M.ODAKA,F.INAGAKI	12/92
R1GB1MR	PROTEIN G(B1 DOMAIN)(GROUP G STREPTOCOCCUS)(NMR,60 STRUCTURES)	A.M.GRONENBORN,G.M.CLORE	9/91
R2TGFMR	TRANSFORMING GROWTH FACTOR(NMR)	I.CAMPBELL ET AL.	1/91

STRUCTURE FACTOR ENTRIES

IDENT CODE	MOLECULE	DEPOSITOR(S)	ACCESSION DATE
R1DA3SF	DNA(CGATCGA(ME)TCG)	I.BAIKALOV,K.GRZESKOWIAK,K.YANAGI, J.QUINTANA,R.E.DICKERSON	11/92
R1DA9SF	DNA(TGGCCA)/ADRIAMYCIN	G.A.LEONARD,T.W.HAMBLEY, K.MCAULEY-HECHT,T.BROWN,W.N.HUNTER	1/93
R1IGISF	IGG1 FAB(IGG2A,KAPPA) FRAGMENT(26-10)	P.D.JEFFREY,S.SHERIFF	2/93
R1IGJSF	IGG1 FAB(IGG2A,KAPPA) FRAGMENT(26-10)/DIGOXIN	R.K.STRONG,G.A.PETSKO,P.D.JEFFREY, S.SHERIFF	2/93
R1PE6SF	PAPAIN/E-64-C PAPAYA FRUIT LATEX	D.YAMAMOTO ET AL.	5/91
R1D54SF	DNA(TGTACA)/4'-EPIADRIAMYCIN	G.A.LEONARD,T.BROWN,W.N.HUNTER	1/92
R1D60SF	DNA(CCAACITTGG)	A.A.LIPANOV,M.L.KOPKA, M.KACZOR-GRZESKOWIAK,R.E.DICKERSON	2/92
R1D61SF	DNA(CCAACITTGG)	A.A.LIPANOV,M.L.KOPKA, M.KACZOR-GRZESKOWIAK,R.E.DICKERSON	2/92
R1D78SF	DNA(GTGTACAC)(A CONFORMATION,GROWN IN PRESENCE OF SPERMINE)	N.THOTA,X.H.LI,C.BINGMAN,M.SUNDARALINGAM	6/92
R1D79SF	DNA(GTGTACAC)(A CONFORMATION,GROWN IN THE PRESENCE OF SPERMIDINE)	N.THOTA,X.H.LI,C.BINGMAN,M.SUNDARALINGAM	6/92
R110DSF	DNA(CGGCCG)/DAUNOMYCIN	G.A.LEONARD,T.W.HAMBLEY, K.MCAULEY-HECHT,T.BROWN,W.N.HUNTER	1/93
R116DSF	DNA(CCGTACGTACGG)	C.BINGMAN,M.SUNDARALINGAM	2/93
R117DSF	DNA(GCGTACGTACGC)	C.BINGMAN,S.JAIN,M.SUNDARALINGAM	2/93

Newly Deposited Entries

IDENT CODE	MOLECULE	DEPOSITOR(S)	ACCESSION DATE
COORDINATE ENTRIES			
1NIS	ACONITASE/NITROCITRATE	H.LAUBLE,M.C.KENNEDY,H.BINERT,C.D.STOUT	1/93
1NIT	ACONITASE/SULFATE	H.LAUBLE,M.C.KENNEDY,H.BINERT,C.D.STOUT	1/93
1ACO	ACONITASE/TRANSACONITATE	C.D.STOUT	1/93
2ABD	ACYL-COENZYME A BINDING PROTEIN (NMR,20 STRUCTURES)	K.ANDERSEN,F.POULSEN	3/93
2CWG	AGGLUTININ(ISOLECTIN 1)/T-5 SIALOGLYCOPEPTIDE OF GLYCOPHORIN A	C.S.WRIGHT	
3HUD	ALCOHOL DEHYDROGENASE (BETA-1 ISOENZYME)	T.D.HURLEY,W.F.BOSRON.J.A.HAMILTON,L.M.AMZEL	1/93
1BTC	BETA-AMYLASE/ALPHA-CYCLODEXTRIN	B.MIKAMI,E.J.HEHRE,M.SATO,Y.KATSUBE,M.HIROSE, Y.MORITA,J.C.SACCHETTINI	2/93
1ALA	ANNEXIN V	D.A.WALLER,M.C.BEWLEY,R.HUBER	1/93
1ASO	ASCORBATE OXIDASE(REDUCED)	A.MESSERSCHMIDT,H.LUECKE,R.HUBER	11/92
1ASQ	ASCORBATE OXIDASE/AZIDE	A.MESSERSCHMIDT,H.LUECKE,R.HUBER	11/92
1ASP	ASCORBATE OXIDASE/PEROXIDE	A.MESSERSCHMIDT,H.LUECKE,R.HUBER	11/92
2ECA	L-ASPARAGINASE(TYPE II)	A.L.SWAIN,M.JASKOLSKI,D.HONSSET,J.K.RAO, A.WLODAWER	1/93
1SPA	ASPARTATE AMINOTRANSFERASE MUTANT(D222A)	Y.HINOUE,T.YANO,D.E.METZLER,I.MIYAHARA, K.HIROTSU,H.KAGAMIYAMA	1/93
1AVI	AVIDIN/BIOTIN	O.LIVNAH,E.BAYER,M.WILCHEK,J.SUSSMAN	12/92
1CLM	CALMODULIN(WILD TYPE)	M.SUNDARALAINGAM	1/93
1DCA	CARBONIC ANHYDRASE II MUTANT(T199C)	J.A.IPPOLITO,D.W.CHRISTIANSON	12/92
1CID	CD4(RAT,DOMAINS 3 AND 4)	R.L.BRADY,E.J.DODSON,G.LANGE	1/93
2CRD	CHARYBDOTOXIN(NMR,12 STRUCTURES)	F.BONTEMS,C.ROUMESTAND,B.GILQUIN,A.MENEZ, F.TOMA	2/93
1CPL	CYCLOPHILIN	H.KE,L.D.ZYDOWSKY,J.LIU,C.T.WALSH	9/91
1CTZ	CYTOCHROME C(ISOZYME 1) MUTANT (Y67F,C102T)	A.M.BERGHUIS,G.D.BRAYER	2/93
1CTY	CYTOCHROME C(OXIDIZED) MUTANT(Y67F,C102T)	A.M.BERGHUIS,G.D.BRAYER	2/93
1CCC	CYTOCHROME C PEROXIDASE MUTANT(D235A)	D.B.GOODIN,D.E.MCREE	1/93
1CCB	CYTOCHROME C PEROXIDASE MUTANT(D235E)	D.B.GOODIN,D.E.MCREE	1/93
1PCB	YEAST CYTOCHROME C PEROXIDASE (CCP)/HORSE HEART CYTOCHROME C	H.PELLETIER	11/92
1CCA	CYTOCHROME C PEROXIDASE(YEAST,WILD TYPE)	D.B.GOODIN,D.E.MCREE	1/93
1PCC	YEAST CYTOCHROME C PEROXIDASE/YEAST ISO-1-CYTOCHROME C	H.PELLETIER	11/92
1PAC	CYTOCHROME C551(FE(II))	D.J.DETLEFSEN,V.THANABAL,V.L.PECORARO, G.WAGNER	5/92
2DRC	DIHYDROFOLATE REDUCTASE MUTANT(W22F)	K.A.BROWN,J.KRAUT	6/91
1EAA	DIHYDROLIPOAMIDE ACETYLTRANSFERASE (CATALYTIC DOMAIN)	A.MATTEVI,W.G.J.HOL	12/92
1EAD	DIHYDROLIPOAMIDE ACETYLTRANSFERASE (CATALYTIC DOMAIN)/COA	A.MATTEVI,W.HOL	12/92
1EAC	DIHYDROLIPOAMIDE ACETYLTRANSFERASE (CATALYTIC DOMAIN)/COA/DTT	A.MATTEVI,W.HOL	12/92
1EAB	DIHYDROLIPOAMIDE ACETYLTRANSFERASE (CATALYTIC DOMAIN)/COA/LIPOAMIDE	A.MATTEVI,W.HOL	12/92
1EAE	DIHYDROLIPOAMIDE ACETYLTRANSFERASE (CATALYTIC DOMAIN)/LIPOAMIDE	A.MATTEVI,W.HOL	12/92
1EAF	DIHYDROLIPOAMIDE ACETYLTRANSFERASE (CATALYTIC DOMAIN)/SO2OH	A.MATTEVI,W.HOL	12/92
1LVL	DIHYDROLIPOAMIDE DEHYDROGENASE/NAD+	A.MATTEVI,W.G.J.HOL	12/92
1DA1	DNA((BR)UGCGCG)	T.BROWN,G.KNEALE,W.N.HUNTER,O.KENNARD	11/92
1DA0	DNA(CGATCG)/DAUNOMYCIN	M.H.MOORE,W.N.HUNTER,B.L.D'ESTAINTOT, O.KENNARD	11/92

Newly Deposited Entries (cont.)

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2DA8	DNA(GATATC)/[N-MECYS3,N-MECYS7] TANDEM(NMR,8 STRUCTURES)	K.J.ADDESS,J.S.SINSHEIMER,J.FEIGON	4/93
1D98	DNA(CGCAAAAAAGCG)	H.C.M.NELSON,J.T.FINCH,B.F.LUISI,A.KLUG	11/92
1D99	DNA(CGCAAATTCGCG)	W.N.HUNTER,T.BROWN,O.KENNARD	11/92
111D	DNA(CGCAAATTGGCG)	T. BROWN	1/93
1DA2	DNA(CGCG(ME4)CG)	L.VAN MEERVELT,M.H.MOORE,P.K.T.LIN, D.M.BROWN,O.KENNARD	11/92
1D89	DNA(CGCGAAAAAACG)(BROMINATED)	A.DIGABRIELE,T.STEITZ	7/92
112D	DNA(CGCGAATTAGCG)	T. BROWN	1/93
113D	DNA(CGCGAATTTGCG)	W.N.HUNTER	1/93
114D	DNA(CGCIAATTAGCG)	P.W.R.CORFIELD	1/93
2DES	DNA(CGTACG)/3'-DESAMINO-(2-METHOXY-4-MORPHOLINYL)-DOXORUBICIN	M.CIRILLI,F.BACHECHI,G.UGHETTO,F.P.COLONNA, M.L.CAPOBIANCO	3/93
1D93	DNA(CTCTAGAG)	W.N.HUNTER,B.L.D'ESTAINTOT,O.KENNARD	11/92
1DA4	DNA(CTCTAGTGCTCAC)(NMR,2 STRUCTURES)	C.J.VAN GARDEREN,D.G.PATEL,L.P.A.VAN HOUTE	1/93
1D97	DNA(GCGCGC)	W.B.T.CRUSE,S.A.SALISBURY,T.BROWN, R.COSSTICK.F.ECKSTEIN,O.KENNARD	11/92
1D94	DNA(GGGCGCCC)	Z.SHAKKED,G.GUERSTEIN-GUZIKEVICH, M.EISENSTEIN,F.FROLOW,D.RABINOVICH	11/92
1D95	DNA(GGGCGCCC)	M.EISENSTEIN,H.HOPE,T.E.HARAN,F.FROLOW, Z.SHAKKED,D.RABINOVICH	11/92
1D92	DNA(GGGGCTCC)	W.N.HUNTER,G.KNEALE,T.BROWN,D.RABINOVICH, O.KENNARD	11/92
1D91	DNA(GGGGTCCC)	G.KNEALE,T.BROWN,O.DENNARD,D.RABINOVICH	11/92
1D90	DNA(GGIGCTCC)	W.B.T.CRUSE,J.AYMANI,O.KENNARD,T.BROWN, A.G.C.JACK,G.A.LEONARD	11/92
118D	DNA(GTGCGCAC)	C.BINGMAN,X.LI,M.SUNDARALINGAM	2/93
1DA5	DNA(GTGAGCACTAGAG)(NMR,2 STRUCTURES)	C.J.VANGARDEREN,D.G.PATEL,L.P.A.VAN HOUTE	1/93
1ECH	ECHISTATIN	J.T.PELTON,R.A.ATKINSON,V.SAUDEK	1/93
1SMR	ENDOTHIAPEPSIN/INHIBITOR PD130328	C.G.DEALWIS,T.L.BLUNDELL	3/92
1FDD	FERREDOXIN MUTANT(D15N)	C.D.STOUT	1/93
4FGF	FIBROBLAST GROWTH FACTOR(BASIC)	A.E.ERIKSSON,B.W.MATTHEWS	2/93
1DOG	GLUCOAMYLASE-471/1-DEOXYNOJIRIMYCIN	E.HARRIS,A.ALESHIN,L.FIRSOV,R.B.HONSATKO	
1GLU	GLUCOCORTICOID RECEPTOR DNA-BINDING DOMAIN/DNA	B.LUISI,W.XU,P.SIGLER	8/92
1GRF	GLUTATHIONE REDUCTASE (CARBOXAMIDOMETHYLATED)	P.A.KARPLUS,G.E.SCHULZ	12/92
1GRG	GLUTATHIONE REDUCTASE/BCNU	P.A.KARPLUS,G.E.SCHULZ	12/92
1GRB	GLUTATHIONE REDUCTASE/NADH	P.A.KARPLUS,G.E.SCHULZ	12/92
1GRE	GLUTATHIONE REDUCTASE/GLUTATHIONE (REDUCED)	P.A.KARPLUS,G.E.SCHULZ	12/92
1GRA	GLUTATHIONE REDUCTASE/GSSG/NADP+	P.A.KARPLUS,G.E.SCHULZ	12/92
1RHG	GRANULOCYTE COLONY-STIMULATING FACTOR	C.P.HILL,T.D.OSSLUND,D.EISENBERG	1/93
1HEV	HEVEIN(NMR,6 STRUCTURES)	N.H.ANDERSEN,B.CAO	1/93
1HVN	HIV-1 NUCLEOCAPSID ZINC FINGER/DNA (ACGCC)(NMR,15 STRUCTURES)	T.SOUTH,M.SUMMERS	12/92
1HVO	HIV-1 ZINC FINGER/DNA(ACGCC)(NMR, 15 STRUCTURES,LESS RESTRAINTS)	T.WOUTH,M.SUMMERS	12/92
1MCO	IMMUNOGLOBULIN IGG1 LAMBDA WITH A HINGE DELETION	A.B.EDMUNDSON,L.W.GUDDAT	2/93
1MCS	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-L-GLN-D-PHE-L-HIS-D-PRO-OH	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCQ	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-L-HIS-D-PRO-NH2	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCR	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-L-HIS-D-PRO-OH	A.B.EDMUNDSON,D.L.HARRIS,A.-C.FAN,L.W.GUDDAT	2/93
1MCK	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-D-GLU-L-HIS-D-PRO-NH2	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93

Newly Deposited Entries (cont.)

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1MCN	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-D-HIS-L-PRO-NH2	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCL	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-D-HIS-L-PRO-OH	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCD	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-D-PHE-B-ALA-L-HIS-D-PRO-NH2	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCJ	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-D-PHE-L-HIS-D-PRO-NH2	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCE	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-L-GLN-D-PHE-L-HIS-D-PRO-B-ALA-OH	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCC	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-L-GLN-D-PHE-L-HIS-D-PRO-NH2	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCB	IMMUNOGLOBULIN LAMBDA LIGHT CHAIN/ N-ACETYL-L-GLN-D-PHE-L-HIS-D-PRO-OH	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCF	IMMUNOGLOBULIN LAMBDA LT. CHAIN / N- ACETYL-L-GLN-D-PHE-L-HIS-D-PRO-B-ALA-B-ALA-OH	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCH	IMMUNOGLOBULIN LAMBDA LT. CHAIN/N-ACETYL-L-GLN-D-PHE-L-HIS-D-PRO-B-ALA-B-ALA-OH	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
1MCI	IMMUNOGLOBUOIN LAMBDA LIGHT CHAIN/ N-ACETYL-D-PHE-L-HIS-D-PRO-OH	A.B.EDMUNDSON,D.L.HARRIS,Z.-C.FAN,L.W.GUDDAT	2/93
2IMM	IMMUNOGLOBULIN VL DOMAIN MCPC603	B.STEIPE,R.HUBER	3/93
2IMN	IMMUNOGLOBULIN VL MUTANT (MCPC603-CDR1 REPLACED BY MOPC167-CDR1)	B.STEIPE,R.HUBER	3/93
1ITI	INTERLEUKIN 4(HUMAN)	G.M.CLORE,B.POWERS,D.S.GARRETT, A.M.GRONENBORN	4/93
1LEC	LECTIN	L.DELBAERE,M.VANDONSELAAR,J.QUAIL	12/92
1LED	LECTIN/LEWIS B HUMAN BLOOD GROUP DETERMINANT	L.DELBAERE,M.VANDONSELAAR,J.QUAIL	12/92
1RIN	LECTIN/METHYL-3,6-DI-O-(ALPHA-D-MANNOPYRANOSYL)-ALPHA-D-MANNOPYRANOSIDE	J.M.RINI,K.D.HARDMAN,H.EINSPAHR,F.L.SUDDATH, J.P.CARVER	1/93
1BPM	LEUCINE AMINOPEPTIDASE	H.KIM,W.N.LIPSCOMB	3/93
1BPN	LEUCINE AMINOPEPTIDASE	H.KIM,W.N.LIPSCOMB	3/93
1RCM	LYSOZYME(HEN EGG WHITE,PARTIALLY REDUCED)	C.P.HILL,N.L.JOHNSTON,R.E.COHEN	1/93
1LZ5	LYSOZYME MUTANT(FOUR RESIDUE INSERT)	M.MATSUSHIMA,K.INAKA,T.YAMADA,K.SEKIGUCHI, M.KIKUCHI	2/93
1LZ6	LYSOZYME MUTANT WITH EIGHT AMINO ACID RESIDUES INSERTED	M.MATSUSHIMA,K.INAKA,T.YAMADA,K.SEKIGUCHI, M.KIKUCHI	2/93
1LZ4	LYSOZYME MUTANT(C77A)	K.INAKA,M.MATSUSHIMA,R.KUROKI,Y.TANIYAMA, M.KIKUCHI	2/93
1HYD	LYSOZYME(T4) MUTANT(S44E,C54T,C97A)	M.BLABER,B.MATTHEWS	12/92
107L	LYSOZYME(T4) MUTANT(S44G,C54T,C97A)	M.BLABER,B.MATTHEWS	12/92
108L	LYSOZYME(T4) MUTANT(S44I,C54T,C97A)	M.BLABER,B.MATTHEWS	12/92
109L	LYSOZYME(T4) MUTANT(S44K,C54T,C97A)	M.BLABER,B.MATTHEWS	12/92
110L	LYSOZYME(T4) MUTANT(S44L,C54T,C97A)	M.BLABER,B.MATTHEWS	12/92
111L	LYSOZYME(T4) MUTANT(S44N,C54T,C97A)	M.BLABER,B.MATTHEWS	12/92
113L	LYSOZYME(T4) MUTANT(S44R,C54T,C97A)	M.BLABER,B.MATTHEWS	12/92
114L	LYSOZYME(T4) MUTANT(S44T,C54T,C97A)	M.BLABER,B.MATTHEWS	12/92
115L	LYSOZYME(T4) MUTANT(S44V,C54T,C97A)	M.BLABER,B.MATTHEWS	12/92
116L	LYSOZYME(T4) MUTANT(S44W,C54T,C97A)	M.BLABER,B.MATTHEWS	1/93
4MT2	METALLOTHIONEIN(ISOFORM II,RAT LIVER)	A.ROBBINS,C.D.STOUT	4/93
1MAT	METHIONINE AMINOPEPTIDASE	S.RODERICK,B.MATTHEWS	12/92
1TCG	MU-CONOTOXIN GIIIA(NMR,MINIMIZED AVERAGE STRUCTURE)	D.KOHDA,J.M.LANCELIN,F.INAGAKI,K.WAKAMATSU	12/92
1TCH	MU-CONOTOXIN GIIIA(INACTIVE ANALOG) (NMR,10 STRUCTURES)	D.KOHDA,J.M.LANCELIN,F.INAGAKI,K.WAKAMATSU	12/92

Newly Deposited Entries (cont.)

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1CMM	CYANIDE MET MYOGLOBIN	T.SATO,N.TANAKA,H.MORIYAMA,N.IGARASHI,S.NEYA, N.FUNASAKI,T.IIZUKA,Y.SHIRO	1/93
1NOA	NEOCARZINOSTATIN	A.TEPLYAKOV	12/92
1MIN	NITROGENASE MOLYBDENUM-IRON PROTEIN	J.KIM,D.C.REES	1/93
1KAA	STAPHYLOCOCCAL NUCLEASE MUTANT(K116A)	A.HODEL,R.FOX	12/92
1KAB	STAPHYLOCOCCAL NUCLEASE MUTANT(K126G)	A.HODEL,R.FOX	12/92
1ERP	PHEROMONE ER-10(NMR,20 STRUCTURES)	L.BROWN,S.MRONGA,R.BRADSHAW,C.ORTENZI, P.LUPORINI,K.WURICH	12/92
1PHO	PHOSPHOPORIN	T.SCHIRMER,S.W.COWAN,J.N.JANSONIUS	1/93
1OMF	PORIN	S.W.COWAN,T.SCHIRMER,J.N.JANSONIUS	1/93
3POR	PORIN(CRYSTAL FORM A)	M.S.WEISS,G.E.SCHULZ	11/92
1PDA	PORPHOBILINOGEN DEAMINASE	G.V.LOUIE,P.D.BROWNLINE,R.LAMBERT, J.B.COOPER,T.L.BLUNDELL,S.P.WOOD,M.J.WARREN, S.C.WOODCOCK,P.M.JORDAN	11/92
1PEK	PROTEINASE K/INHIBITOR	CH.BETZEL,T.P.SINGH,M.VISANJI,K.PETERS, S.FITTKAU,W.SAENGER,K.S.WILSON	1/93
1HPP	PROTHROMBIN FRAGMENT 2/HUMAN PPACK-THROMBIN	A.TULINSKY,K.PADMANABHAN	3/93
1HPQ	HUMAN PROTHROMBIN FRAGMENT 2/ PPACK-THROMBIN	A.TULINSKY,K.PADMANABHAN	3/93
1PYD	PYRUVATE DECARBOXYLASE	W.FUREY,F.DYDA	3/93
1OPA	RETINOL BINDING PROTEIN II(APO,CELLULAR)	N.WINTER,L.BANASZAK	12/92
1OPB	RETINOL BINDING PROTEIN II(HOLO,CELLULAR)	N.WINTER,L.BANASZAK	12/92
2AAS	RIBONUCLEASE A	J.SANTORO,C.GONZALEZ,M.BRUIX,J.L.NEIRA, J.L.NIETO,J.HERRANZ,M.RICO	11/92
2AAU	RIBONUCLEASE A(NMR,16 STRUCTURES)	J.SANTORO,C.GONZALEZ,M.BRUIX,J.L.NEIRA, J.L.NIETO,J.HERRANZ,M.RICO	11/92
1FUS	RIBONUCLEASE F1	K.KATAYANAGI,D.G.VASSYLYEV,K.ISHIKAWA, K.MORIKAWA	1/93
1FUT	RIBONUCLEASE F1/GUANOSINE-2' MONOPHOSPHATE	K.KATAYANAGI,D.G.VASSYLYEV,K.ISHIKAWA, K.MORIKAWA	1/93
1RIL	RIBONUCLEASE H	K.ISHIKAWA,M.OKUMURA,K.KATAYANAGI,S.KIMURA, S.KANAYA,H.NAKAMURA,K.MORIKAWA	1/93
1D96	RNA(GCG)-D(TATACGC)	A.H.-J.WANG,S.FUJII,J.H.VAN BOOM, G.A.VAN DER MAREL,S.A.A.VAN BOECKEL,A.RICH	11/92
1ABG	SULFATE-BINDING PROTEIN/SULFATE	J.S.SACK,F.A.QUIOCHO	4/92
1SDA	SUPEROXIDE DISMUTASE(CU,ZN)NITRATED AT TYR 108	C.D.SMITH,M.CARSON,M.VAN DER WOERD, J.CHEN,H.ISCHIROPOULOS,J.S.BECKMAN	1/93
1MSD	SUPEROXIDE DISMUTASE(MANGANESE)	J.SUSSMAN	11/92
1THO	THIOREDOXIN MUTANT(33R34)	M.NIKKOLA,K.LANGSETMO,J.A.FUCHS,H.EKLUND	1/93
1HAT	ALPHA-THROMBIN/PEPTIDOMIMETIC INHIBITOR	T.-P.WU,A.TULINSKY	2/93
1TDM	THYMIDYLATE SYNTHASE/DEOXYURIDINE MONOPHOSPHATE	J.FINER-MOORE,R.STROUD	12/92
1TDA	THYMIDYLATE SYNTHASE MUTANT(V316 DELETE)	K.PERRY	2/93
2TDD	THYMIDYLATE SYNTHASE MUTANT(V316 DELETE) COMPLEX	K.PERRY	4/93
1TDB	THYMIDYLATE SYNTHASE MUTANT(V316 DELETE)/ FLUORO-2'-DEOXYURIDINE-5'-MONOPHOSPHATE	K.PERRY	2/93
1TDC	THYMIDYLATE SYNTHASE MUTANT(V316 DELETE)/ 2'-DEOXYURIDINE-5'MONOPHOSPHATE	K.PERRY	2/93
1TLM	TRANSTHYRETIN/MILRINONE	A.WOJTCZAK,J.LUFT,V.CODY	12/92
1TSI	TRIOSEPHOSPHATE ISOMERASE/N-HYDROXY-4- PHOSPHONO-BUTANAMIDE	C.L.M.J.VERLINDE	11/92
1CTA	TROPONIN C SITE III HOMODIMER	G.S.SHAW,B.D.SYKES	11/92
1SHP	TRYPSIN INHIBITOR(NMR,20 STRUCTURES)	W.ANTUCH,K.BERNDT,M.CHAVEZ,J.DELFIN, K.WUTHRICH	11/92
1TUN	TUMOR NECROSIS FACTOR-ALPHA MUTANT(A84V)	P.SALUDJIAN,T.PRANGE	12/92

Newly Deposited Entries (cont.)

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1TPL	TYROSINE PHENOL-LYASE	A.ANTSON,T.DEMIDKINA,Z.DAUTER, E.HARUTYUNYAN,K.WILSON	11/92
1TRO	TRP REPRESSOR/OPERATOR	Z.OTWINOWSKI,R.G.ZHANG,P.B.SIGLER	8/92
1CAS	PARVOVIRUS(CANINE) CAPSID(STRAIN D, VIRAL PROTEIN 2)	H.WU,M.G.ROSSMANN	1/93
1HLH	E46 PROTEIN PRODUCT OF THE E2A GENE (HELIX-LOOP-HELIX DOMAIN) MODEL	T.J.GIBSON,J.D.THOMPSON,R.A.ABAGYAN	12/92
NMR ENTRIES			
R1ITIMR	INTERLEUKIN 4(HUMAN)	G.M.CLORE,B.POWERS,D.S.GARRETT, A.M.GRONENBORN	4/93
STRUCTURE FACTOR ENTRIES			
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R1CTYSF	CYTOCHROME C(OXIDIZED) MUTANT(Y67F, C102T)	A.M.BERGHUIS,G.D.BRAYER	2/93
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R1EADSF	DIHYDROLIPOAMIDE ACETYLTRANSFERASE (CATALYTIC DOMAIN)/COA	A.MATTEVI,W.HOL	12/92
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R1EABSF	DIHYDROLIPOAMIDE ACETYLTRANSFERASE (CATALYTIC DOMAIN)/COA/LIPOAMIDE	A.MATTEVI,W.HOL	12/92
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R118DSF	DNA(GTGCGCAC)	C.BINGMAN,X.LI,M.SUNDARALINGAM	2/93
R2DESSF	DNA(CGTACG)/3'-DESAMINO-(2-METHOXY-4-MORPHOLINYL)-DOXORUBICIN	M.CIRILLI,F.BACHECHI,G.UGHETTO,F.P.COLONNA, M.L.CAPOBIANCO	3/93
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R1LZ6SF	LYSOZYME MUTANT(8 RESIDUE INSERT)	M.MATSUSHIMA,K.INAKA,T.YAMADA,K.SEKIGUCHI, M.KIKUCHI	2/93
R1RCMSF	LYSOZYME(HEN EGG WHITE,PARTIALLY REDUCED)	C.P.HILL,N.L.JOHNSTON,R.E.COHEN	1/93
R1MATSF	METHIONINE AMINOPEPTIDASE	S.RODERICK,B.MATTHEWS	12/92
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R1TDMSF	THYMIDYLATE SYNTHASE/DEOXYURIDINE MONOPHOSPHATE	J.FINER-MOORE,R.STROUD	12/92
R3TGLSF	TRIACYLGLYCEROL ACYLHYDROLASE	L.BRADY,A.M.BRZOZOWSKI.Z.S.DEREWENDA, E.J.DODSON,G.G.DODSON,S.P.TOLLEY, J.P.TURKENBURG,L.CHRISTIANSEN, H.HUGE-JENSEN,L.NORSKOV,L.THIM	7/91
R4TGLSF	TRIACYLGLYCEROL ACYLHYDROLASE/ DIETHYLPHOSPHATE	U.DEREWENDA,A.M.BRZOZOWSKI,D.LAWSON, Z.S.DEREWENDA	7/91

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Statement of Support

The PDB is supported by a combination of Federal Government Agency funds (work supported by the U.S. National Science Foundation; the U.S. Public Health Service, National Institutes of Health, National Center for Research Resources, National Institute of General Medical Sciences, and National Library of Medicine; and the U.S. Department of Energy under contract DE-AC02-76CH00016) and user fees.

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