

THE PROTEIN DATA BANK

NEWSLETTER

Number 12

April 1980

The Protein Data Bank is pleased that data continue to arrive steadily and we wish to thank all our depositors for their cooperation. We now have 145 entries available or in preparation, of which about 30 are replacement entries for older data. However, over the past few years we have found that there are generally about 60 structures, described in publications, which we have not yet received. Although our percentage of coverage is thus increasing, we very much hope that many of these structures will be deposited and made available to the community.

As a result of expansion in our holdings, we are rapidly approaching the point where it will no longer be possible to fit all our programs and coordinate data entries on one 2400' magnetic tape at 800 cpi. Under our present charging scheme we will have to charge double for preparation of two tapes and so we want to encourage users to request tapes at 1600 cpi. Schemes for subdividing our holdings or changing our charging algorithm are being considered, and we would appreciate user input on this matter. We are especially concerned with hearing from users who cannot process tapes at 1600 cpi. (see form below).

Recently, an inquiry has been received from a user about the possibility of purchasing our mailing list for purposes of a promotion. There are close to 1000 names (400 outside the United States) and we would prepare a set of mailing labels for a fee. We do not anticipate great demand for this service and are only considering sale of the list for "relevant" purposes. However, we would like to hear from anyone who has strong objections to the release of address information (see form below).

Name: _____ Telephone: _____
Address: _____

1. I cannot read 1600 cpi tapes.
Suggestions:

2. I object to the Protein Data Bank releasing address information.
Comments:

Please return to: Ms. Frances C. Bernstein
Brookhaven National Laboratory
Department of Chemistry
Upton, New York 11973

<u>Area</u>	<u>Address of Center</u>	<u>Name</u>	
The Americas	Protein Data Bank Chemistry Department Brookhaven National Laboratory Upton, New York 11973 USA	E. Abola F. C. Bernstein T. F. Koetzle	516-345-4383 516-345-4382 516-345-4384
Europe and Worldwide	University Chemical Laboratory Lensfield Road Cambridge CB2 1EW, England	O. Kennard S. Bellard	0223-66499
Australia	CSIRO Div. of Chemical Physics P. O. Box 160 Clayton, Victoria 31368 Australia	B. J. Poppleton	
Japan	Institute for Protein Research Osaka University 5311, Yamada-Kami, Suita Osaka, Japan	M. Kakudo	(06) 877-5111 ext. 3836

TABLE 1. PROTEIN DATA BANK, INFORMATION AVAILABLE ON MAGNETIC TAPE

CODE	ITEM	17-APR-80
DATAPRTP	ALL CURRENT COORDINATE ENTRIES AND PROGRAMS (TABLES 3,4)	
NONSTDF	ALL STRUCTURE FACTOR HOLDINGS (TABLE 5)	
BENDERTP	PARAMETERS FOR BENT-WIRE MODELS	
CONNECTP	CONNECTIVITY SPECIFICATIONS FOR ALL ATOMS	
DGPLOTP	DIAGONAL PLOTS (LINE PRINTER)	
DIHDLRTP	*COMPLETE TORSION ANGLES	
DSTNCETP	CONNECTIVITY SPECIFICATIONS WITH DISTANCES	
FISIPLTP	PHI/PSI PLOTS (LINE PRINTER)	
PHIPSITP	LISTS OF PHI/PSI/OMEGA VALUES	
* NEW OR REPLACEMENT ENTRY SINCE JAN-80 NEWSLETTER		
ITEM DSTNCETP REQUIRES TWO TAPES AT 800CPI, OTHER ITEMS COMPRISE ONE TAPE EACH		

TABLE 2. PROTEIN DATA BANK, INFORMATION AVAILABLE ON MICROFICHE

CODE	ITEM	NO. OF FICHE	PRICE	17-APR-80
DATAPRFI	ALL CURRENT COORDINATE ENTRIES AND PROGRAMS (TABLES 3,4)	14	\$83.82	
NONSTDFI	ALL STRUCTURE FACTOR HOLDINGS (TABLE 5)	12	\$80.96	
CORROSF	LIST OF CORRECTIONS NO. 5 (AUG/79-JAN/80)	1	FREE	
BENDERFI	PARAMETERS FOR BENT-WIRE MODELS	2	\$66.66	
CONNECTFI	CONNECTIVITY SPECIFICATIONS FOR ALL ATOMS	12	\$80.96	
DGPIOTFI	DIAGONAL PLOTS (LINE PRINTER)	5	\$70.95	
DIHDLRFI	*COMPLETE TORSION ANGLES	7	\$73.81	
DSTNCFI	CONNECTIVITY SPECIFICATIONS WITH DISTANCES	24	\$98.12	
FISIFLFI	PHI/PSI PLOTS (LINE PRINTER)	1	\$65.23	
PHIPSIFI	LISTS OF PHI/PSI/OMEGA VALUES	5	\$70.95	
* NEW OR REPLACEMENT ENTRY SINCE JAN-80 NEWSLETTER				

PRICES QUOTED ARE IN U.S. DOLLARS FOR DISTRIBUTIONS FROM BROOKHAVEN. REQUESTORS FROM OTHER CENTERS SHOULD INQUIRE FOR AVAILABILITY AND PRICES.

TABLE 4. PROTEIN DATA BANK, AVAILABLE PROGRAMS

NAME	PURPOSE	AUTHOR(S)	REV DATE/ SUPPORTED	17-APR-80
BENDER	PARAMETERS FOR BENT-WIRE MODELS	G.WILLIAMS	1/79 YES	
CHIRAL	*CHECK CHIRALITY	E.ABOLA	3/80 YES	
CONNECT	GENERATE FULL CONNECTIVITY	F.BERNSTEIN	4/79 YES	
CONTC	INTERMOLECULAR CONTACTS	L.ANDREWS	10/79 NO	
DGPIOT	DIAGONAL PLOTS ON PRINTER	E.SWANSON,F.BERNSTEIN	3/79 YES	
DIHDLR	*COMPLETE TORSION ANGLES	E.ABOLA	3/80 YES	
DSTNCE	CALC DISTANCES FROM CONECT RECORDS	F.BERNSTEIN	3/79 YES	
FISIFL	PHI/PSI PLOTS ON PRINTER	F.BERNSTEIN	5/79 YES	
NAMOD	BALL-AND-STICK MODEL DISPLAY	Y.BEPPU	11/78 NO	
PHI/PSI	MAIN-CHAIN TORSION ANGLES	ANDREWS,WILLIAMS,BERNSTEIN	2/79 YES	
STEREO	EXTRACT X,Y,Z FROM STEREO DIAGRAMS	M.ROSSMANN	6/79 NO	
TAPDIR	PRINT DIRECTORY OF TAPE CONTENTS	H.BERNSTEIN,F.BERNSTEIN	12/79 YES	
TORSRU	COMPLETE TORSION ANGLES	G.REEKE	10/79 NO	
TOTALS	VALIDATION OF MASTER RECORD	L.ANDREWS,F.BERNSTEIN	5/78 YES	
* NEW OR REPLACEMENT ENTRY SINCE JAN-80 NEWSLETTER				

SUPPORTED PROGRAMS ARE THOSE FOR WHICH STAFF OF THE PROTEIN DATA BANK WILL PROVIDE CORRECTIONS FOR DEMONSTRATED ERRORS.

TABLE 5. PROTEIN DATA BANK, STRUCTURE FACTOR HOLDINGS

IDENT CODE	MOLECULE	DEPOSITOR	DATE/ CODE	17-APR-80
RIACTSF	ACTINIDIN	E.BAKER	7/77 SF	
CHYMOF	ALPHA-CHYMOTRYPSIN (TOSYL)	D.BLOW	4/73 SF	
RCARP04	CALCIUM-BINDING PARVALBUMIN	R.KRETSINGER	2/74 SF	
RCARP05	CALCIUM-BINDING PARVALBUMIN	R.KRETSINGER	2/74 SF	
R2B5CSF	CYTOCHROME B5	F.S.MATHEWS	12/77 SF	
RTUNOX201	CYTOCHROME C (ALBACORE, OXIDIZED)	R.DICKERSON	5/76 SF	
RTUNRD201	CYTOCHROME C (ALBACORE, REDUCED)	R.DICKERSON	5/76 SF	
RCYC5501	CYTOCHROME C550	R.TIMKOVICH	4/76 SF	
R151CSF	CYTOCHROME C551	R.DICKERSON	8/78 SF	
RGR004	GLYCERALDEHYDE-3-P-DEHYDROGENASE (LOBSTR)	M.ROSSMANN	8/75 SF	
R2GDSF	APO-GLYCERALDEHYDE-3-P-DEHYDROGENASE	M.ROSSMANN	12/79 SF	
RHUMDEH02	HEMOGLOBIN (HUMAN, DEOXY)	M.PERUTZ,G.FERRI	5/75 SF	
LAMPRY1	HEMOGLOBIN (LAMPREY)	HENDRICKSON,LOVE,KARLE	5/73 SF	
RLDH06	LACTATE DEHYDROGENASE	M.ROSSMANN	8/75 SF	
RLDH07	LACTATE DEHYDROGENASE/NAD/PYRUVATE	M.ROSSMANN	8/75 SF	
RMETMYSF1	MYOGLOBIN (SPERM WHALE, MET)	T.TAKANO	6/76 SF	
RDEMYSF1	MYOGLOBIN (SPERM WHALE, DEOXY)	T.TAKANO	6/76 SF	
RUBRY02	RUBREDOXIN	L.JENSEN	3/74 SF	
* NEW OR REPLACEMENT ENTRY SINCE JAN-80 NEWSLETTER				

CODES

SF STRUCTURE FACTORS

TABLE 3. PROTEIN DATA BANK, ATOMIC COORDINATE HOLDINGS

IDENT CODE	MOLECULE	DEPOSITOR(S)	DATE/STATUS		
1APE	ACID PROTEINASE (ENDOTHIA PARASITICA)	T. BLUNDELL	10/79	4LDH	LACTATE DEHYDROGENASE
1APP	ACID PROTEINASE (PENICILLIUM JANTHINELLUM)	M. JAMES, I. HSU	12/79	3LDH	LACTATE DEHYDROGENASE/NAD/PYRUVATE
1APR	ACID PROTEINASE (RHIZOPUS CHINENSIS)	D. DAVIES	8/79	1LDX	LACTATE DEHYDROGENASE (MOUSE TESTES)
2ACT	ACTININ	E. BAKER	11/79 R	1HBL	LEGHEMOGLOBIN
2ADK	ADENYLATE KINASE (PORCINE MUSCLE)	G. SCHULZ	3/77 R	1LZM	LYSOZYME (BACTERIOPHAGE T4)
1AGA	AGAROSE	S. ARNOTT	5/78	1LYZ	LYSOZYME (HEN EGG-WHITE, SET W2)
1MGA	AGGLUTININ (WHEAT GERM)	C. WRIGHT	2/78 A	2LYZ	LYSOZYME (HEN EGG-WHITE, SET RS5D)
1ADH	ALCOHOL DEHYDROGENASE (ADP-RIB)	C. -I. BRANDEN	8/76	3LYZ	LYSOZYME (HEN EGG-WHITE, SET RS6A)
4ADH	ALCOHOL DEHYDROGENASE (ORTHOPHEN)	C. -I. BRANDEN	8/76	4LYZ	LYSOZYME (HEN EGG-WHITE, SET RS9A)
1ALP	ALPHA LYTIC PROTEASE	C. -I. BRANDEN	8/79	5LYZ	LYSOZYME (HEN EGG-WHITE, SET RS12A)
1ATC	ASPARTATE CARBAMOYLTRANSFERASE	BRAYER, DELBAERE, JAMES	6/79	6LYZ	LYSOZYME (HEN EGG-WHITE, SET RS16)
2BCL	BACTERIOCHLOROPHYLL A-PROTEIN	CRAWFORD, MONACO, LIPSCOMB	8/79 A	7LYZ	LYSOZYME (HEN EGG-WHITE, TRICLINIC)
1ABX	*ALPHA-BUNGAROTOXIN	B. MATTHEWS	1/79 RA	8LYZ	LYSOZYME (HEN EGG-WHITE, INACTIVATED)
1CPV	CALCIUM-BINDING PARVALBUMIN SET 5A	D. AGARD, S. SPENCER, R. STROUD	4/80 AN	9LYZ	LYSOZYME (HEN, NAM-NAG-NAM SUBSTRATE ONLY)
2CPV	CALCIUM-BINDING PARVALBUMIN SET 5B	R. KRETSINGER	8/74	1MDH	MALATE DEHYDROGENASE
3CPV	CALCIUM-BINDING PARVALBUMIN SET 5I	R. KRETSINGER	8/74	1MLP	MUREIN LIPOPROTEIN (HYPOTHETICAL)
1CAP	CAPSULAR POLYSACCHARIDE (E. COLI M41)	S. ARNOTT	5/78	1MBN	MYOGLOBIN (SPERM WHALE, MET)
1CAB	CARBONIC ANHYDRASE B (HUMAN)	K. KANNAN	6/76	2MBN	MYOGLOBIN (SPERM WHALE, MET)
1CAC	CARBONIC ANHYDRASE C (HUMAN)	K. KANNAN	5/76	3MBN	MYOGLOBIN (SPERM WHALE, DEOXY)
1CPA	CARBOXYPEPTIDASE A (BOVINE)	W. LIPSCOMB	2/73	1MBS	MYOGLOBIN (SEAL, MET)
1CPB	CARBOXYPEPTIDASE B (BOVINE)	H. SCHMID, J. HERRIOTT	9/76 A	1MHR	MYOHEMERITRIN
1CAR	CARRAGEENAN	S. ARNOTT	5/78	6PAP	PAPAIN (NATIVE)
1C4S	CHONDROITIN-4-SULFATE	S. ARNOTT	5/78	1PAD	PAPAIN (ACE-ALA-ALA-PHE-ALA, CYS-25)
2C4S	CHONDROITIN-4-SULFATE (CA SALT)	S. ARNOTT	5/78	2PAD	PAPAIN (CYS DERIV OF CYS-25)
2CHA	ALPHA-CHYMOTRYPSIN (TOSYL)	S. ARNOTT	5/78	3PAD	PAPAIN (OXIDIZED CYS-25)
3CHA	ALPHA-CHYMOTRYPSIN	D. BLOW	1/75 R	4PAD	PAPAIN (TOS-LYS, CYS-25)
1GCH	GAMMA-CHYMOTRYPSIN	A. TULINSKY	8/76	5PAD	PAPAIN (BZOXY-GLY-PHE-GLY, CYS-25)
1CHG	CHYMOTRYPSINOGEN	COHEN, DAVIES, SILVERTON	2/77	6PAD	PAPAIN (BZOXY-PHE-ALA, CYS-25)
2CNA	CONCANAVALIN A	J. KRAUT, J. BIRKTOFT	3/75	1PEP	PEPSIN (PORCINE)
3CNA	CONCANAVALIN A	G. REEKE, J. BECKER, G. EDELMAN	4/75	1PGK	PHOSPHOGLYCERATE KINASE (YEAST)
2B5C	CYTOCHROME B5 (OXIDIZED)	K. HARDMAN	9/76 R	2PGK	PHOSPHOGLYCERATE KINASE (HORSE)
1S6B	CYTOCHROME B562 (E. COLI, OXIDIZED)	F. S. MATHEWS	12/77 R	1PGM	PHOSPHOGLYCERATE MUTASE
1CYT	CYTOCHROME C (ALBACORE, OXIDIZED)	BETHGE, CZERWINSKI, MATHEWS	8/79	2PAB	PREALBUMIN (HUMAN, PLASMA)
2CYT	CYTOCHROME C (ALBACORE, REDUCED)	R. DICKERSON	9/76	1PYK	PYRUVATE KINASE (CAT)
1CYC	CYTOCHROME C (BONITO, HEART)	R. DICKERSON	9/76	1RLX	RELAXIN(MODEL, CONFORMATION A, UNREFINED)
1C2C	CYTOCHROME C2	M. KAKUDO	8/76	2RLX	RELAXIN(MODEL, CONFORMATION B, UNREFINED)
1S5C	CYTOCHROME C550	J. KRAUT	3/73	3RLX	RELAXIN(MODEL, CONFORMATION A, REFINED)
2S1C	CYTOCHROME C551	R. TIKOVICH	8/76	4RLX	RELAXIN(MODEL, CONFORMATION B, REFINED)
1DFR	*DIHYDROFOLATE REDUCTASE (L. CASEI)	R. DICKERSON	8/78 R	1RHD	RHODANSE
2DFR	*DIHYDROFOLATE REDUCTASE (E. COLI)	J. BOLIN, D. MATTHEWS, J. KRAUT	3/80 P	2RSA	RIBONUCLEASE A
1EST	ELASTASE (PORCINE, TOSYL)	J. BOLIN, D. MATTHEWS, J. KRAUT	3/80 P	1RNS	RIBONUCLEASE S
1EBX	*ERABUTOXIN B	H. WATSON	5/76	2RXN	RUBREDOXIN
1ECD	ERYTHROCUORIN (REDUCED, DEOXY)	B. LOW	7/79 N	1SNS	STAPHYLOCOCCAL NUCLEASE
1ECO	ERYTHROCUORIN (CARBONMONOXY)	W. STEIGEMANN, E. WEBER	3/79	1SOA	STREPTOMYCES GRISEUS PROTEINASE A
1ECA	ERYTHROCUORIN (AQUO, MET)	W. STEIGEMANN, E. WEBER	3/79	2SGB	STREPTOMYCES GRISEUS PROTEINASE B
1ECN	ERYTHROCUORIN (CYANO, MET)	W. STEIGEMANN, E. WEBER	3/79	2SS1	*SUBTILISIN INHIBITOR (STREPTOMYCES)
1FXC	FERREDOXIN (PEPTOCOCCUS AEROGENES)	E. ADMAN, L. SIEKER, L. JENSEN	8/76	1S8T	SUBTILISIN BPN
3FXN	FLAVODOXIN (CLOSTRIDIUM MP, OXIDIZED)	M. KAKUDO	8/79	2S8T	SUBTILISIN NOVO
4FXN	FLAVODOXIN (CLOSTRIDIUM MP, SEMIQUINONE)	M. LUDWIG	12/77 R	2S0D	*SUPEROXIDE DISMUTASE
1GCN	GLUCAGON	M. LUDWIG	12/77 R	1TLN	THERMOLYSIN (UNREFINED)
1PGI	GLUCOSE-6-PHOSPHATE ISOMERASE	T. BLUNDELL	10/77	2TLN	THERMOLYSIN (REFINED)
1PGD	GLYCERALDEHYDE-3-P-DEHYDROGENASE (LOBSTRIN)	H. MUIRHEAD	7/77	1SRX	THIOREDOXIN (E. COLI, OXIDIZED)
2PGD	APD-GLYCERALDEHYDE-3-P-DEHYDROGENASE	M. ROSSMANN	12/79	4TNA	TRANSFER RNA (YEAST, PHE)
1HRB	HEMERYTHRIN B	W. HENDRICKSON	6/76 A	6TNA	TRANSFER RNA (YEAST, PHE)
1HMN	HEMERYTHRIN (MET, AQUO)	R. STENKAMP ET AL.	1/79 A	8TNA	TRANSFER RNA (YEAST, PHE)
1HDS	HEMOGLOBIN (DEER, SICKLE CELL)	E. AMMA, R. GIRLING	10/79	1TIM	TRIOSE PHOSPHATE ISOMERASE
2HBH	HEMOGLOBIN (HORSE, AQUO MET)	R. LADNER, H. EIDNER, PERUTZ	2/77 R	1PTN	TRYPSIN (NATIVE, PHB)
2DHB	HEMOGLOBIN (HORSE, DEOXY)	M. PERUTZ, G. FERMI	11/73	2PTB	TRYPSIN(BENZAMIDINE INHIBITED, PH7)
1HHB	HEMOGLOBIN (HUMAN, DEOXY)	M. PERUTZ, G. FERMI	4/75	1PTC	TRYPSIN/TRYPsin INHIBITOR COMPLEX
1HCO	HEMOGLOBIN (HUMAN, CARBONMONOXY)	J. BALDWIN	8/79	3PTI	TRYPSIN/TRYPsin INHIBITOR (BOVINE, PANCREAS)
2HCO	HEMOGLOBIN (HUMAN, CARBONMONOXY, NRG REFND)	J. BALDWIN	8/76	3PTP	TRYPSIN (DIP INHIBITED)
1FDH	HEMOGLOBIN (HUMAN, FETAL, DEOXY)	J. FRIER	3/73	1ITGP	TRYPSINOGEN/TRYPsin INHIBITOR
1LHB	HEMOGLOBIN (LAMPREY)	HENDRICKSON, LOVE, KARLE	3/73	1TP1	TRYPSINOGEN/TRYPsin INHIBITOR/ILE-VAL
2VHK	HEXOKINASE (YEAST) FORM B111	STEITZ, ANDERSON, STENKAMP	3/78 R	1TGA	TRYPSINOGEN (MG50A, WITHOUT CA)
1HIP	HIGH POTENTIAL IRON PROTEIN	J. KRAUT	4/75	1TGB	TRYPSINOGEN (WITH CA, FROM PEG)
1HYA	HYALURONIC ACID (NA SALT, 3-FOLD HELIX)	S. ARNOTT	11/77	1TGN	TRYPSINOGEN
2HYA	HYALURONIC ACID (NA SALT, 4-FOLD HELIX)	S. ARNOTT	5/78	1SBV	VIRUS COAT PROTEIN(SOUTHERN BEAN MOSAIC)
3HYA	HYALURONIC ACID (NA SALT, 2-FOLD HELIX)	S. ARNOTT	5/78		
4HYA	HYALURONIC ACID (CA SALT, 3-FOLD HELIX)	S. ARNOTT	5/78		
2FAB	IMMUNOGLOBULIN FAB*	J. POLJAK	6/79		
1MCG	IMMUNOGLOBULIN B-INTACT MCG	SCHIFFER, EDMUNDSON ET AL.	5/78		
1REI	IMMUNOGLOBULIN B-J FRAGMENT(V-DIMER)REI	O. EPP, R. HUBER	3/76		
1RHE	IMMUNOGLOBULIN B-J FRAGMENT(V-MNMR)RHE	B. HANG, C. YOO, M. SAX	12/77 A		
1KGA	KDGP ALDOLASE	A. TULINSKY	8/78 A		
1KES	KERATAN SULFATE	S. ARNOTT	5/78		

* NEW OR REPLACEMENT ENTRY SINCE JAN-80 NEWSLETTER

STATUS CODES

BLANK	STANDARD ENTRY AVAILABLE FOR DISTRIBUTION
A	ALPHA CARBON ATOMS ONLY
B	BACKBONE ONLY
N	NEW ENTRY AWAITING APPROVAL BY DEPOSITOR
P	IN PREPARATION
R	REPLACES AN OUT-OF-DATE PARAMETER SET

REQUEST FORM

1. Name _____ Date _____
 Address _____

2. Send the following information (please check):
- () description of atomic coordinate entries (no charge)
- () the magnetic tape items listed below (from Table 1)
- _____
- (Item "DATAPRTP" comprises all atomic coordinate sets and programs)
- () the microfiche items listed below (from Table 2)
- _____
3. Tape: I am sending a new 2400 foot reel of magnetic tape () yes () no.
4. Tape format desired:
- () 7 track () 556 cpi () BCD-7 track only () Unlabelled
 (preferred)
- () 9 track () 800 cpi () ASCII-9 track only () Labelled, -
 User's label
- () 1600 cpi () EBCDIC-9 track only _____
 Retained

NOTE: All current coordinate entries and programs can be written to one 2400' reel of magnetic tape for one unit charge (see over) if some space economies are achieved by blocking the records. Please indicate here the maximum block size permitted if this is less than 5120 characters (bytes)

_____.

(Please complete reverse side)

REQUEST FORM

5. Charges

(i) For requests to Brookhaven

- A. Data preparation (\$63.80 charge per magnetic tape) \$ _____
- B. Magnetic Tape (charge per tape) \$ 8.85 \$ _____
(please include if answer to 3 above was NO)
- C. Postage (per magnetic tape) \$ _____
U.S. and Canada \$ 2.00 () \$ _____
Air Mail to Other Countries \$17.00 ()
- D. Microfiche items (Price from Table 2) \$ _____
- E. Total Charge \$ _____
- F. Payment to the order of Brookhaven National Laboratory
by () check is () enclosed
() purchase order number _____ () sent separately
to the Protein
Data Bank

Brookhaven requires that either a check or actual purchase order be received before data are shipped. Inclusion of check with order will expedite processing.

(ii) For requests to Cambridge

- A. Data preparation and postage (per user-supplied tape) _____
Within United Kingdom £ 27.50 ()
Elsewhere £ 35.00 ()
- B. Magnetic tape £ 8.00 ()
(please check if NO was checked on 3 above) _____
- C. Microfiche (please inquire for prices) _____
- D. Total Charge _____

Please return to

Ms. F. C. Bernstein
Chemistry Department
Brookhaven National Laboratory
Upton, NY 11973 USA

or

Dr. S. Bellard
University Chemical Laboratory
Lensfield Rd.
Cambridge CB2 1EW, England

It is expected that the Protein Data Bank be acknowledged in publications which result from work making use of the Bank's services. In citing the Protein Data Bank in print, we suggest that a reference be included to F. C. Bernstein, T. F. Koetzle, G. J. B. Williams, E. F. Meyer, Jr., M. D. Brice, J. R. Rodgers, O. Kennard, T. Shimanouchi, and M. Tasumi, J. Mol. Biol. 112, 535-42 (1977).

We would appreciate receiving reprints.