

Anomalous diffraction in crystallographic phase evaluation

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Supplemental Table 1**Chronicle of MS-Rated MAD Phased Structures through 2001**(Published results meeting *Macromolecular Structures* criteria)

1988				
Basic blue protein	Guss ... Freeman	Cu	SSRL I-5	<i>Science</i>
1989				
Streptavidin	Hendrickson ... Phizackerley	Se	PF 14A	<i>PNAS</i>
1990				
Interleukin 1- α	Graves ... Satow	Se	PF 14A	<i>Biochemistry</i>
Ribonuclease H	Yang ... Satow	Se	PF 14A	<i>Science</i>
Cytochrome c 553	Nakagawa ... Yagi	Fe	PF 6A2	<i>J. Biochem.</i>
CD4	Ryu ... Hendrickson	Pt	Rot. anode	<i>Nature</i>
1991				
Mannose binding prot.	Weis ... Hendrickson	Ho	LURE D23	<i>Science</i>
1992				
Urechis Hb	Kolatkhar ... Hackert	Fe	SSRL I-5	<i>Acta Cryst. B</i>
Tenascin (FNIII)	Leahy ... Erickson	Se	CHESS F1	<i>Science</i>
1993				
DsbA	Martin ... Kuriyan	Se	NSLS X4A	<i>Nature</i>
Histone H5	Ramakrishnan ... Sweet	Se	NSLS X12C	<i>Science</i>
1994				
hCG	Wu ... Hendrickson	Se	NSLS X4A	<i>Structure</i>
PCNA	Krishna ... Kuriyan	Hg	NSLS X4A	<i>Cell</i>
IR kinase	Hubbard ... Hendrickson	Hg	NSLS X4A	<i>Nature</i>
HIV integrase	Dyda ... Davies	Se	NSLS X4A	<i>Science</i>
Gene V ssb protein	Skinner ... Terwilliger	Se	SSRL I-5	<i>PNAS</i>
BamH1	Newman ... Aggarwal	Se	CHESS F2	<i>Nature</i>
Gln PRPP amidotrans.	Smith ... Satow	Fe	PF 14A	<i>Science</i>
OppA	Tame ... Wilkinson	U	SRS 9.5	<i>Science</i>

1995

GreA	Stebbins ... Darst	Hg	NSLS X4A	<i>Nature</i>
N-Cadherin	Shapiro ... Hendrickson	U	NSLS X4A	<i>Nature</i>
Moloney RT	Georgiadis ... Hendrickson	Hg	NSLS X4A	<i>Structure</i>
CNTF	McDonald ... Hendrickson	Yb	NSLS X4A	<i>EMBO J.</i>
PKC Cys2	Zhang ... Hurley	Zn	NSLS X4A	<i>Cell</i>
MurB	Benson ... Hogle	Hg	NSLS X4A	<i>Nat. Str. Biol.</i>
Ser/Thr phosphatase	Goldberg ... Kuriyan	Hg	NSLS X4A	<i>Nature</i>
Integrin CD11a	Qu ... Leahy	Se	NSLS X4A	<i>PNAS</i>
Sonic hedgehog, N	Tanaka Hall ... Leahy	Se	NSLS X4A	<i>Nature</i>
BCCP	Athappilly & Hendrickson	Se	NSLS X4A	<i>Structure</i>
NFkB : DNA	Muller ... Harrison	Se	NSLS X25	<i>Nature</i>
CD11b I-domain	Lee ... Liddington	Se	NSLS X12C	<i>Cell</i>
N-cadherin, D1	Shapiro ... Hendrickson	Yb	ESRF ID10	<i>Nature</i>
Lac repressor core	Friedman ... Steitz	Hg	CHESS F2	<i>Science</i>
T4 ssb protein : DNA	Shamoo ... Steitz	Se	CHESS F2	<i>Nature</i>
IF3, C	Biou ... Ramakrishnan	Se	NSLS X12C	<i>EMBO J.</i>
Sulfite reductase	Crane ... Getzoff	Fe	SSRL I-5	<i>Science</i>
ASV integrase	Bujacz ... Skalka	Se	CHESS F2	<i>J. Mol. Biol.</i>
Prot. phosphatase 1	Egloff ... Barford	W	DESY BW6	<i>J. Mol. Biol.</i>

1996

Fibronectin, FnIII 7-10	Leahy ... Erickson	Se	NSLS X4A	<i>Cell</i>
Gβγ heterodimer	Sondek ... Sigler	Gd	NSLS X4A	<i>Nature</i>
TAFII42 : TAFII62	Xie ... Burley	Se	NSLS X4A	<i>Nature</i>
UmuD'	Peat ... Hendrickson	Se	NSLS X4A	<i>Nature</i>
TBP : TFIIA : DNA	Geiger ... Sigler	Se,Br	NSLS X4A	<i>Science</i>
HIV Nef : SH3	Lee ... Kuriyan	Pb	NSLS X4A	<i>Cell</i>
Bisphosphatase	Lee ... Pilkis	Se	NSLS X4A	<i>Biochemistry</i>
DnaK : peptide	Zhu ... Hendrickson	Se	NSLS X4A	<i>Science</i>
Metal-free CD11a	Qu ... Leahy	Se	NSLS X4A	<i>Structure</i>
AlkA	Labahn ... Ellenberger	Se	NSLS X4A	<i>Cell</i>
hCMV protease	Tong et al.	Se	NSLS X4A	<i>Nature</i>
RNA pol σ70	Malhotra ... Darst	Se	NSLS X4A	<i>Cell</i>
Intron P4-P6	Cate ... Doudna	Os	NSLS X4A	<i>Science</i>
Myelin P ₀	Shapiro ... Hendrickson	Hg	NSLS X4A	<i>Neuron</i>

GFP	Yang ... Phillips	Se	NSLS X4A	<i>Nature Biotech.</i>
Phosducin : Gβγ	Gaudet ... Sigler	Se,Gd	NSLS X4A	<i>Cell</i>
Lck Kinase	Yamaguchi & Hendrickson	Pt	NSLS X4A	<i>Nature</i>
Ribosomal L14	Davies ... Ramakrishnan	Se	NSLS X12C	<i>Structure</i>
<i>Arabidopsis</i> GST	Reinemer ... Bieseler	Se	DESY BW6	<i>J. Mol. Biol.</i>
GMP synthetase	Tesmer ... Smith	Se	PF 6A2	<i>Nat. Str. Biol.</i>
Me mal CoA mutase	Mancia ... Evans	Pt	SRS 9.5	<i>Structure</i>
MIF	Suzuki ... Sakai	Se	PF 18B	<i>Nat. Str. Biol.</i>
E-cadherin D1D2	Nagar ... Rini	Hg	CHESS F2	<i>Nature</i>
Cyt bc ₁ Rieske	Iwata ... Michel	Fe	PF 18B	<i>Structure</i>
Metallo β-lactamase	Concha ... Herzberg	Zn	NSLS X12C	<i>Structure</i>
T5 5'-exonuclease	Ceska ... Suck	Se	ESRF BM14	<i>Nature</i>
Rustacyanin	Walter ... Shoham	Cu	CHESS F2	<i>J. Mol. Biol.</i>
FBP-aldolase	Cooper ... Hunter	Se	ESRF BM14	<i>Structure</i>
Cryptogein	Boissy ... Brunie	Pt	ESRF BM2	<i>Structure</i>

1997

OmpR, C	Martinez-Hackert & Stock	Se	NSLS X4A	<i>Structure</i>
Hck	Sicheri ... Kuriyan	Hg	NSLS X4A	<i>Nature</i>
Formate dehydrogenase	Boyington ... Sun	Au	NSLS X4A	<i>Science</i>
HIV gp41 core	Chan ... Kim	Os	NSLS X4A	<i>Cell</i>
p38 MAP kinase	Tong ... Pargellis	Se	NSLS X4A	<i>Nat. Str. Biol.</i>
PI-SceI endonuclease	Duan ... Quijoch	Se	NSLS X4A	<i>Cell</i>
SSB _C	Raghunathan ... Waksman	Se	NSLS X4A	<i>PNAS</i>
Ral GDS	Huang ... Kim	Se	NSLS X4A	<i>Nat. Str. Biol.</i>
Cre : lox DNA	Guo, Gopaul & Van Duyne	Se	NSLS X4A	<i>Nature</i>
Hedgehog, C	Hall ... Leahy	Se	NSLS X4A	<i>Cell</i>
5S RNA fragment	Correll ... Steitz	Br	NSLS X4A	<i>Cell</i>
PGA monooxygenase	Prigge ... Amzel	Cu	NSLS X4A	<i>Science</i>
OmpR, C	Kondo ... Tanaka	Se	PF 18B	<i>Nat. Str. Biol.</i>
p50rhoGAP	Barrett ... Eccleston	Se	DESY X31	<i>Nature</i>
Profilin	Thorn ... Schutt	Se	NSLS X12C	<i>Structure</i>
Pit-1	Jacobson ... Aggarwal	Br	CHESS F2	<i>Genes & Dev.</i>
Mbp1, N	Xu ... Cheng	Se	NSLS X12C	<i>Structure</i>
HP1 integrase, C	Hickman ... Dyda	Sm	CHESS F2	<i>Cell</i>
Aminoglycoside kinase	Hon ... Berghuis	Se	NSLS X12C	<i>Cell</i>

mRNA 5' cap b.p.	Marcotrigiano ... Burley	Se	CHESS F2	<i>Cell</i>
FHIT	Lima ... Hendrickson	Se	APS 19-ID	<i>Structure</i>
MurD	Bertrand ... Dideberg	Se	ESRF BM2	<i>EMBO J.</i>
Cyt c552	Than ... Soulimane	Fe	DESY BW6	<i>J. Mol. Biol.</i>
Stromelysin : TIMP	Gomis-Ruth ... Bode	Se,Zn	DESY BW6	<i>Nature</i>
NK inhib. receptor	Fan ... Wiley	Se	NSLS X25	<i>Nature</i>
β -Catenin	Huber, Nelson & Weis	Se	SSRL I-5	<i>Cell</i>
vWF, A3	Huizinga ... Gros	Se	DESY X31	<i>Structure</i>
Ribosomal S7	Wimberly ... Ramakrishnan	Hg	NSLS X12C	<i>Structure</i>
Ribosomal S7	Hosaka ... Wakatsuki	Se	ESRF BM14	<i>Structure</i>
Desulfoferrodoxin	Coelho ... Carrondo	Fe?	ESRF BM14	<i>JBIC</i>
Mbp1, N	Taylor ... Smerdon	Se	ELETTRA	<i>J. Mol. Biol.</i>
NO reductase	Park ... Shiro	Fe	PF 18B	<i>Nat. Str. Biol.</i>
HIV CA, C	Gamble ... Hill	Se	NSLS X12C	<i>Science</i>
ALA dehydratase	Erskine ... Cooper	Se	ESRF BM14	<i>Nat. Str. Biol.</i>
Split Soret Cyt c	Matias ... Carrondo	Fe	ESRF BM14	<i>JBIC</i>
X11 PTB : amyloid	Zhang ... Kuriyan	Se	NSLS X25	<i>EMBO J.</i>
Rieske protein	Carrell ... Smith	Se	ESRF BM14	<i>Structure</i>
RAG1, dimer. domain	Bellon ... Steitz	Zn	CHESS F2	<i>Nat. Str. Biol.</i>
Ubiquitin Ct hydrolase	Johnston ... Hill	Se	SSRL I-5	<i>EMBO J.</i>
Calpain, Ca ²⁺ domain	Blanchard ... Cygler	Se	NSLS X12C	<i>Nat. Str. Biol.</i>

1998

GABPa/b : DNA	Batchelor ... Wolberger	Br	NSLS X4A	<i>Science</i>
STAT-4, N	Vinkemeier ... Kuriyan	Se	NSLS X4A	<i>Science</i>
D/C enzyme	Allaire ... Cygler	Se	NSLS X4A	<i>Structure</i>
Rb pocket domain	Lee, Russo & Pavletich	Hg	NSLS X4A	<i>Nature</i>
Synapsin I	Esser ... Deisenhofer	Se	NSLS X4A	<i>EMBO J.</i>
tRNA splicing enzyme	Li, Trotta & Abelson	Au	NSLS X4A	<i>Science</i>
hCask PDZ domain	Daniels ... Brünger	Se	NSLS X4A	<i>Nat. Str. Biol.</i>
Rho term. fact., N	Allison ... Rule	Se	NSLS X4A	<i>Nat. Str. Biol.</i>
Progesterone R, LBD	Williams & Sigler	Se	NSLS X4A	<i>Nature</i>
FGF : heparin	DiGabrielle ... Hendrickson	Se	NSLS X4A	<i>Nature</i>
MarA : DNA	Rhee ... Davies	Se	NSLS X4A	<i>PNAS</i>
MJ eIF 5A	Kim ... Kim	Se	NSLS X4A	<i>PNAS</i>
Cdk6 : p16	Russo ... Pavletich	Hg	NSLS X4A	<i>Nature</i>

Hep. δ ribozyme : U1A	Ferré-D'amaré ... Doudna	Se	NSLS X4A	<i>Nature</i>
SOS, Dbl-PH domains	Soisson ... Kuriyan	Se	NSLS X4A	<i>Cell</i>
Glutamate receptor	Armstrong ... Gouaux	Se	NSLS X4A CHESS F2	<i>Nature</i>
Pro α -lytic protease	Sauter ... Agard	Se	NSLS X4A	<i>Nat. Str. Biol.</i>
FixL	Gong ... Chan	Fe	NSLS X4A	<i>PNAS</i>
N-myristoyl transferase	Bhatnager ... Waksman	Se	NSLS X4A	<i>Nat. Str. Biol.</i>
IRF-1 : DNA	Escalante ... Aggarwal	Br	CHESS F2	<i>Nature</i>
TCR : Fab	Wang ... Reinherz	Se	NSLS X12C	<i>EMBO J.</i>
T7 pol : DNA : Trxn	Doublet ... Ellenberger	Se	NSLS X12C	<i>Nature</i>
NFAT : Fos/Jun : DNA	Chen ... Harrison	Se	NSLS X25	<i>Nature</i>
MPA agglutinin	Lee... Young	Pb	ESRF BM14	<i>J. Biol. Chem.</i>
hTopoI C : DNA	Stewart ... Champoux	Br	SSRL I-5	<i>Science</i>
Adrenodoxin	Müller ... Heinemann	Fe	DESY X31	<i>Structure</i>
PyrR	Tomchick ... Smith	Sm	ESRF BM14	<i>Structure</i>
Phosphotran. IIA ^{mtl}	van Montfort ... Dijkstra	Se	ESRF BM14	<i>Structure</i>
gp130 receptor	Bravo ... Jones	Se	ESRF BM14	<i>EMBO J.</i>
Gene 3p, N1N2	Lubkowski ... Wlodawer	Se	NSLS X9B	<i>Nat. Str. Biol.</i>
TNF α convert. enz.	Maskos ... Bode	Zn	DESY BW6	<i>PNAS</i>
MTCP-1	Fu ... Harrison	Se	NSLS X12B	<i>PNAS</i>
Shaker T1 domain	Kreusch ... Choe	Hg	SSRL I-5	<i>Nature</i>
N-myr transferase	Weston ... Paupit	Se	ESRF BM14	<i>Nat. Str. Biol.</i>
Hemocyanin O ₂	Cuff ... Hendrickson	Cu	PF 14A	<i>J. Mol. Biol.</i>
ErmC'	Bussiere ... Abad-Zapatero	Se	NSLS X8C	<i>Biochemistry</i>
Ribosomal S15	Clemons ... Ramakrishnan	Se	NSLS X12C	<i>Structure</i>
Psoriasis S100	Broderson ... Kjeldgaard	Ho	DESY X31	<i>Structure</i>
SAH hydrolase	Turner ... Howell	Se	NSLS X12C	<i>Nat. Str. Biol.</i>
Complement C3d	Nagar ... Rini	Se	CHESS F2	<i>Science</i>
DNA zipper	Shepard ... Prangé	Br	LURE DW21b	<i>Structure</i>
SmAAT	Wolf ... Burley	Se	CHESS F2	<i>Cell</i>
IF-5A	Peat ... Terwilliger	Se	NSLS X8C	<i>Structure</i>
SNARE complex	Sutton ... Brunger	Se	SSRL I-5	<i>Nature</i>
BTB domain	Ahmad, Engel & Privé	Se	CHESS F2	<i>PNAS</i>
AA glycosylase : DNA	Lau ... Ellenberger	Se	NSLS X12C	<i>Cell</i>
Sialoadhesin	May ... Jones	Se	ESRF BM14	<i>Mol. Cell</i>
Adenosine kinase	Mathews ... Ealick	Se	NSLS X12C	<i>Biochemistry</i>

GAR synthetase	Wang ... Ealick	Se	CHESS F2	<i>Biochemistry</i>
L1 metallo- β -lactamase	Ullah ... Spencer	Se/Zn	DESY X31	<i>J. Mol. Biol.</i>
HERG PAS domain	Cabral ... Mackinnon	Se	CHESS F2	<i>Cell</i>
Fe hydrogenase	Peters ... Seefeldt	Fe	SSRL I-5	<i>Science</i>
FhuA	Locher ... Moras	Se	ESRF BM14	<i>Cell</i>
HisP ABC transporter	Hung ... Kim	Se	ALS 5.0.2	<i>Nature</i>
FhuA	Ferguson ... Welte	Se	ESRF BM14	<i>Science</i>
MJ0577	Zarembinski ... Kim	Se	ALS 5.0.2	<i>PNAS</i>
Klentaq1:DNA	Li, Korolev & Waksman	Se	APS 19-ID	<i>EMBO J.</i>
NO synthase	Raman ... Poulous	Se	CHESS F2	<i>Cell</i>

1999

FepA	Buchanan ... Deisenhofer	Se	NSLS X4A	<i>Nat. Str. Biol.</i>
Rab3A : rabphilin 3A	Ostermeier & Brünger	Se	NSLS X4A	<i>Cell</i>
L11 : RNA	Conn ... Gittis	Se	NSLS X4A	<i>Science</i>
DAHPS	Shumilin ... Bauerle	Pb	NSLS X4A	<i>Structure</i>
PapD : PapK	Sauer ... Waksman	Se	NSLS X4A	<i>Science</i>
Malic enzyme	Xu ... Tong	Se	NSLS X4A	<i>Structure</i>
IQN17 : D peptide	Eckert ... Kim	Os	NSLS X4A	<i>Cell</i>
E6AP	Huang ... Pavletich	Se	NSLS X4A	<i>Science</i>
Tubby, C	Boggon ... Shapiro	Se	NSLS X4A	<i>Science</i>
PAP β 2 domains	Mandiyani ... Hubbard	Se	NSLS X4A	<i>EMBO J.</i>
PLZF, BTB/POZ	Li ... Marmorstein	Se	NSLS X4A	<i>Cancer Res.</i>
CheA histidine kinase	Bilwes ... Simon	Hg	ALS 5.0.2	<i>Cell</i>
PhoB	Solà ... Coll	Au	DESY X31	<i>J. Mol. Biol.</i>
Fe hydrogenase	Nicolet ... Fontecilla-Camps	Fe	ESRF BM2	<i>Structure</i>
Nitrate reductase	Dias ... Romão	Fe	DESY BW6	<i>Structure</i>
ABC coiled coil	Nautiyal & Alber	Pt	SSRL I-5	<i>Protein Science</i>
EF-Tu	Song ... Phillips	Se	ESRF BM14	<i>J. Mol. Biol.</i>
Eph receptor, SAM	Thanos, Goodwill & Bowie	Se	ALS 5.0.2	<i>Science</i>
EIAV p26 capsid	Jin ... Lawson	Pt	NSLS X12C	<i>J. Mol. Biol.</i>
Nine-heme cytochrome	Matias ... Carrondo	Fe	ESRF BM14	<i>Structure</i>
LukF	Olson ... Gouaux	Se	CHESS F2	<i>Nat. Str. Biol.</i>
Swi6, ANK	Foord ... Smerdon	Se	DESY X31	<i>Nat. Str. Biol.</i>
PFOR	Chabriere .. Fontecilla-Camps	Fe	ESRF BM2	<i>Nat. Str. Biol.</i>
Serotonin NAT	Hickman, Klein & Dyda	Se	NSLS X9B	<i>Mol. Cell</i>

NrdD	Logan ... Nordlund	Hg,Os	ESRF BM14	<i>Science</i>
Sarcosine oxidase	Trickey ... Mathews	Se	APS 19-ID	<i>Structure</i>
LukF	Pédelacq ... Mourey	Ir	DESY X31	<i>Structure</i>
E9 DNase : Im9	Kleanthous ... Hemmings	Se	DESY X31	<i>Nat. Str. Biol.</i>
Phospholipase D	Stuckey & Dixon	Pt	CHESS F2	<i>Nat. Str. Biol.</i>
ModE	Hall ... Hunter	Se	ESRF BM14	<i>Embo J.</i>
Ribosomal L2	Nakagawa ... Tanaka	Se	PF 18B	<i>Embo J.</i>
FN 12-14	Sharma ... Stuart	Se	ESRF BM14	<i>Embo J.</i>
MTHFR	Guenther ... Ludwig	Hg	CHESS F2	<i>Nat. Str. Biol.</i>
IMPDH	Zhang ... Collart	Se	APS 19-ID	<i>Biochemistry</i>
DNA octamer	Todd ... Cardin	Br	Elettra	<i>Acta Cryst. D</i>
PPAT	Izard & Geerlof	Se	NSLS X12C	<i>Embo J.</i>
SXL RRM1+2	Crowder ... Alber	Se	SSRL I-5	<i>P.N.A.S.</i>
5' nucleotidase	Knöfel & Sträter	W,Zn	ESRF BM14	<i>Nat. Str. Biol.</i>
Glutamate racemase	Hwang ... Cho	Hg	ALS 5.0.2	<i>Nat. Str. Biol.</i>
EVH1 : peptide	Prehoda, Lee & Lim	Se	ALS 5.0.2	<i>Cell</i>
L11 : RNA	Wimberly ... Ramakrishnan	Hg	NSLS X12C	<i>Cell</i>
Arrestin	Hirsch ... Sigler	Se	APS 19-ID	<i>Cell</i>
HPP pyrophosphokinase	Xiao ... Ji	Se	NSLS X9B	<i>Structure</i>
AAC(6')-Ii	Wybenga-Groot ... Berghuis	Se	CHESS F2	<i>Structure</i>
PEP mutase	Huang ... Herzberg	Se	NSLS X12C	<i>Structure</i>
AdoMetDC	Ekstrom ... Ealick	Se	NSLS X12C	<i>Structure</i>
Importin β : IBB	Cingolani ... Müller	Se	ESRF ID2	<i>Nature</i>
Kap β 2 : RanGppNp	Chook & Blobel	Se	NSLS X25	<i>Nature</i>
Clathrin, hub fragment	Ybe ... Hwang	Se	ALS 5.0.2	<i>Nature</i>
Vps27p, FYVE domain	Mistra & Hurley	Zn	NSLS X9B	<i>Cell</i>
CK2 β	Chantalat ... Dideberg	Se	ESRF BM14	<i>Embo J.</i>
GroEL, apical	Walsh ... Joachimiak	Se	APS 19-ID	<i>Acta Cryst. D</i>
MTA phosphorylase	Appleby, Erion & Ealick	Se	NSLS X12C CHESS F2	<i>Structure</i>
Formate reductase	Iverson ... Rees	Fe	ALS 5.0.2	<i>Science</i>
Cyt. oxidase, Cu _A	Williams ... McRee	Cu	SSRL I-5	<i>Nat. Str. Biol.</i>
Pyruvate formate lyase	Leppanen ... Goldman	Hg	DESY BW7A ESRF ID14-3	<i>Structure</i>
ERA	Chen, Court & Ji	Hg	NSLS X9B	<i>PNAS</i>
TRAF2	McWhirter ... Alber	Hg Se	SSRL I-5 (?) ALS 5.0.2 (?)	<i>PNAS</i>

NSF, N	Yu, Jahn & Brünger	Se	ALS 5.0.2	<i>Mol. Cell</i>
EVH1	Fedorov ... Almo	Se	NSLS X9B	<i>Nat. Str. Biol.</i>
UCH : Ubal	Johnston ... Hill	Se	NSLS X12C	<i>EMBO J.</i>
FliG	Lloyd ... Hill	Se	SSRL I-5	<i>Nature</i>
Cyt c nitrite reductase	Einsle ... Kronek	Fe	DESY BW6	<i>Nature</i>
PIN : LC8	Liang ... Clardy	Se	CHESS F2	<i>Nat. Str. Biol.</i>
GlmU	Brown ... Bourne	Hg	DESY BW7A	<i>EMBO J.</i>
AP-2 appendage	Traub ... Fremont	Se	APS 19-ID	<i>PNAS</i>
FimC : FimH	Choudhury ... Knight	Se	ESRF BM14	<i>Science</i>
yCCS	Lamb ... Rosenzweig	Se	APS 5-ID	<i>Nat. Str. Biol.</i>
E1b	Æversson ... Hol	Se	ESRF BM14	<i>Nat. Str. Biol.</i>
Glutamate mutase	Reitzer ... Kratky	Hg,Au	ESRF BM14	<i>Structure</i>
RPA14 : RPA32, N	Bochkarev ... Edwards	Se	CHESS F2	<i>EMBO J.</i>
cTsrQ	Kim, Yokota & Kim	Se	SSRL I-5 (?)	<i>Nature</i>
tGCN5	Rojas ... Marmorstein	Se Se,Hg	CHESS F2 NSLS X8C	<i>Nature</i>
Gelsolin factor ABP120	McCoy ... Stewart	Hg	ESRF BM14	<i>Nat. Str. Biol.</i>
Fumaryl acac hydrolase	Timm ... Bunick	Se	NSLS X12C	<i>Structure</i>
PurM	Li ... Ealick	Se	CHESS F2	<i>Structure</i>
CTP : G3P transferase	Weber ... Ludwig	Hg	CHESS F2	<i>Structure</i>
Phage PRD1 P3 protein	Benson ... Burnett	Se	NSLS X12C	<i>Cell</i>
Neurexin 1β	Rudenko ... Deisenhofer	Se	APS 19-ID	<i>Cell</i>
OMPLA	Snijder ... Dijkstra	Ir,Se	DESY X31	<i>Nature</i>
HCV RNA polymerase	Lesburg ... Weber	Se	APS 17-ID	<i>Nat. Str. Biol.</i>
DNA Holliday junction	Ortiz-Lombardi ... Coll	Br	DESY X31	<i>Nat. Str. Biol.</i>
MukB, N	van den Ent ... Löwe	Se	DESY BW6	<i>Structure</i>
Cyclohydrolase	Grabarse ... Ermler	Lu	DESY BW6	<i>Structure</i>
TolB	Abergel ... Bouveret	Se	ESRF BM14	<i>Structure</i>
Gingipain R	Eichinger ... Bode	Hg	DESY BW6	<i>EMBO J.</i>
Rhinovirus proeinase	Petersen ... James	Zn	NSLS X12C	<i>EMBO J.</i>
PTEN	Lee ... Pavletich	Hg	CHESS F2	<i>Cell</i>
HCV RNA polymerase	Bressanelli ... Rey	Se	ESRF BM14	<i>PNAS</i>
YabJ	Sinha ... Smith	Hg	APS 14-BMD	<i>PNAS</i>
SRP RNA helix 6	Wild ... Cusack	Br	ESRF BM14	<i>Structure</i>
PurE	Mathews ... Ealick	Se	CHESS F2	<i>Structure</i>
β2-GPI	Schwarzenbacher ... Prassl	Pt	DESY X31	<i>EMBO J.</i>

Factor V C2 domain	Macedo-Ribeiro et al.	Hg	DESY BW6	<i>Nature</i>
Pelle-DD : Tube-DD	Xiao ... Sprang	Se	ALS 5.0.2	<i>Cell</i>
HMG-D : DNA	Murphy, Sweet & Churchill	Br	NLSL X12C	<i>EMBO J.</i>
Sfp	Reuter ... Ficner	Se	Elettra 5.2	<i>EMBO J.</i>
Fumarate reductase	Banford ... Hemmings	Fe	ESRF BM14	<i>Nat. Str. Biol.</i>
Fumarate reductase	Taylor ... Walkinshaw	Fe	DESY X31(?)	<i>Nat. Str. Biol.</i>
Utrophin, N	Keep ... Kendrick-Jones	Se	ESRF BM14	<i>Structure</i>
ETR1, RD	Muller-Diekermann ... Kim	Se	NLSL X12C	<i>Structure</i>
RRF	Selmer ... Liljas	Se	ESRF BM14	<i>Science</i>
Calpain	Hosfield ... Jia	Se	SSRL I-5	<i>EMBO J.</i>
Transposon Tn5	Davies ... Rayment	Pt	APS 19-ID	<i>J. Biol. Chem.</i>
HA-CoA dehydrogenase	Barycki ... Banaszak	Se	APS 19-ID	<i>Biochemistry</i>
Thiamin phos. syn'ase	Chiu ... Ealick	Se	CHESS F2	<i>Biochemistry</i>
Flavin reductase	Ingelman ... Eklund	Au	ESRF BM14	<i>Biochemistry</i>
AHBA synthase	Eads ... Floss	Se	ESRF BM14	<i>Biochemistry</i>
Cyt. c552	Brown ... Cambillau	Fe	LURE DW21b	<i>J. Mol. Biol.</i>
Mismatched RNA	Anderson ... Frederick	Br	SSRL I-5	<i>Biochemistry</i>
SRP54M	Clemons ... Ramakrishnan	Se	NLSL X25	<i>J. Mol. Biol.</i>
Asparagine synthetase	Larsen ... Rayment	U	APS 19-ID	<i>Biochemistry</i>
Centromere DNA	Gao ... Wang	Br	APS 19-ID NLSL X25	<i>Biochemistry</i>
pNB esterase	Spiller ... Stevens	Se	ALS 5.0.2 (?)	<i>PNAS</i>
RNA triplex/duplex	Rhee ... Davies	Br	NLSL X12C	<i>Biochemistry</i>
Troponin C : Ca	Soman, Tao & Phillips	Se	??	<i>Proteins</i>
FabH	Qiu ... Abdel-Mequid	Se	NLSL X12C	<i>J. Biol. Chem.</i>
Bowman-Birk inhibitor	Song .. Suh	Fe	NLSL X8C	<i>J. Mol. Biol.</i>
U5-15kD	Reuter .. Ficner	Se	ESRF BM14	<i>J. Mol. Biol.</i>
Papillomavirus E2	Harris & Botchan	Se	ALS 5.0.2	<i>Science</i>
Endonuclease I-Dmol	Silva ... Van Roey	Se	NLSL X12C	<i>J. Mol. Biol.</i>
IL-4 : α receptor	Hage, Sebald & Reinemer	Se	DESY BW6	<i>Cell</i>
Human p32	Jiang ... Xu	Se	NLSL X12C	<i>PNAS</i>
HSNST sulfotransferase	Kakuta ... Pedersen	Se	NLSL X9B	<i>J. Biol. Chem.</i>
HIV-1 integrase	Greenwald ... Choe	As	ALS 5.0.2	<i>Biochemistry</i>
Cyt. c3	Nörager ... Rotah	Fe	ESRF BM2(?)	<i>J. Mol. Biol.</i>
Chondroitin AC lyase	Fethiere, Eggimann & Cygler	Tb	CHESS F2	<i>J. Mol. Biol.</i>
DAPA synthase	Käck ... Lindqvist	Hg	ESRF BM14	<i>J. Mol. Biol.</i>

<i>Hi</i> HPPK	Hennig ... Oefner	Se	ESRF SNBL	<i>J. Mol. Biol.</i>
Tryparedoxin	Alphey ... Hunter	Se	ESRF BM14	<i>J. Biol. Chem.</i>
Adrebidixub reductase	Ziegler ... Schulz	Hg	DESY X31(?)	<i>J. Mol. Biol.</i>
c phospholipase A2	Dessen ... Somers	Tb	ALS 5.0.2	<i>Cell</i>
Anthranilate synthase	Knöchel ... Jansonius	Hg	DESY X31	<i>PNAS</i>
Endonuclease IV	Hosfield ... Tainer	Zn	CHESS F2	<i>Cell</i>
α -Actinin, R2R3	Djinovic-Carugo ... Saraste	Hg	ESRF BM14	<i>Cell</i>
Ile-tRNA synthase : tRNA	Silvian, Wang & Steitz	Se,Hg	NSLS X12C X4A, X8C	<i>Science</i>
UvrB, CT	Sohi ... Sanderson	Se	ESRF BM14	<i>FEBS Lett.</i>
eIF4 RNA helicase	Johnson & McKay	Se	SSRL I-5	<i>RNA</i>

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FGFR2 : FGF1	Stauber ... Hendrickson	Se	NSLS X4A	<i>PNAS</i>
Mj0697 fibrillarin	Wang ... Kim	Se	NSLS X4A	<i>EMBO J.</i>
Hrs, VHS/FYVE	Mao ... Quijcho	Se	NSLS X4A	<i>Cell</i>
SRP core	Batey ... Doudna	Se	NSLS X4A	<i>Science</i>
Ulp1 : SUMO	Mossessova & Lima	Se	NSLS X4A	<i>Mol. Cell</i>
hMLN4, StART	Tsujishita & Hurley	Se	NSLS X4A	<i>Nat. Struct. Biol.</i>
Homer, EVH1	Benekin ... Leahy	Se	NSLS X4A	<i>Neuron</i>
TRADD : TRAF2	Park ... Wu	Se	NSLS X4A	<i>Cell</i>
Stem cell factor	Jiang ... Hendrickson	Se	NSLS X4A	<i>EMBO J.</i>
Helicase, TOPRIM	Podbnik ... Kuriyan	Se	NSLS X4A	<i>J. Mol. Biol.</i>
Phosphonotase	Morais ... Allen	W	NSLS X4A	<i>Biochemistry</i>
ssBP : ssDNA	Raghunathan ... Waxman	Se	NSLS X4A APS 19-ID	<i>Nat. Struct. Biol.</i>
Bis-intercalated DNA	Shui ... Williams	Br	NSLS X4A	<i>Curr. Med. Chem.</i>
Grp1, PH domain	Lietzke ... Lambright	Se	NSLS X4A	<i>Mol. Cell</i>
TLR1, TIR domain	Xu ... Tong	Se	NSLS X4A	<i>Nature</i>
Rac1 : Tiam1	Worthylake ... Sondek	Se	NSLS X4A	<i>Nature</i>
Aspartyl dipeptidase	Hakansson, Wang & Miller	Se	NSLS X4A	<i>PNAS</i>
Rop, mutant	Willis ... Brunger	Pt	NSLS X4A	<i>Structure</i>
vMIPII	Fernandez ... Lolis	Se	NSLS X4A	<i>Biochemistry</i>
RNA aptamer : vit B ₁₂	Sussman, Nix & Wilson	Co	ALS 5.0.2	<i>Nat. Str. Biol.</i>
Cyt P450 monooxygenase	Williams ... McRee	Fe	ESRF BM14	<i>Mol. Cell</i>
Transhydrogenase, dIII	White ... Jackson	Se	ESRF ID14-4	<i>Structure</i>
RNA cyclase	Palm ... Wlodawer	Se	NSLS X9B	<i>Structure</i>

DHODH	Liu ... Clardy	Se	CHESS F2	<i>Structure</i>
Tol B	Carr ... Hemmings	Yb	DESY X31	<i>Structure</i>
B7 (CD80)	Ikemizu ... Davis	Se	ESRF BM14	<i>Immunity</i>
Ribosomal L12	Wahl ... Huber	Se	DESY BW6	<i>EMBO J.</i>
m-Calpain	Strobl ... Bode	Hg,Au	DESY BW6	<i>PNAS</i>
Fxn:Txn reductase	Dai ... Eklund	Fe	ESRF BM14	<i>Science</i>
Nitric oxide reductase	Brown ... Cambillau	Cu	ESRF ID14-4	<i>Nat. Str. Biol.</i>
Pheromone bp	Sandler ... Clardy	Se	APS 14-BMD	<i>Chem. Biol.</i>
Epoxide hydrolase	Zou ... Jones	Se	ESRF ID14-4	<i>Structure</i>
Adenylosucc. lyase	Toth & Yeates	Se	NSLS X8C	<i>Structure</i>
FabH	Davies ... Rock	Se	CHESS F2	<i>Structure</i>
HslU : HslV	Bochtler ... Huber	Hg,Ta	DESY BW6	<i>Nature</i>
hOGG1	Bruner, Norman & Verdine	Se	NSLS X12C	<i>Nature</i>
hRFX1, DBD	Gajiwala ... Burley	Br	CHESS F2	<i>Nature</i>
OMP decarboxylase	Appleby ... Ealick	Se	APS 19-ID	<i>PNAS</i>
ODCase	Miller ... Short	Se	APS 17-ID	<i>PNAS</i>
ODCase	Wu ... Pai	Se	APS 14-BMD?	<i>PNAS</i>
Ribosomal L25 : 5S	Lu & Steitz	Se	NSLS X8C	<i>PNAS</i>
HMG-CoA reductase	Istvan ... Deisenhofer	Se	APS 19-ID	<i>EMBO J.</i>
MalY	Clausen ... Boos	Er	DESY BW6	<i>EMBO J.</i>
Tfi DNA ligase	Lee ... Suh	Se	NSLS X12C? NSLS X8C	<i>EMBO J.</i>
Cortexillin I	Burkhard ... Aebi	Se Se	DESY BW7B? DESY BW6	<i>Structure</i>
nSec1 : syntaxin 1a	Misura, Scheller & Weis	Se	SSRL 9-2	<i>Nature</i>
DnaG-RNAP	Keck ... Berger	Se	ALS 5.0.2	<i>Science</i>
β carbonic anhydrase	Kimber & Pai	Zn	NSLS X8C	<i>EMBO J.</i>
Bs iPGM	Jedrzejewski ... Krishnasamy	Se	NSLS X12C(?) NSLS X25(?)	<i>EMBO J.</i>
Human AGT	Daniels & Tainer	Au	ALS 5.0.2	<i>EMBO J.</i>
Cystine C-S lyase	Clausen ... Kessler	Pt	DESY BW7A	<i>PNAS</i>
Hop TPR : peptide	Scheufler ... Moarefi	Ni,Se	DESY BW6	<i>Cell</i>
ba ₃ cyto. c oxidase	Soulimane ... Than	Fe,Cu	DESY BW6	<i>EMBO J.</i>
PPT1	Bellizzi ... Clardy	Se	CHESS F2	<i>PNAS</i>
RNA polymerase II	Cramer ... Kornberg	Ta	SSRL 9-2	<i>Science</i>
Rev binding element	Hung, Holbrook & Holbrook	Br	ALS 5.0.2	<i>PNAS</i>
Axonin-1:TAG-1	Freigang ... Welte	Pt	DESY X31	<i>Cell</i>

AGM epimerase	Deacon ... Ealick	Se	CHESS F2	<i>Structure</i>
D-ala, D-lac ligase	Kuzin ... Knox	Se	NLSL X12C	<i>Structure</i>
Cyanase	Walsh ... Joachimiak	Se	APS 19-ID	<i>Structure</i>
4.5S RNA, domain IV	Jovine ... Nagai	Lu	Elettra 5.2	<i>Structure</i>
Leishmania GPDH	Suresh ... Hol	Pt	APS 19-ID (?)	<i>Structure</i>
Aequorin	Head ... Shimomura	Se	NLSL X8C	<i>Nature</i>
Apolipo E, ortho	Segelke ... Rupp	Se	SSRL I-5	<i>Protein Science</i>
Apolipo E, trigonal	Segelke ... Rupp	Se	ALS 5.0.2	<i>Protein Science</i>
TAF _{II} 250	Jacobson ... Tjian	Se	ALS 5.0.2	<i>Science</i>
Paramecium Hb	Pesce ... Bolognesi	Fe	ESRF BM14	<i>EMBO J.</i>
CPT	Izard & Ellis	Se	ESRF BM14	<i>EMBO J.</i>
RNA pol, RPB5	Todone ... Onesti	Se	Elettra 5.2	<i>PNAS</i>
Maf	Minasov ... Egli	Se	APS 5-ID	<i>PNAS</i>
PDE4	Xu ... Nolte	Er	NLSL X12C	<i>Science</i>
RSV capsid protein	Kingston ... Rossmann	Se	APS 14-BMD	<i>Structure</i>
Phospholipase D	Leiros ... Hough	W	ESRF BM14	<i>Structure</i>
TolC	Koronakis ... Hughes	Se	ESRF BM14	<i>Nature</i>
AML1 Runt : CBF β	Warren ... Rabbitts	Se	ESRF ID14-3	<i>EMBO J.</i>
NaeI	Huai ... Ke	Se	NLSL X12C	<i>EMBO J.</i>
Rad50 : ATP	Hopfner ... Tainer	Se	ESRF BM30A?	<i>Cell</i>
λ Repressor, CTD	Bell ... Lewis	Hg	NLSL X25	<i>Cell</i>
s-Sec1	Bracher ... Weissenhorn	Se	ESRF BM14	<i>Structure</i>
DCase	Nakai ... Tsukihara	Hg	SP8 BL45XU	<i>Structure</i>
PNP oxidase	Safo ... Schirch	Se	APS 19-ID	<i>Structure</i>
PRMT3	Zhang, Zhou & Cheng	Se	NLSL X12C	<i>EMBO J.</i>
DDG aldolase	Izard & Blackwell	Se	ESRF BM14	<i>EMBO J.</i>
MutM	Sugahara ... Kuramitsu	Zn	SP8 BL45XU	<i>EMBO J.</i>
Rhodopsin	Palczewski ... Miyano	Hg	SP8 BL45XU	<i>Science</i>
Sis1 hsp40	Sha, Lee & Cyr	Se	SSRL I-5	<i>Structure</i>
Transhydrogenase, dI	Buckley ... Baker	Se	ESRF BM30	<i>Structure</i>
MeTr	Doukov ... Ragsdale	Se	SSRL I-5	<i>Structure</i>
Oncostatin M	Deller ... Heath	Hg	ESRF BM14	<i>Structure</i>
ACP Synthase	Parris ... Somers	Se	NLSL X12C	<i>Structure</i>
AcpS : CoA	Parris ... Somers	Se	NLSL X12C	<i>Structure</i>
RNase HII	Lai ... Kim	Se	ALS 5.0.2	<i>Structure</i>
Poly(A) polymerase	Martin, Keller & Doublié	Se	NLSL X12C	<i>EMBO J.</i>

Ebola virus VP40	Dessen ... Weissenhorn	Se	ESRF BM14	<i>EMBO J.</i>
<i>E. coli</i> D-LDH	Dym ... Eisenberg	Se	NLSL X8C	<i>PNAS</i>
DNA : porphyrin	Bennett ... Neidle	Ni	ESRF BM14	<i>PNAS</i>
Poly(A) polymerase	Bard ... Bohm	Se	ALS 5.0.2	<i>Science</i>
HisA	Lang ... Wilmanns	Se	DESY BW7A	<i>Science</i>
HisF	Lang ... Wilmanns	Se	DESY BW7A	<i>Science</i>
ArsA ATPase	Zhou ... Gatti	Se	NLSL X12C	<i>EMBO J.</i>
IFN γ : IFN γ receptor	Thiel ... Ealick	Se	CHESS F2	<i>Structure</i>
Colicin E3 RNase : Im3	Carr ... Hemmings	Se	ESRF BM14	<i>Structure</i>
Gyp1p, GAP domain	Rak ... Scheidig	Se	DESY BW6	<i>EMBO J.</i>
FadR	van Aalten ... Wierenga	Hg	ESRF BM14	<i>EMBO J.</i>
MutS : DNA	Obmolova ... Yang	Se	NLSL X9B	<i>Nature</i>
MutS : DNA	Lamers ... Sixma	Se	ESRF BM14	<i>Nature</i>
Saccharopine reductase	Johansson ... Schneider	Se	DESY X31	<i>Structure</i>
Cephalosporin acylase	Kim ... Hol	Se	ALS 5.0.2	<i>Structure</i>
GnT I	Ünligil ... Rini	Hg	CHESS F2	<i>EMBO J.</i>
ACP synthase	Chirgadze ... Zhao	Se	APS 17-ID	<i>EMBO J.</i>
YKG9, GAF domain	Ho, Burden & Hurley	Br	NLSL X9B	<i>EMBO J.</i>
FtsA	van den Ent & Löwe	Se	ESRF ID14-4	<i>EMBO J.</i>
mGluR, LBR	Kunishima ... Morikawa	Se	SP8 BL45XU	<i>Nature</i>
FGF:FGFR:heparin	Pellegrini ... Blundell	Se	APS 19-ID	<i>Nature</i>
MobA	Stevenson ... Lawson	Se	SRS 9.5	<i>Structure</i>
Met sulfoxide reductase	Tête-Favier ... Aubry	Se	ESRF BM14	<i>Structure</i>
Polynuc. phosphorylase	Symmons, Jones & Luisi	Se	DESY BW7A	<i>Structure</i>
MalK	Diederichs ... Welte	Hg	DESY BW7A	<i>EMBO J.</i>
Xrcc4	Junop ... Yang	Se	NLSL X9B	<i>EMBO J.</i>
CPDase	Hofmann ... Wlodawer	Se	NLSL X9B	<i>EMBO J.</i>
BphF Rieske protein	Colbert ... Bolin	Fe	APS 14-BMD	<i>Structure</i>
Oxa10 β -lactamase	Maveyraud ... Samama	Au	DESY X31	<i>Structure</i>
Glutamate synthase	Binda ... Mattevi	Fe	ESRF BM14	<i>Structure</i>
Trbp1	Swairjo ... Schimmel	Pt	SSRL 9-2	<i>EMBO J.</i>
RmlA	Blankenfeldt ... Naismith	Se	ESRF BM14	<i>EMBO J.</i>
RSV integrase	Yang ... Hyde	Se	NLSL X9B	<i>J. Mol. Biol.</i>
T4 gene 59 helicase	Mueser ... Hyde	Se	NLSL X9B	<i>J. Mol. Biol.</i>
RNA aptamer:Sebiotin	Nix, Sussman & Wilson	Se	ALS 5.0.2	<i>J. Mol. Biol.</i>
<i>Tm</i> NifS-like protein	Kaiser ... Huber	Se	DESY BW6	<i>J. Mol. Biol.</i>

Mog1p	Stewart & Baker	Se	ESRF ID14-4	<i>J. Mol. Biol.</i>
Germination protease	Ponnuraj ... Jedrzejak	Se	NLSL X12C	<i>J. Mol. Biol.</i>
Trx-like ferredoxin	Yeh ... Rees	Fe	SSRL 9-2	<i>J. Mol. Biol.</i>
TryP	Alphey ... Hunter	Se	ESRF BM14	<i>J. Mol. Biol.</i>
Malachite green aptamer	Baugh, Grate & Wilson	Br	ALS 5.0.2	<i>J. Mol. Biol.</i>
<i>Rm</i> FixL, sensor	Miyatake ... Shiro	Fe	SP8 BL44B2	<i>J. Mol. Biol.</i>
T4 gp11	Leiman ... Rossmann	Se	APS 14D-BM	<i>J. Mol. Biol.</i>
<i>Af</i> splicing endonuclease	Li & Abelson	Se	ALS 5.0.2	<i>J. Mol. Biol.</i>
RAP30/RAP74 (TFIIF)	Gaiser, Tan & Richmond	Hg	ESRF BM14	<i>J. Mol. Biol.</i>
16S(UUCG):S15	Ennifar ... Dumas	Se	DESY BW7A	<i>J. Mol. Biol.</i>
GM2 activator protein	Wright, Li & Rastinejad	Se	NLSL X12C	<i>J. Mol. Biol.</i>
MurF	Yan ... Chen	Se	APS 17-ID	<i>J. Mol. Biol.</i>
Sec4:GMPPNP	Stroupe & Brünger	Se	ALS 5.0.2	<i>J. Mol. Biol.</i>
Sec4:GDP	Stroupe & Brünger	Se	ALS 5.0.2	<i>J. Mol. Biol.</i>
Hsc20 J-protein	Cupp-Vickery & Vickery	Se	SSRL 1-5	<i>J. Mol. Biol.</i>
Rotavirus NSP4, olig'n	Bowman ... Schutt	Se	NLSL X12C	<i>J. Mol. Biol.</i>
Malate synthase G	Howard, Endrizzi & Remington	Se	ALS 5.0.2	<i>Biochemistry</i>
FTHF synthetase	Radfar ... Lebioda	Se	APS 19-ID	<i>Biochemistry</i>
Xylanase, X6b domain	Charnock ... Fontes	Se	ESRF ID14-4	<i>Biochemistry</i>
<i>Giardia</i> GPRTase	Shi ... Almo	Se	NLSL X12C	<i>Biochemistry</i>
UDPGlcDH	Campbell ... Strynadka	Se	DESY X11 (X31?)	<i>Biochemistry</i>
Syntaxin-1A	Lerman ... Hughson	Se	NLSL X12C	<i>Biochemistry</i>
Glyoxalase I	He ... Matthews	Se	ALS 5.0.2	<i>Biochemistry</i>
BAF	Umland ... Davies	Se	NLSL X9B	<i>Biochemistry</i>
apoGAPDH	Yun ... Park	Se	NLSL X9B	<i>Biochemistry</i>
Tom1, VHS domain	Misra, Beach & Hurley	Se	NLSL X9B	<i>Biochemistry</i>
Cytochrome c553	Benini ... Ciurli	Fe	DESY W7A	<i>Biochemistry</i>
UDP-GlcNAc2-epimerase	Campbell ... Strynadka	Se	NLSL X12C	<i>Biochemistry</i>
MsrA	Lowther ... Matthews	Se	SSRL 9-2	<i>Biochemistry</i>
HNF-1 α L12M	He ... Alber	Se	ALS 5.0.2	<i>Biochemistry</i>
HNF-1 α L13M	He ... Alber	Se	ALS 5.0.2	<i>Biochemistry</i>
λ Ser/Thr PPase	Voegtli ... Rosenzweig	Hg	APS 5-ID	<i>Biochemistry</i>
β Carbonic anhydrase	Mitsuhashi ... Tsukihara	Zn	SP8 BL45XU	<i>J. Biol. Chem.</i>
KDO8P synthase	Radaev ... Gatti	Hg	NLSL X12C	<i>J. Biol. Chem.</i>
GATE-16	Paz, Elazar & Fass	Se	ESRF BM30	<i>J. Biol. Chem.</i>

Parathyroid hormone, N	Jin ... Zhang	Se	APS 17-ID	<i>J. Biol.Chem.</i>
yACCD, orthorhombic	Yao ... Tanaka	Hg	ESRF BM14	<i>J. Biol.Chem.</i>
yACCD, trigonal	Yao ... Tanaka	Hg	PF BL18B	<i>J. Biol.Chem.</i>
Phytase	Lim ... Jia	W	NSLS X8C	<i>Nat. Str. Biol.</i>
BglII:DNA	Lukacs ... Aggarwal	Se	APS 17-ID	<i>Nat. Str. Biol.</i>
DsbC	McCarthy ... Metcalf	Se	ESRF BL19? (BM14)	<i>Nat. Str. Biol.</i>
λ -phage gpD	Yang ... Wlodawer	Se	NSLS X8C APS 14BM-D	<i>Nat. Str. Biol.</i>
S15:rRNA	Nikulin ... Dumas	Se	LURE DW21 DESY BW7A	<i>Nat. Str. Biol.</i>
PhuD	Clarke ... Tari	Ga	NSLS X8C	<i>Nat. Str. Biol.</i>
NCAM, IgI-IgII	Kasper ... Larsen	Pt	ESRF BM14	<i>Nat. Str. Biol.</i>
RmlC	Giraud ... Naismith	Se	ESRF BM14	<i>Nat. Str. Biol.</i>
Rob:DNA	Kwon ... Ellenberger	Se	NSLS X25	<i>Nat. Str. Biol.</i>
<i>Mt</i> NusB	Gopal ... Dodson	Se	ESRF ID14-3	<i>Nat. Str. Biol.</i>
HGO	Titus ... Timm	Se	SSRL 1-5	<i>Nat. Str. Biol.</i>
Thioesterase II	Li ... Derewenda	Se	NSLS X9B	<i>Nat. Str. Biol.</i>
NAT	Sinclair ... Noble	Se	ESRF BM14?	<i>Nat. Str. Biol.</i>
FinO	Ghetu ... Glover	Se	NSLS X12C	<i>Nat. Str. Biol.</i>
Survivin	Verdecia ... Noel	Se	SSRL 9-2	<i>Nat. Str. Biol.</i>
Pepsin inhibitor-3	Ng ... James	Se	APS 14BM-D	<i>Nat. Str. Biol.</i>
<i>Mt</i> isocitrate lyase	Sharma ... Sacchettini	Se	APS 14BM-D	<i>Nat. Str. Biol.</i>
Botulinum neurotoxin B	Swaminathan & Eswarsoorthy	Os W,Pt,Hg	NSLS X12C	<i>Nat. Str. Biol.</i>
DCoH:HNF-p1	Rose ... Alber	Se	SSRL 9-2?	<i>Nat. Str. Biol.</i>
PSII D1 protease	Liao ... Diner	Se	APS 5-ID	<i>Nat. Str. Biol.</i>
SeV phosphoprotein	Turboureich ... Burmeister	Se,Hg	ESRF ID14-4	<i>Nat. Str. Biol.</i>
Protein 4.1R, core	Han ... Jap	Se	NSLS X25	<i>Nat. Str. Biol.</i>
CooA	Lanzilotta ... Poulos	Fe	SSRL 1-5	<i>Nat. Str. Biol.</i>
tSNARE Sso1p	Munson ... Hughson	Se	NSLS X12C	<i>Nat. Str. Biol.</i>
Dioxygen red'n enzyme	Frazão ... LeGall	Fe	ESRF BM14	<i>Nat. Str. Biol.</i>
ATP synthase, γ - ϵ	Rodgers & Wilce	Se	APS 14BM-C?	<i>Nat. Str. Biol.</i>
Exonuclease I	Breyer & Matthews	Se	SSRL 9-2	<i>Nat. Str. Biol.</i>
SecB	Xu, Knafels & Yoshina	Se	APS 14BM-D?	<i>Nat. Str. Biol.</i>
eRF1	Song ... Barford	Se	DESY BW7A	<i>Cell</i>
Nova(KH):RNA	Lewis ... Burley	Br	NSLS X25	<i>Cell</i>

Moesin, FERM domain	Pearson ... Karplus	Se	CHESS F2	<i>Cell</i>
Prefoldin (GimC)	Siegert ... Moarefi	Se	DESY BW6	<i>Cell</i>
IF2/eIF5B·GDP	Roll-Mecak ... Burley	Se	NSLS X25?	<i>Cell</i>
β -catenin	Pokutta & Weis	Se	SSRL 1-5	<i>Mol. Cell</i>
BPV E1	Enemark & Joshua-Tor	Se	NSLS X8C	<i>Mol. Cell</i>
Survivin	Chantalat ... Margolis	Se	ESRF BM14	<i>Mol. Cell</i>
Pa Cdc6/Cdc18	Liu ... Berger	Se	ALS 5.0.2	<i>Mol. Cell</i>
Flp recombinase : DNA	Chen ... Rice	Br	APS 14BM-D	<i>Mol. Cell</i>
Esa1, HAT domain	Yan ... Marmorstein	Se	NSLS X12C	<i>Mol. Cell</i>
15.5dD : U4 snRNA	Vidovic ... Ficner	Se	ESRF BM14	<i>Mol. Cell</i>
AAA ATPase p97	Zhang ... Freemont	Gd	ESRF BM14	<i>Mol. Cell</i>
CTLA4	Ostrov ... Nathenson	Se	NSLS X12C	<i>Science</i>
SpeA	Kagawa ... Baker	Se	ESRF ID14-4	<i>PNAS</i>
Xanthine dehydrogenase	Enroth ... Pai	Fe	APS 14BM-D?	<i>PNAS</i>
eIF4A, C	Caruthers, Johnson & McKay	Sm	ALS 5.0.2	<i>PNAS</i>
Ph1704 protease	Du ... Kim	Se	ALS 5.0.2	<i>PNAS</i>
MRP8 S100	Ishikawa ... Nishihira	Yb	PF BL18B	<i>Acta Cryst. D</i>
YbaK	Zhang ... Herzberg	Se	NSLS X12C	<i>Proteins</i>
Epsin, ENTH domain	Hyman ... Brunger	Se	SSRL 1-5	<i>J. Cell Biol.</i>
Hormone sens've lipase	DeSimone ... Pedone	Se	DESY X31	<i>J. Mol. Biol.</i>
Rab6, NBD	Chattopadhyay ... Smith	Se	APS 17-ID	<i>Acta Cryst. D</i>
human β -defensin-2	Hoover ... Lubkowski	Br	NSLS X9B	<i>J. Biol. Chem.</i>
Aldehyde dehydr'ase	Ahvazi ... Vrieland	Se MIR	NSLS X12C	<i>Biochem. J.</i>
Importin β , N	Lee ... Tsukihara	Se	SP8 BL45XU	<i>J. Mol. Biol.</i>
L-methionine lyase	Motoshima ... Tanaka	Pb	SP8 BL45XU	<i>J. Biochem. (Tokyo)</i>
Band 3, cbd3	Zhang ... Bolin & Low	Se	APS 14-BMD	<i>Blood</i>
Leucyl tRNA synthetase	Cusack, Yaremchuk & Tukalo	Se	ESRF ID14-4	<i>EMBO J.</i>
Stem cell factor	Zhang ... Kong	Sm	APS 19-ID	<i>PNAS</i>

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VCP, P212121	Murthy ... Kotwal	Eu	NSLS X4A	<i>Cell</i>
VCP, C222	Murthy ... Kotwal	Au	NSLS X4A	<i>Cell</i>
AP180, N-t domain	Mao ... Quiocho	Se	NSLS X4A	<i>Cell</i>
OxyR	Choi ... Ryu	Se	NSLS X4A	<i>Cell</i>
Hsp33	Kim ... Ryu	Se	NSLS X4A	<i>Nat. Struct. Biol.</i>
sFRP-3 Frizzled domain	Dann ... Leahy	Br	NSLS X4A	<i>Nature</i>

PhoQ histidine kinase	Marina ... Waldburger	Se	NLSL X4A	<i>J. Biol. Chem.</i>
GluR0, LBD	Mayer, Olson & Gouaux	Se	NLSL X4A	<i>J. Mol. Biol.</i>
RNA/DNA duplex	Deng ... Sundaralingam	Br	NLSL X4A	<i>RNA</i>
SarA	Schumacher ... Brennan	Se	SSRL 1-5	<i>Nature</i>
TrwB	Gomis-Rüth ... Coll	Ta	DESY BW7B(A?)	<i>Nature</i>
RGS-9	Slep ... Sigler	Se	APS 19-ID	<i>Nature</i>
G α_{v11} : RGS-9	Slep ... Sigler	Se	APS 19-ID	<i>Nature</i>
G α_{v11} : PDE γ : RGS-9	Slep ... Sigler	Se	APS 19-ID	<i>Nature</i>
$\phi 6$ RNA polymerase	Butcher ... Stuart	Se	APS 19-ID	<i>Nature</i>
Flagellin F41	Samatey ... Namba	Hg	SP8 BL45XU	<i>Nature</i>
Hairpin ribozyme : U1A	Rupert & Ferré-D'Amaré	Se	ALS 5.0.2	<i>Nature</i>
Arfaptin	Tarricone ... Smerdon	Se	ESRF BM14	<i>Nature</i>
AChBP - orthorhombic	Brejč ... Sixma	Pb	DESY BW7A	<i>Nature</i>
AChBP - monoclinic	Brejč ... Sixma	Pb	ESRF BM14	<i>Nature</i>
$\gamma\delta$ – T cell receptor	Allison ... Garbozi	Se	NLSL X9B	<i>Nature</i>
Ku heterodimer	Walker, Corpina & Goldberg	Se	NLSL X25	<i>Nature</i>
MreB	van den Ent, Amos & Löwe	Se	ESRF ID14-4	<i>Nature</i>
Anthrax lethal factor	Pannifer ... Liddington	Pb-MIR	ESRF BM14	<i>Nature</i>
Tricorn protease	Brandstetter ... Huber	Se	ESRF ID14-4	<i>Nature</i>
AQP1	Sui ... Jap	Tl	ALS 5.0.2	<i>Nature</i>
EphB2 : ephrin	Himanen ... Nikolov	Se	CHESS F2	<i>Nature</i>
SptP : SicP	Stebbins & Galán	Br	NLSL X12C	<i>Nature</i>
Bag-1 : Hsc70	Sondermann ... Moarefi	Se	DESY BW6	<i>Science</i>
CO dehydrogenase	Dobbek ... Meyer	Fe	ESRF BM14	<i>Science</i>
MsbA	Chang & Roth	Os-SIR	SSRL 9-2	<i>Science</i>
Integrin $\alpha V\beta 3$	Xiong ... Araout	Lu-SIR	APS 19-ID	<i>Science</i>
Arp 2/3 complex	Robinson ... Pollard	Pt	SSRL 9-2	<i>Science</i>
QacR	Schumacher ... Brennan	Se	SSRL 9-2	<i>Science</i>
CBF α - β :C/EBP β :DNA	Tahirov ... Ogata	Au	SP8 BL45XU	<i>Cell</i>
SFV E1	Lescar ... Rey	U-MIR	DESY (μ X31)	<i>Cell</i>
SIR2	Min ... Xu	Hg	NLSL X12C	<i>Cell</i>
Pumilio	Edwards ... Aggarwal	Hg	NLSL X25	<i>Cell</i>
Mre11 nuclease	Hopfner ... Tainer	Se	ALS 5.0.2	<i>Cell</i>
PapGII	Dodson ... Waxman	Se	APS 19-BM	<i>Cell</i>

Clamp loader γ complex	Jeruzalmi ... Kuriyan	Ta Os,Ta U	ALS 5.0.2? SSRL 9.2? APS 19-ID NSLS X25	<i>Cell</i>
U2AF heterodimer	Kielkopf ... Burley	Se	CHESS F2	<i>Cell</i>
EphB2	Wybenga-Groot ... Sicheri	Se	APS 14-BM-D	<i>Cell</i>
Dpo4 polymerase	Ling ... Yang	Se	NSLS X9B	<i>Cell</i>
TruB : RNA	Hoang & Ferré-D'Amaré	Se	ALS 5.0.2	<i>Cell</i>
Caspase 3 : BIR2	Riedl ... Salveson	Zn	SSRL 9-2	<i>Cell</i>
KDPG aldolase	Wymer ... Naismith	Se	ESRF ID14-4	<i>Structure</i>
DHBP synthase	Liao ... Jordan	Au	APS 5-ID	<i>Structure</i>
Ure2p	Bousset ... Morera	Se	ESRF BM14	<i>Structure</i>
PSP	Wang ... Kim	Se	SSRL 1-5	<i>Structure</i>
Spherulin 3a	Clout... Slingsby	Se	NSLS X12C	<i>Structure</i>
Arsenite oxidase	Ellis ... Kuhn	Fe	SSRL 9-2	<i>Structure</i>
Transhydrogenase	Cotton ... Jackson	Se	ESRF ID14-4 ESRF BM30	<i>Structure</i>
Hjc resolvase	Nishino ... Morikawa	Se	SP8 BL40B2	<i>Structure</i>
Pyrophosphatase	Merckel ... Goldman	Se	DESY X31	<i>Structure</i>
Transhydrogenase	Vijayalakshmi ... Saper	Au	NSLS X12C APS 14-BM-C	<i>Structure</i>
Riboflavin synthase	Liao ... Jordan	Se	APS 5-ID	<i>Structure</i>
Pantothenate synthetase	von Delft... Smith	Se	NSLS X25	<i>Structure</i>
DFPase	Scharff ... Rüterjans	Se	DESY BW7A	<i>Structure</i>
κ -carrageenase	Michel ... Dideberg	Se	ESRF BM14	<i>Structure</i>
<i>H. pylori</i> LuxS	Lewis ... Buchanan	Se	APS 32-ID	<i>Structure</i>
<i>D. radiodurans</i> LuxS	Lewis ... Buchanan	Se	APS 32-ID	<i>Structure</i>
<i>H. influenzae</i> LuxS	Lewis ... Buchanan	Se	APS 32-ID	<i>Structure</i>
TPK	Baker ... Timm	Br	APS 19-ID	<i>Structure</i>
RGSL	Longenecker ... Derewenda	Se	NSLS X9B	<i>Structure</i>
Mj1267 ABC transporter	Karpowich ... Hunt	Hg	APS 19-ID	<i>Structure</i>
CobH	Shipman ... Sacchittini	Hg	NSLS X12C	<i>Structure</i>
SpoIIAA	Seavers ... Wilkinson	Se	ESRF BM14	<i>Structure</i>
MPP	Taylor ... Deisenhofer	Se	ALS 5.0.2	<i>Structure</i>
MMCE	McCarthy ... Baker	Se	SSRL 9-2	<i>Structure</i>
Hydroxynitrile lyase	Dreveny ... Kratky	Hg	ESRF BM14	<i>Structure</i>
MinD	Sakai ... Tanaka	Se	SP8 BL41XU	<i>Structure</i>

HNMT	Horton ... Cheng	Se	NLSL X8C	<i>Structure</i>
MTA/AdoHcy	Lee ... Howell	Se	NLSL X8C	<i>Structure</i>
IGF-1 kinase	Pautsch ... Nar	Hg SIR	DESY BW6	<i>Structure</i>
IGPS	Chaudhuri ... Smith	Se	APS 14-BM-D	<i>Structure</i>
SurE	Zhang ... Savchenko	Se	APS 19-BM	<i>Structure</i>
UspA	Sousa & McKay	Se	SSRL 9-2	<i>Structure</i>
EAS	Lemke & Howell	Se	NLSL X8C	<i>Structure</i>
FAE	Prates ... Davies	Se	ESRF ID29	<i>Structure</i>
PolyB	Carrodegua ... Kisker	Se	NLSL X25	<i>Mol. Cell</i>
eIF4G	Marcotrigiano ... Burley	Se	NLSL X25	<i>Mol. Cell</i>
NusA	Worbs ... Wahl	Hg/Se	DESY BW6	<i>Mol. Cell</i>
Cap binding complex	Mazza ... Cusack	Se	ESRF BM30	<i>Mol. Cell</i>
Polη	Trincao ... Aggarwal	Se	APS 31-ID ?	<i>Mol. Cell</i>
Dbp polymerase	Zhou, Pata & Steitz	Se	NLSL X25	<i>Mol. Cell</i>
Oct-1/PORE	Reményi ... Wilmanns	Br Ir MIR	DESY BW7A	<i>Mol. Cell</i>
TAP : p15	Fribourg ... Conti	Hg	Elettra	<i>Mol. Cell</i>
Nucleoplasmin core	Dutta ... Akey	Se	NLSL X12C	<i>Mol. Cell</i>
Ets-1 : Pax5 : DNA	Garvie, Hagman & Wolberger	Se	APS 14-BM-D	<i>Mol. Cell</i>
PSD-95, SH3-GK	McGee ... Prehoda	Se	ALS 5.0.2	<i>Mol. Cell</i>
PSD-95, SH3-GK	Tavares, Panepucci & Brunger	Se	SSRL 9-2	<i>Mol. Cell</i>
EEA1	Dumas ... Lambright	Zn	NLSL X12C	<i>Mol. Cell</i>
RFCS clamp loader	Oyama ... Morikawa	Ta MIR	SP8 40B2	<i>Mol. Cell</i>
K channel, RCK domain	Jiang ... MacKinnon	Se	CHESS F2	<i>Neuron</i>
IL-10 : sIL-10R1	Josephson, Logsdon & Walter	Se	SSRL 9-2	<i>Immunity</i>
NKG2D : ULBP3	Radaev ... Sun	Se MR	NLSL X9B	<i>Immunity</i>
Activated CheY	Lee ... Wemmer	Se SIR MR	SSRL 1-5	<i>Nat. Struct. Biol.</i>
DNA primase	Augustin, Huber & Kaiser	Se	DESY BW6	<i>Nat. Struct. Biol.</i>
T7 endonuclease 1	Hadden ... Phillips	Se	ESRF ID14-4	<i>Nat. Struct. Biol.</i>
BglII	Lukacs ... Aggarwal	Se MR	NLSL X25	<i>Nat. Struct. Biol.</i>
Leukotri. A4 hydrolase	Thunnis., Nordl. & Haeggström	Yb	ESRF BM14	<i>Nat. Struct. Biol.</i>
Galactosyltrans. LgtC	Perrson ... Strynadka	Se	SSRL 1-5	<i>Nat. Struct. Biol.</i>
Biliverdin reductase	Kikuchi ... Shiro	Ir	SP8 BL44B2	<i>Nat. Struct. Biol.</i>
Antranilate synthase	Morollo & Eck	Se	NLSL X12C	<i>Nat. Struct. Biol.</i>
Chalcone O-Me t'ase	Zubieta ... Noel	Se	SSRL 9-2	<i>Nat. Struct. Biol.</i>
Isoflavone O-Me t'ase	Zubieta ... Noel	Se	SSRL 9-2	<i>Nat. Struct. Biol.</i>

PurH ATIC	Greasley ... Wilson	Se	ALS 5.0.2	<i>Nat. Struct. Biol.</i>
Pteridine reductase	Gourley ... Hunter	Se	ESRF BM14	<i>Nat. Struct. Biol.</i>
CNF1, C domain	Buetow ... Ghosh	Se	SSRL 1-5	<i>Nat. Struct. Biol.</i>
dNK	Johansson ... Eklund	Se	ESRF BM14	<i>Nat. Struct. Biol.</i>
CDP-ME synthetase	Richard ... Noel	Se MIR	SSRL 9-2	<i>Nat. Struct. Biol.</i>
hMms2-hUbc13	Moraes ... Ellison	Se	NLSL X12C	<i>Nat. Struct. Biol.</i>
DppA	Remaut ... van Beeumen	Zn	DESY BW7A	<i>Nat. Struct. Biol.</i>
β -lactam syntetase	Miller ... Rosenzweig	Se	APS 5-ID	<i>Nat. Struct. Biol.</i>
N-TIMP-1	Stetefeld ... Kammerer	Se	DESY X31	<i>Nat. Struct. Biol.</i>
MarR	Alekshun ... Head	Se	NLSL X8C	<i>Nat. Struct. Biol.</i>
Lp Mip	Riboldi-Tunnicliffe ... Hilgenfeld	Zn	Elettra XRD	<i>Nat. Struct. Biol.</i>
APC10	Wendt ... Sondermann	Se	DESY BW6	<i>Nat. Struct. Biol.</i>
SurE	Lee ... Suh	Se	NLSL X8C	<i>Nat. Struct. Biol.</i>
rgRGS	Chen ... Sprang	Se	CHESS F2	<i>Nat. Struct. Biol.</i>
BRCA1, repeats	Williams, Green & Glover	Se	APS 14-BM-D	<i>Nat. Struct. Biol.</i>
ArsC	Zegers ... Messens	Se	DESY BW7A	<i>Nat. Struct. Biol.</i>
SycE	Birtalan & Ghosh	Se	ALS 5.0.2	<i>Nat. Struct. Biol.</i>
LytA	Fernández-Tornero ... Romero	Pt	DESY X31	<i>Nat. Struct. Biol.</i>
HSP 16.9	van Montfort ... Vierling	Se	ESRF BM14	<i>Nat. Struct. Biol.</i>
CesT	Luo ... Strynadka	Se	SSRL9.2	<i>Nat. Struct. Biol.</i>
SigE	Luo ... Strynadka	Se	NLSL X12C	<i>Nat. Struct. Biol.</i>
UDP Galf	Sanders ... Naismith	Se	ESRF ID14-4	<i>Nat. Struct. Biol.</i>
<i>Pa</i> DDAH	Murray-Rust ... McDonald	Se	ESRF BM30	<i>Nat. Struct. Biol.</i>
DPD	Dobritsch ... Lindqvist	Fe SIR	ESRF BM14	<i>EMBO J.</i>
OspCs (HB19)	Kumaran ... Swaminathan	Se	NLSL X12C	<i>EMBO J.</i>
Reovirus $\sigma 3$	Olland ... Harrison	Au MIR	NLSL X12C	<i>EMBO J.</i>
IPP isomerase	Durbecq ... Villeret	Se	ESRF BM14	<i>EMBO J.</i>
Tm MinC	Cordell, Anderson & Löwe	Se	ESRF ID14-4	<i>EMBO J.</i>
dGMII	van den Elsen, Kuntz & Rose	Se	APS 14-BM-D	<i>EMBO J.</i>
α -catenin M fragment	Yang ... Barford	Se	Elettra PX	<i>EMBO J.</i>
Lic.T, PTS domain	van Tilbeurgh, Le Coq & Declerck	Se	ESRF BM14	<i>EMBO J.</i>
Cystathione β -synthase	Meier ... Burkhard	Fe MR	DESY BW7A	<i>EMBO J.</i>
HPr kinase	Fieulaine ... Nessler	Se	ESRF ID14-4	<i>EMBO J.</i>
IL-17F	Hymowitz ... Starovasnak	Hg	SSRL 9-2	<i>EMBO J.</i>
hPMS2	Guarné, Junop & Yang	Se	NLSL X9B	<i>EMBO J.</i>
Uroporph. III synthase	Mathews ... Hill	Se	NLSL X25	<i>EMBO J.</i>

AGX1 : GlcNAc1P	Peneff ... Bourne	Se	ESRF BM14	<i>EMBO J.</i>
Fno	Warkentin ... Shima	Se	ESRF ID14-4	<i>EMBO J.</i>
Cathepsin C	Turk ... Turk	Os ^{MR} SIR	DESY BW6	<i>EMBO J.</i>
TEL, SAM	Kim ... Bowie	Se	NSLS X8C	<i>EMBO J.</i>
Mce1, N	Changela ... Mondragon	Se	APS 5-ID	<i>EMBO J.</i>
α3GalT	Gastinel ... Jaziasse	Se	ESRF 14-4	<i>EMBO J.</i>
RPA70, ssDNA bd	Bochkareva ... Bochkarev	Se	APS 19-ID	<i>EMBO J.</i>
PKS thioesterase	Tsai ... Stroud	Sm ^{MIR} Se	SSRL 9-2	<i>PNAS</i>
RNA tetraplex	Deng, Xiong & Sundaralingam	Br	APS 14-BM-D	<i>PNAS</i>
Arsenate reductase	Bennet ... Su	Se Hg	MAX BL711	<i>PNAS</i>
<i>Sc</i> MDD	Bonanno ... Burley	Se	NSLS X25	<i>PNAS</i>
<i>Ec</i> IDI	Bonanno ... Burley	Se	CHESS F2	<i>PNAS</i>
Ni-Fe-S CO dehydr'ase	Drennan ... Ludden	Fe	ALS 5.0.2	<i>PNAS</i>
BCK	Machius ... Chuang	Se	APS 19-ID APS 19-BM	<i>PNAS</i>
V-ATPase, H subunit	Sagerman, Stevens & Matthews	Se ^{SIR}	SSRL 9-2	<i>PNAS</i>
SmAP	Mura ... Eisenberg	Ir	NSLS X8C	<i>PNAS</i>
MIA	Lougheed ... Handel	Se	ALS 5.0.2	<i>PNAS</i>
Hjc resolvase	Bond ... Hunter	Se	ESRF BM14	<i>PNAS</i>
HYD-P	Deo, Sonenberg & Burley	Se	APS 19-ID	<i>PNAS</i>
Mth, ectodomain	West ... Bjorkman	Pb ^{MIR}	NSLS X8C	<i>PNAS</i>
KDPG aldolase	Allard, Grochulski & Sygusch	Se	NSLS X8C	<i>PNAS</i>
RAP74, CT	Kamada ... Burley	Se	NSLS X25	<i>PNAS</i>
<i>Mj</i> DEAD	Story, Li & Abelson	Se	ALS 5.0.2	<i>PNAS</i>
Urep2	Umland ... Davies	Se	NSLS X9B	<i>PNAS</i>
DsRed	Yarbrough ... Remington	Se	SSRL 9-2	<i>PNAS</i>
<i>Pa</i> nitrite reductase	Cutruzzola ... Brunori	Fe ^{MR}	ESRF BM14	<i>PNAS</i>
Pyrazinamidase	Du ... Kim	Se	SSRL 1-5	<i>Biochemistry</i>
<i>Ne</i> Peroxidase	Shimizu ... Poulos	Fe ^{MR}	ALS 5.0.2	<i>Biochemistry</i>
FabG	Price ... White	Se	NSLS X25	<i>Biochemistry</i>
<i>Nm</i> Heme oxygenase	Schuller ... Poulos	Fe	SSRL 1-5	<i>Biochemistry</i>
<i>Ec</i> Ferredoxin	Kakuta ... Fukuyama	Fe	SP8 BLU41XU	<i>Biochemistry</i>
hIGF-1	Vajdos ... de Vos	Br	SSRL 9-2	<i>Biochemistry</i>
Dihydroorotase	Thoden ... Holden	Os	APS 19-ID	<i>Biochemistry</i>

Moesin	Edwards & Keep	Se	DESY BW7A	<i>Biochemistry</i>
ATP sulfurylase	MacRae, Segel & Fisher	Se SIR	SSRL 9-2	<i>Biochemistry</i>
<i>Tm</i> Xylanase 10A	Notenboom ... Rose	Se SIR	APS 14-BM-D	<i>Biochemistry</i>
<i>Ne</i> Nitrocyenin	Lieberman ... Rosenzweig	Cu	APS 5-ID	<i>Biochemistry</i>
DNA : actinomycin	Robinson ... Wang	Br	APS 19-ID	<i>Biochemistry</i>
Ketobutyrate ligase	Schmidt ... Cygler	Se	NSLS X8C	<i>Biochemistry</i>
AhpF	Wood, Poole & Karplus	Se	ALS 5.0.2	<i>Biochemistry</i>
MurB	Benson ... Baldwin	Se	APS 17-ID	<i>Biochemistry</i>
MAAI	Polekhina ... Parker	Pt SIR	APS 14-BM-D	<i>Biochemistry</i>
Nonaheme cyt. c	Umhau ... Kroneck	Fe	DESY BW6	<i>Biochemistry</i>
[4Fe-4S] ⁰ nitrogenase	Strop ... Rees	Fe	ALS 5.0.2	<i>Biochemistry</i>
CobA	Bauer ... Rayment	Se	APS 19-ID	<i>Biochemistry</i>
UreE	Song ... Hausinger	Se	DESY BW6	<i>J. Biol. Chem.</i>
CBM6	Czjzek ... Gilbert	Se	ESRF ID14-4	<i>J. Biol. Chem.</i>
MtaN	Godsey ... Brennan	Se	SSRL 1-5	<i>J. Biol. Chem.</i>
Syntaxin 1a: SNAP25N	Misura ... Weis	Se	SSRL 9-2	<i>J. Biol. Chem.</i>
PDK2	Steussy ... Hamilton	Se	NSLS X12C	<i>J. Biol. Chem.</i>
NrdH-redoxin	Stehr ... Lindqvist	Se	ESRF BM14	<i>J. Biol. Chem.</i>
MJ0796 ABC	Yuan ... Hunt	Se	NSLS X12C	<i>J. Biol. Chem.</i>
CheA, H domain	Mourey ... Samama	Se	DESY BW7A	<i>J. Biol. Chem.</i>
TonB, CT	Chang ... Wlodawer	Br	NSLS X9B	<i>J. Biol. Chem.</i>
Amylosucrase	Skov ... Gajeda	Se	ESRF BM14	<i>J. Biol. Chem.</i>
Sec22b SNARE	Gonzales, Weis & Scheller	Se	SSRL 9-2	<i>J. Biol. Chem.</i>
FadR : DNA	Xu ... White	Se	APS 19-ID	<i>J. Biol. Chem.</i>
GNA1 NAT	Peneff, Mengin-Lecreux & Bourne	Se	ESRF ID14-4	<i>J. Biol. Chem.</i>
GNA1 : AcCoA	Peneff, Mengin-Lecreux & Bourne	Se	ESRF ID14-4	<i>J. Biol. Chem.</i>
Syntaxin 1a, H3	Misura, Scheller & Weis	Se	ALS 5.0.2	<i>J. Biol. Chem.</i>
GlmU	Sulzenbacher ... Bourne	Se	ESRF BM14	<i>J. Biol. Chem.</i>
β -Hexosaminidase	Mark ... James	Se	APS 14-BM-D	<i>J. Biol. Chem.</i>
OspC	Eicken ... Sacchettini	Se	APS 14-BM-D	<i>J. Biol. Chem.</i>
PITP	Yoder ... Helmkamp	Se	NSLS X12C	<i>J. Biol. Chem.</i>
CMP-NeuAc synthetase	Mosimann ... Strynadka	Se	NSLS X8C	<i>J. Biol. Chem.</i>
NMNATase	Saridakis ... Pai	Se	APS 14-BM-D	<i>J. Biol. Chem.</i>
Abalone SP18	Cohen ... Soltis	Kr	SSRL 9-2	<i>Acta Cryst. D.</i>
<i>Da</i> Cytochrome c7	Czjzek ... Shepard	Fe MR	ESRF D2AM	<i>Acta Cryst. D.</i>
<i>Tt</i> Hsp60, apical	Korolev ... Joachimiak	Rb	APS 19-ID	<i>Acta Cryst. D.</i>

Bacterioferritin	Coehlo ... Carrondo	Fe	ESRF BM14	<i>Acta Cryst. D.</i>
Gf MEP	Hori ... Takio	Zn	SP8 BL45XU	<i>Acta Cryst. D.</i>
Tt YlxR	Osipiuk ... Joachimiak	Se	APS 19-BM	<i>Acta Cryst. D.</i>
Tt Ribosomal TL5	Fedorov ... Nikonov	Se	MAX BL711	<i>Acta Cryst. D.</i>
EsaI	Watson ... Churchill M.Cell 02	Re	NLSL X12C	<i>Acta Cryst. D.</i>
Mk Histone	Fahrner ... Slesarev	Se	NLSL X12C	<i>Prot. Sci.</i>
Carbonic anhydrase	Cronk ... Zhang	Se	ALS 5.0.2	<i>Prot. Sci.</i>
Threonine synthase	Thomazeau ... Biou	Se	ESRF BM14 ESRF BM30	<i>Prot. Sci.</i>
CBM17	Nottenboom ... Rose	Se	APS 14-BM-D	<i>J. Mol. Biol.</i>
S _{F11} RNase	Ida ... Sato	Hg	SP8 BL45XU	<i>J. Mol. Biol.</i>
Sg PPase	Ahn ... White	Se	ESRF BM30	<i>J. Mol. Biol.</i>
Bs PPase	Ahn ... White	Se	ESRF ID14-4	<i>J. Mol. Biol.</i>
RNA bulged duplex	Xiong ... Sundaraligam	Br	APS 14-BM-C?	<i>J. Mol. Biol.</i>
Pa Nitrite reductase	Brown ... Tegoni	Fe	ESRF ID29	<i>J. Mol. Biol.</i>
Cnx1-G	Schwarz ... Schindelin	Se	DESY BW6	<i>J. Mol. Biol.</i>
hPeroxiredoxin 5	Declerq ... Knoops	Br	DESY X31	<i>J. Mol. Biol.</i>
HisC	Sivaraman ... Cygler & Matte	Se	NLSL X8C	<i>J. Mol. Biol.</i>
Ribosomal S8 : RNA	Tishchenko ... Nikonov	Se	ESRF BM30	<i>J. Mol. Biol.</i>
TCR V α	Machius ... Ward	Se	APS 19-ID	<i>J. Mol. Biol.</i>
MoeA	Schrag ... Cygler	Se	NLSL X8C	<i>J. Mol. Biol.</i>
Thiamin pyroph'kinase	Timm ... Harris	Se	APS 19-ID	<i>J. Mol. Biol.</i>
Pe Hb	Schwarz ... Bolognesi	Fe	DESY X31	<i>J. Mol. Biol.</i>
Enoyl CoA isomerase	Mursula ... Wierenga	Re	DESY BW7A	<i>J. Mol. Biol.</i>
Nitroreductase orthorh.	Lovering ... White	Se	ESRF ID14-4	<i>J. Mol. Biol.</i>
NHERF PDZ1	Karthikeyan ... Ladias	Hg	CHESS F2	<i>J. Mol. Biol.</i>
ModG	Delarbre ... Lawson	W	DESY X31	<i>J. Mol. Biol.</i>
Tv Nucleoside hydrolase	Versées ... Steyaert	Sm	DESY BW7A	<i>J. Mol. Biol.</i>
apo Guanylate kinase	Blaszczyk ... Ji	Hg	NLSL X9B	<i>J. Mol. Biol.</i>
Bs GerE	Ducros ... Brannigan	Se	ESRF BM14	<i>J. Mol. Biol.</i>
Ba Ketose reductase	Banfield ... Smith	Zn	SSRL 9-2	<i>J. Mol. Biol.</i>
SMC head domain	Löwe, Cordell & van den Ent	Se	ESRF ID29	<i>J. Mol. Biol.</i>
Aphrodisin	Vincent ... Tegoni	Se	ESRF ID14-4	<i>J. Mol. Biol.</i>
Tt GroEL, apical	Hua ... Joachimiak	Se	APS 19-ID	<i>J. Mol. Biol.</i>
Tiny TIM	Walden ... Taylor	Se	DESY BW7A	<i>J. Mol. Biol.</i>
Auracyanin	Bond ... Freeman ... Willingham	Cu	APS 14-BM-D	<i>J. Mol. Biol.</i>

MTH938	Das ... Arnold	Se	APS 14-BM-D	<i>Proteins</i>
<i>Hi</i> YecO	Lim ... Hertzberg	Se	APS 17-ID NSLS X12C	<i>Proteins</i>
HSF : DNA 10mer	Littlefield & Nelson	Se	SSRL 1-5	<i>Proteins</i>
HSF : DNA 12mer	Littlefield & Nelson	Se/Br	SSRL 1-5	<i>Proteins</i>
ExoS GTPase	Würtele ... Wolf	Se	ESRF BM14	<i>FEBS Lett.</i>
MinD	Cordell & Löwe	Se	ESRF BM14	<i>FEBS Lett.</i>
Sar1	Huang ... Balch	Se	SSRL 9-2	<i>J. Cell Biol.</i>
Acetate kinase	Buss ... Hasson	Se MIR	APS 14-BM-D	<i>J. Bacteriol.</i>
<i>Hi</i> DPK	Obmolova ... Gilliland	Se	APS 17-ID	<i>J. Struct. Biol.</i>
DctD	Meyer ... Farber & Nixon	Se	APS 17-ID	<i>FASEB J.</i>
NKG2D : MIKA	Li ... Strong	Se	ALS 5.0.2	<i>Nature Immunol.</i>
<i>Bs</i> L5 ribosomal protein	Nakashima ... Tanaka	Se	SP8 41XU	<i>RNA</i>
<i>Ph</i> DNA primase	Ito ... Hanaoka PRELIM.	Se	SP8 41XU	<i>J. Biochem.</i>

Supplemental Table 2

Chronicle of MS-Rated SAD Phased Structures through 2001

(Published results meeting *Macromolecular Structures* criteria)

1981						
Crambin	Hendrickson & Teeter	S	CuK α	<i>Nature</i>		
1987						
Myohemerythrin	Sheriff, Smith & Hendrickson	Fe Model Resolved	CuK α	<i>J. Mol. Biol.</i>		
1991						
Neurophysin	Chen ... Wang	I	CuK α	<i>PNAS</i>		
Cd, Zn Metallothionein	Robbins ... Stout	Cd	CuK α	<i>J. Mol. Biol.</i>		
1995						
IF3, N	Biou ... Ramakrishnan	Pb	NSLS X12C	<i>EMBO J.</i>		
1996						
GFP	Ormö ... Remington	Se	NSLS X4A	<i>Science</i>		1ema
Halophilic ferredoxin	Frolova ... Shoham	Fe SAD+SIR	CuK α	<i>Nat. Str. Biol.</i>		1doi
1998						
SAH hydrolase	Turner ... Howell	Se	NSLS X12C	<i>Nat. Str. Biol.</i>		1a7a
Cs gramicidin	Wallace & Ravikumar	Cs	CuK α	<i>Science</i>		1c4d
1999						
Ferredoxin	Bes ... Sheldrick	Fe MR	CuK α	<i>Structure</i>		1awd
2000						
APT1	Devedjiev ... Derewenda	Br-SAD	NSLS X9B	<i>Structure</i>		(1fj2)
DsRed	Wall, Socolich & Raganathan	Se-SAD	APS 19-ID	<i>Nat. Str. Biol.</i>		(1ggx)
PAK1	Lei ... Harrison	Hg SAD	APS 14BM-C	<i>Cell</i>		(1f3m)
Hp0525 traf ATPase	Yeo ... Waksman	Se SAD	APS 19ID	<i>Mol. Cell</i>		1g6o
Obelin	Liu ... Wang	S-SAD	APS 17-ID	<i>Prot. Science</i>		1el4

2001

UPP synthase	Ko ... Liang	Se SAD NSLS X4A	<i>J. Biol. Chem.</i>	1jp3
SRP19 : RNA	Wild, Sinnig & Cusack	Br-SAD ESRF ID29	<i>Science</i>	1jid
β -arrestin	Han ... Shubert	Se-SAD NSLS X25 MR	<i>Structure</i>	
Calnexin	Schrag ... Cygler	Sm-SAD NSLS X8C	<i>Mol. Cell</i>	1jhn
RF2	Vestergaard ... Kjeldgaard	Se-SAD Elletra ?	<i>Mol. Cella</i>	
Ps carboxyl proteinase	Wlodawer ... Oda	Br SAD NSLS X9B	<i>Nat. Struct. Biol.</i>	
Nucleotidyl transferase	Barton ... Nikolov	Se SAD NSLS X9B	<i>Nat. Struct. Biol.</i>	
DAPK	Tereshko ... Egli	Hg SAD APS 5-ID	<i>Nat. Str. Biol.</i>	1jks
DOPA decarboxylase	Burkhard ... Malashkavitch	Ta SAD DESY BW6 DESY X31	<i>Nat. Struct. Biol.</i>	
Xrcc4 : DNA ligase	Sibanda ... Pelligrini	Se SAD ESRF BM14	<i>Nat. Str. Biol.</i>	1ik9
OmpT	Vandeputte-Rutten ... Gros	Se SAD ESRF ID14-4	<i>EMBO J.</i>	1i78
Ydc2 resolvase	Ceschini ... Barrett	Se SAD ESRF ID14-4	<i>EMBO J.</i>	1kcf
Gp2.5	Hollis ... Ellenberger	Se SAD NSLS X25	<i>PNAS</i>	1je5
Neurolysin	Brown ... Rodgers	Se SAD APS 14BMC? SIR	<i>PNAS</i>	
P67 phox	Grizot ... Pebay-Peyroula	Se SAD ESRF ID29	<i>J. Biol. Chem.</i>	
human β -defensin-1	Hoover, Chertov & Lubkowski	Br SAD NSLS X9B	<i>J. Biol. Chem.</i>	
PCP	Dauter, Li & Wlodawer	Br SAD NSLS X9B	<i>Acta Cryst. D.</i>	1gal
TrpRS : TrpAMP	Retailleau ... Carter	Se SAD NSLS X12C	<i>Acta Cryst. D.</i>	1i6l
Nitroreductase tetrag.	Lovering ... White	Se SAD ESRF ID14-4	<i>J. Mol. Biol.</i>	1icr
Hu. ferrochelatase	Wu ... Wang	Fe SAD CuK α	<i>Nat. Str. Biol.</i>	1hrk
Cytochrome C2	Camara-Artigas, Williams & Allen	Fe SAD CuK α MR	<i>Acta Cryst. D.</i>	1gn9

Supplemental Table 3

MAD & SAD Phased Structures by Beamline and Year
(Published results rating *Macromolecular Structures* abstracts)

	81	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	Total
CuK α	1	1			1	2					1		1	1		2	10
SSRL 1-5			1				1		1	1		2	4	9	8	10	37
PF 14A				1	2				1				1				5
PF 6A2					1						1						2
LURE D23						1											1
CHESS F1							1										1
NLSL X4A								1	4	10	18	12	19	11	19	10	104
NLSL X12C								1		3	2	6	7	17	25	19	80
CHESS F2									1	3	2	4	8	15	8	6	47
SRS 9.5									1		1				1		3
NLSL X25										1		2	1	3	6	14	27
ESRF ID10										1							1
DESY BW6										1	1	2	1	7	10	10	32
PF 18B											2	2		1	2		7
ESRF BM14											2	5	8	24	29	27	95
ESRF BM2											1	1		3			5
DESY X31												2	3	10	6	8	29
APS 19-ID (SBC)												1	1	10	10	19	41
Elettra 5.2												1		2	2	4	9
NLSL X9B													1	6	13	12	32
NLSL X12B													1				1
NLSL X8C													2	3	10	14	29
LURE DW21b													1	1	1		3

ALS 5.0.2														2	13	21	18	54
ESRF ID2															1			1
DESY BW7A															2	10	12	24
ESRF ID14-3															1	2		3
APS 17-ID (IMCA)															1	7	4	12
APS 5-ID (DND)															1	3	6	10
APS 14-BMD (BioCARS)															1	12	15	28
ESRF BM1A (SNBL)															1			1
ESRF ID14-4																9	19	28
SSRL 9-2																8	25	33
SPring8 45XU																7	4	11
ESRF BM30																3	6	9
APS 14-BMC (BioCARS)																2	3	5
SPring8 44B2																1	1	2
ESRF ID29																	5	5
ESRF D2AM																	1	1
APS 19-BM																	4	4
SPring8 40B2																	2	2
APS 32-ID																	3	3
APS 31-ID																	1	1
SPring8 41XU																	4	4
MAX BL711																	2	2
Unspecified																1		1
TOTAL	1	1	1	1	4	3	2	2	8	20	31	40	61	145	235	290	845	
Doubles														1	4	5	6	16
Triples															1			1
Quadruple																	1	1
NET	1	1	1	1	4	3	2	2	8	20	31	40	60	139	230	281	824	

Supplemental Table 4

MAD & SAD Phased Structures by Element and Year
 (Published results rating *Macromolecular Structures* abstracts)

Element	Z	81	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	Total	SAD
S	16	1														1		2	2
Fe	26		1			1		1		1	1	2	4	3	12	12	17	55	5
Co	27															1		1	
Ni	28															2		2	
Cu	29			1								1	1	1	1	2	2	9	
Zn	30										1	1	2	2	4	3	6	19	
Ga	31															1		1	
As	33														1			1	
Se	34				1	2		1	2	4	8	19	27	43	81	164	195	547	16
Br	35											1	2	4	7	9	16	39	5
Kr	36																1	1	
Rb	37																1	1	
Cd	48						1											1	1
I	53						1											1	1
Cs	55													1				1	1
Sm	62												1	1		2	3	7	1
Eu	63																1	1	
Gd	64											2				1		3	
Tb	65														2			2	

Ho	67					1								1					2	
Er	68															2			2	
Yb	70									2						2	1		5	
Lu	71														1	1	1		3	
Ta	73															2	4		6	1
W	74									1					1	4	1		7	
Re	75																2		2	
Os	76										1	1			2	1	4		9	
Ir	77														2		3		5	
Pt	78					1					3				5	7	3		19	
Au	79												1	1	3	3	5		13	
Hg	80								2	5	2	2	3	22	17	15			68	2
Tl	81																1		1	
Pb	82									1	1		1	1	2	4			10	1
U	92								1	1				1		2			5	
TOTAL		1	1	1	1	4	3	2	2	8	20	33	41	61	146	239	288		851	36
Doubles												2	1	1	7	6	5		22	
Triples																	1		1	
Quads																1			1	
NET		1	1	1	1	4	3	2	2	8	20	31	40	60	139	230	281		824	
SAD		1	1				2				1	2		2	1	5	21			36
% Se		0	0	0	100	50	0	50	100	50	40	61	68	72	58	71	69		66	

Supplemental Table 5

**Chronicle of MS-Rated MAD & SAD Structures
from Elements beyond those in the 2001 Set**

		2003			
Troponin TnT core	Takeda ... Maeda		Os Sr	SP8 BL45XU? SP8 BL44B2	<i>Nature</i>
				Resonance MAD	
		2004			
Glucose isomerase P ₂ ₁ ₂ ₁ ₂	Ramagopal ... Dauter		Mn	NSLS X9B	<i>Acta D</i>
			Remote		
		2007			
Trichoderma xylanase	Moiseeva & Allaire		Ba	NSLS X6A	<i>Acta D</i>
			Remote		
		2008			
MINTS peptide (18)	Fütterer ... Alleman		Pd	CuK α ESRF ID 14-4	<i>Acta D</i>
			Remote		
		2010			
ATV viral prtotein	Goulet ... Ortiz-Lomardia		Cl/S	AS MX2	<i>Acta D</i>
			Remote		
Human S100	Koch ... Fritz Koch & Fritz		Ca/S	SLS X06	<i>Acta F</i> <i>FEBS J</i> 2012
			Remote		
		2011			
Centriole hub	Kitagawas Steinmetz		Nd	SLS X06	<i>Cell</i>
			Resonance		
		2013			
Bax	Czalobar.... Colman		Pr	AS MX2	<i>Cell</i>
			Remote		