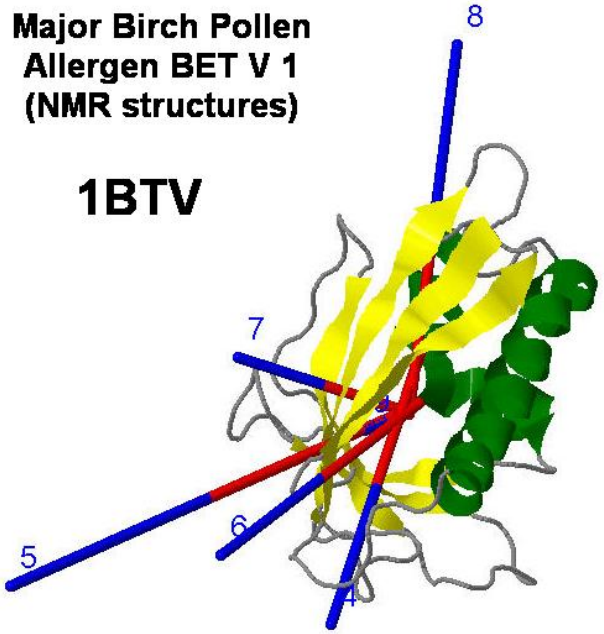
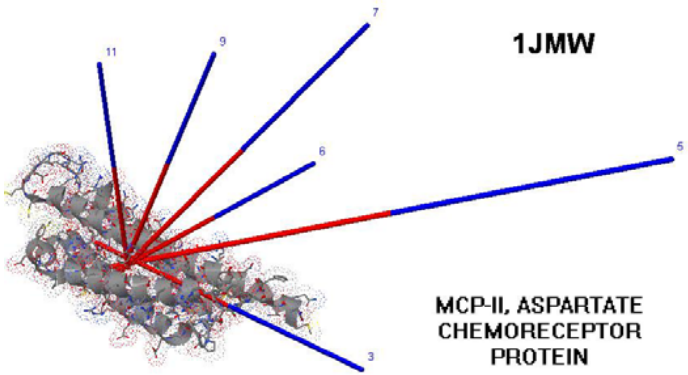
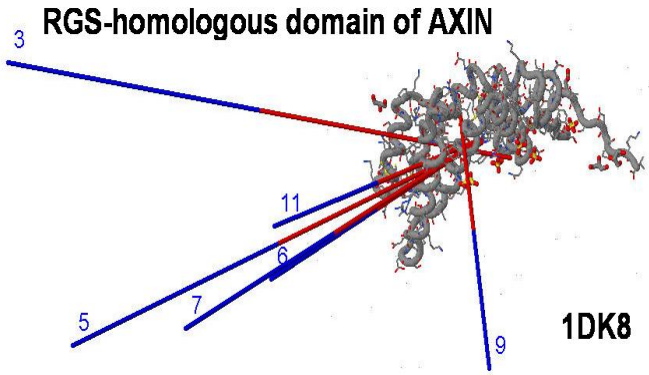
# Electric Moments GALLERY

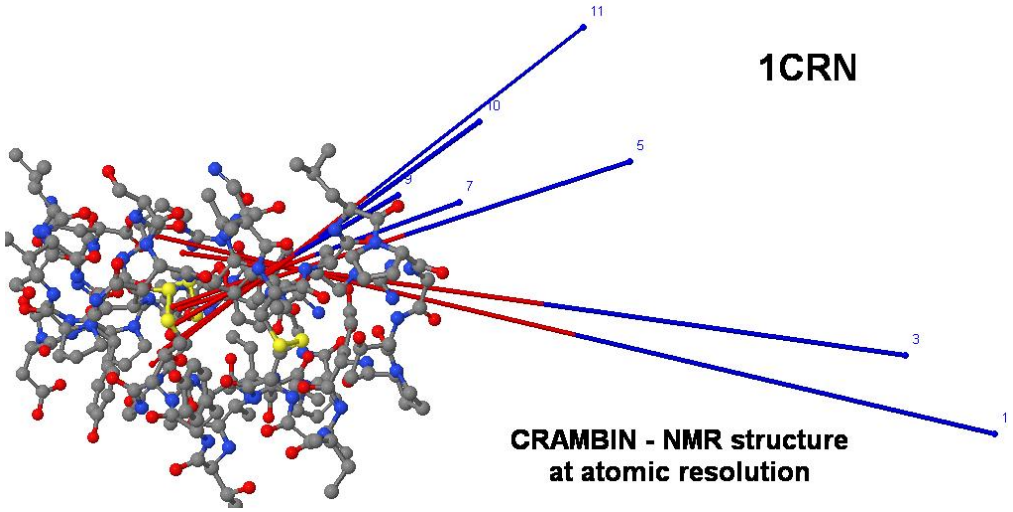
**(Some representative from our EM-Data Base)**

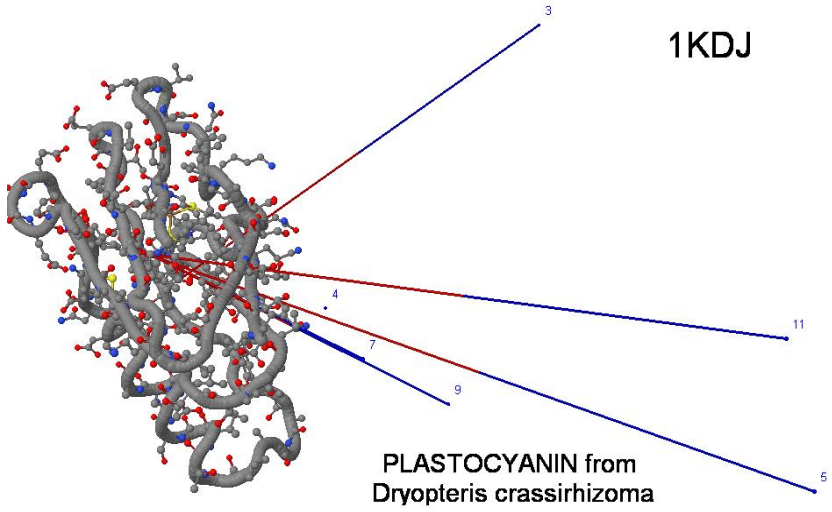
*) See below comments to some of models (marked by PDB-ID)

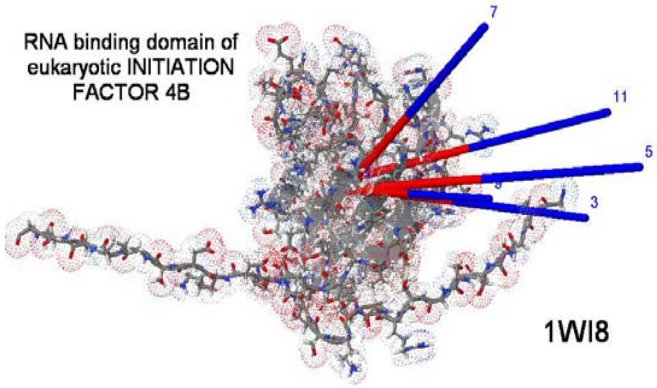


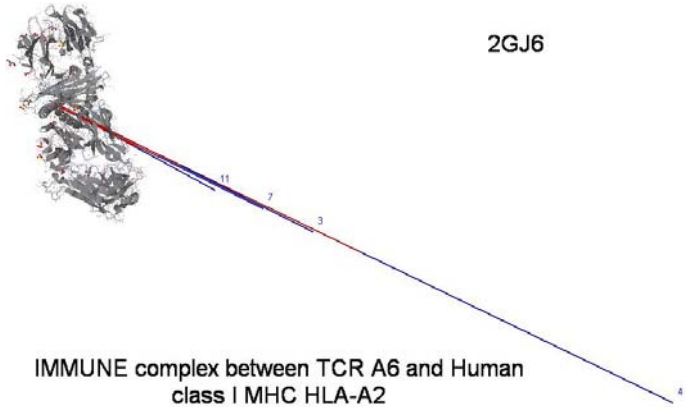



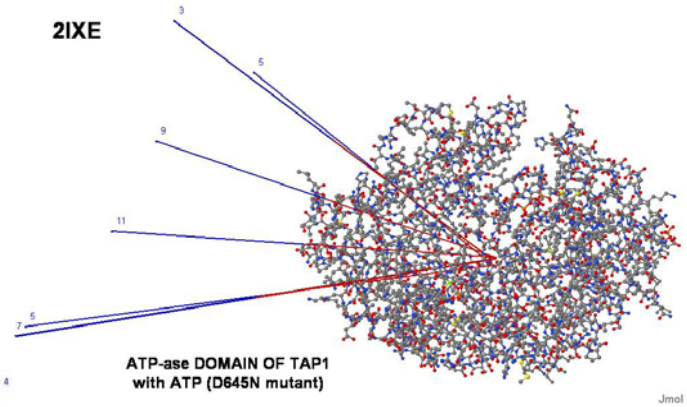



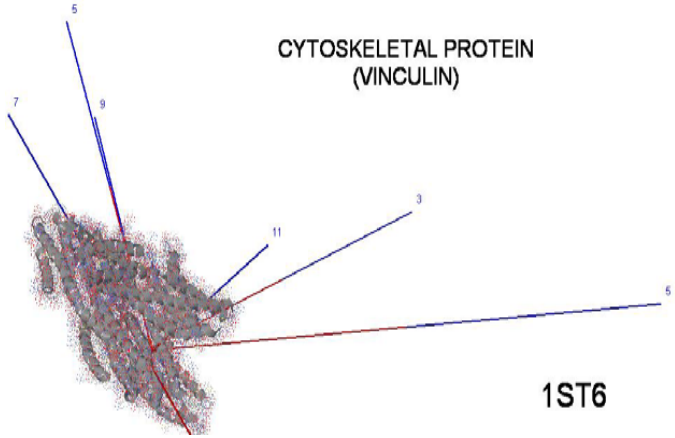



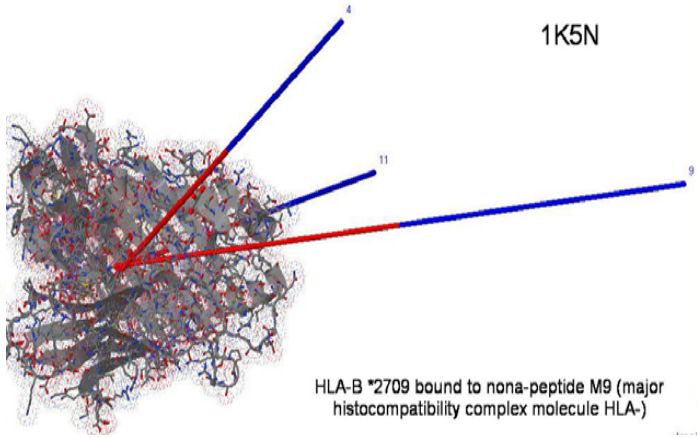



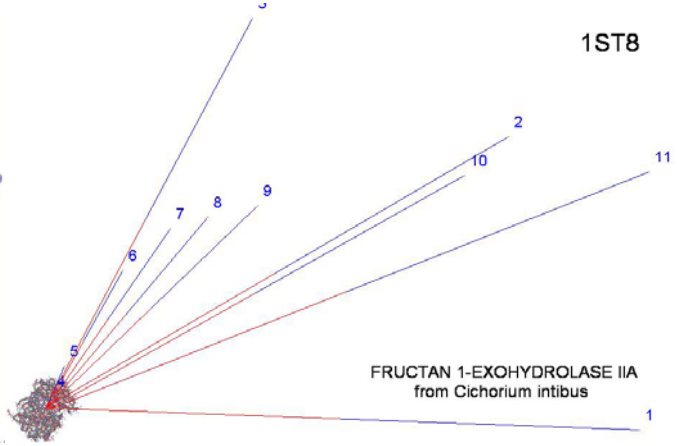

RNA binding domain of
eukaryotic INITIATION
FACTOR 4B
1WI8

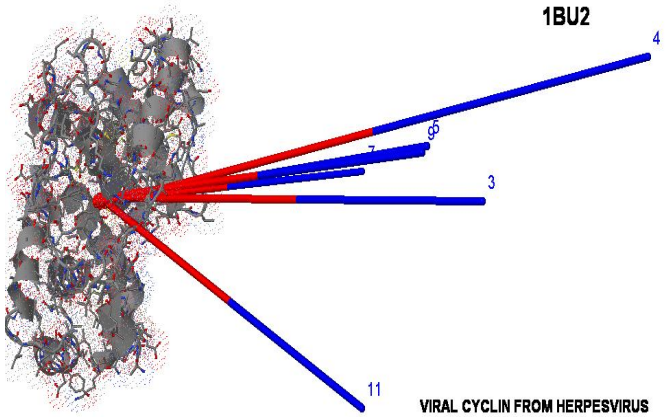

2GJ6
IMMUNE complex between TCR A6 and Human
class I MHC HLA-A2

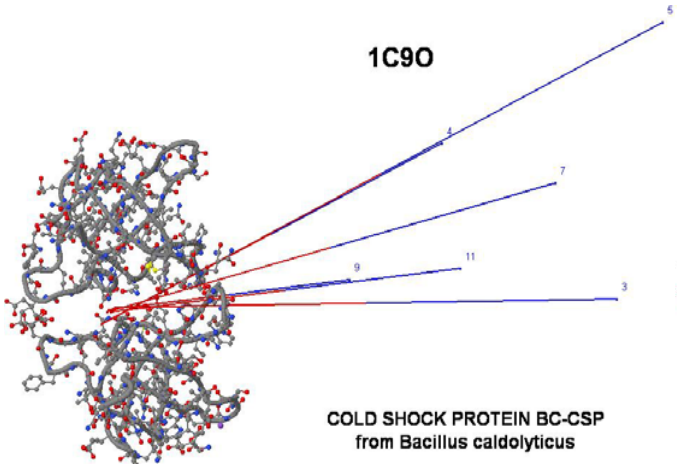

2IXE
ATP-ase DOMAIN OF TAP1
with ATP (D645N mutant)
Jmol

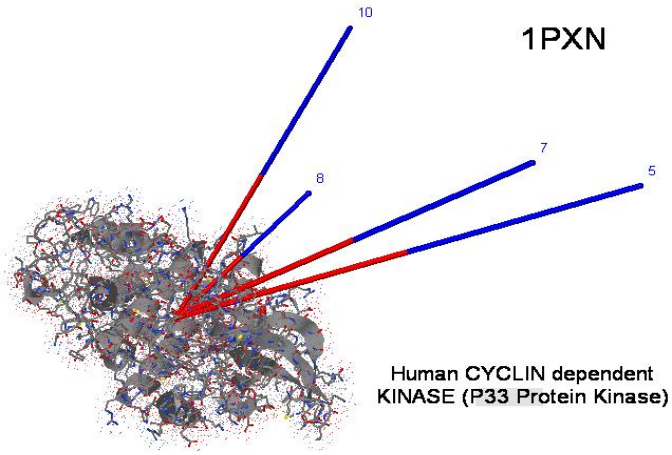

CYTOSKELETAL PROTEIN
(VINCULIN)
1ST6

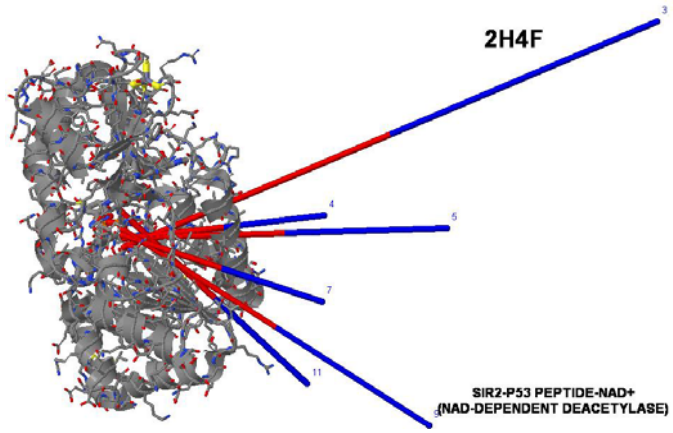

1K5N
HLA-B *2709 bound to nona-peptide M9 (major
histocompatibility complex molecule HLA-)

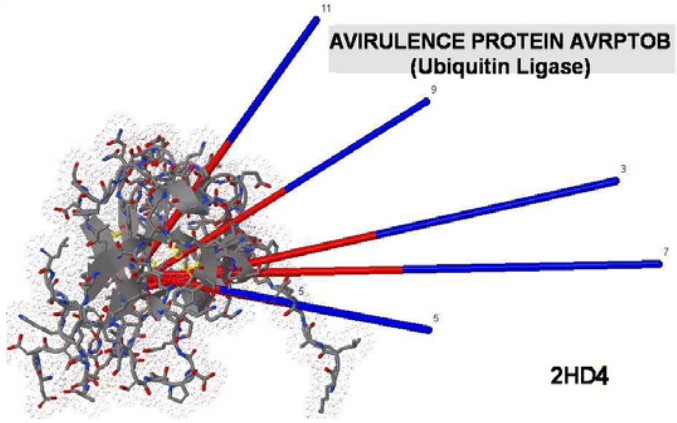

1ST8
FRUCTAN 1-EXOHYDROLASE IIA
from Cichorium intibus

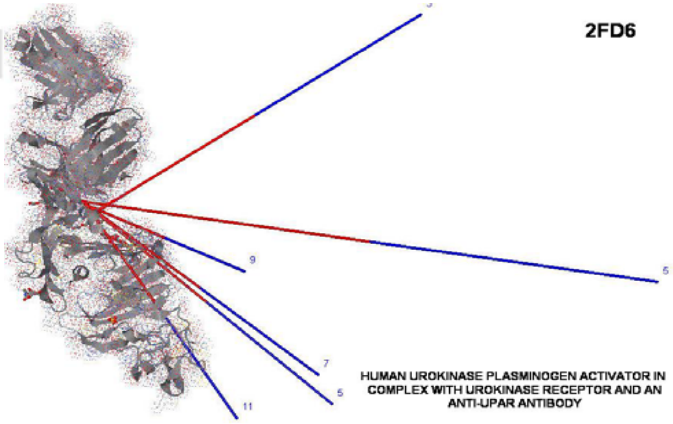

1BU2
VIRAL CYCLIN FROM HERPESVIRUS

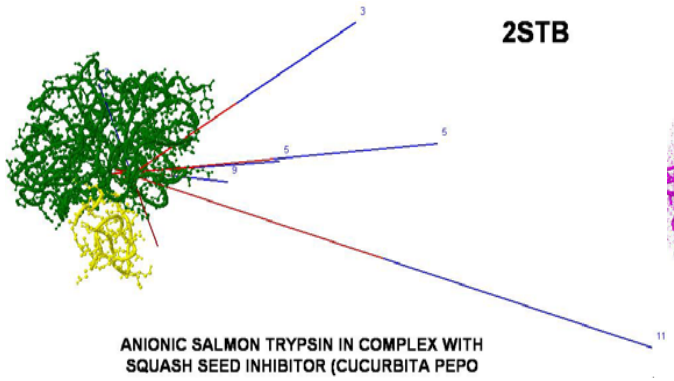

1C9O
COLD SHOCK PROTEIN BC-CSP
from Bacillus caldolyticus

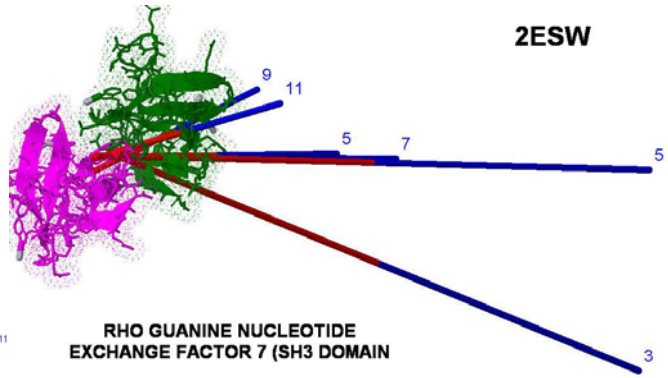

1PXN
Human CYCLIN dependent
KINASE (P33 Protein Kinase)

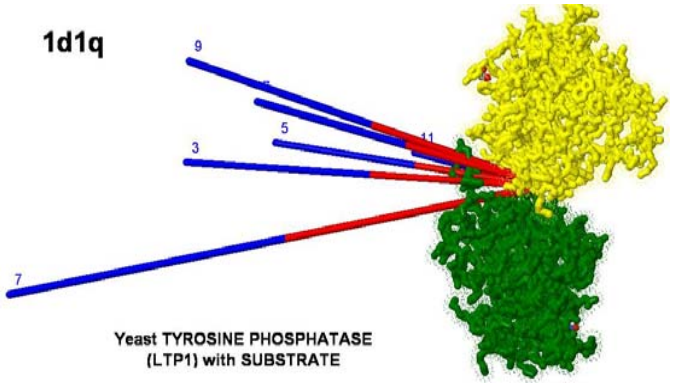

2H4F
SIR2-P53 PEPTIDE-NAD+
(NAD-DEPENDENT DEACETYLASE)

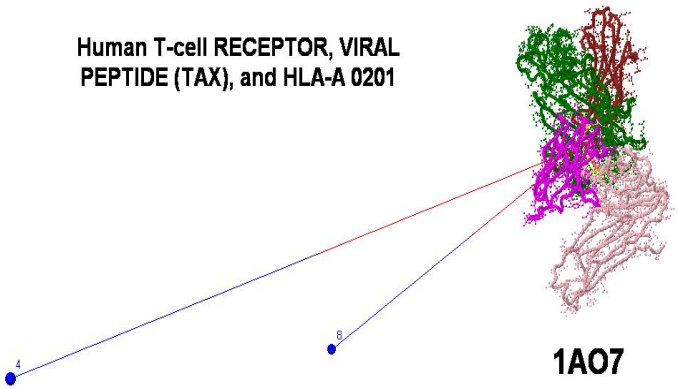

AVIRULENCE PROTEIN AVRPTOB
(Ubiquitin Ligase)
2HD4

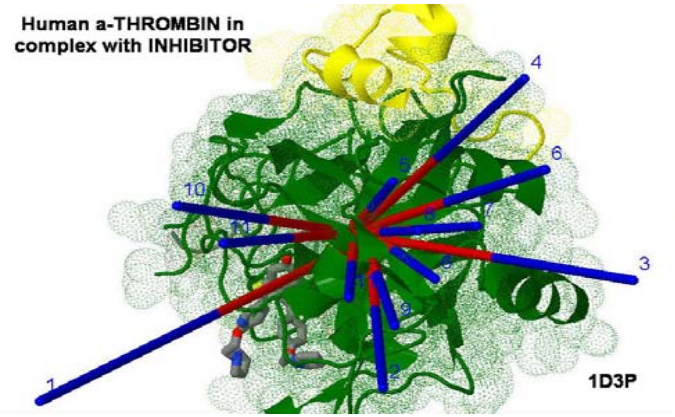

2FD6
HUMAN UROKINASE PLASMINOGEN ACTIVATOR IN
COMPLEX WITH UROKINASE RECEPTOR AND AN
ANTI-UPAR ANTIBODY

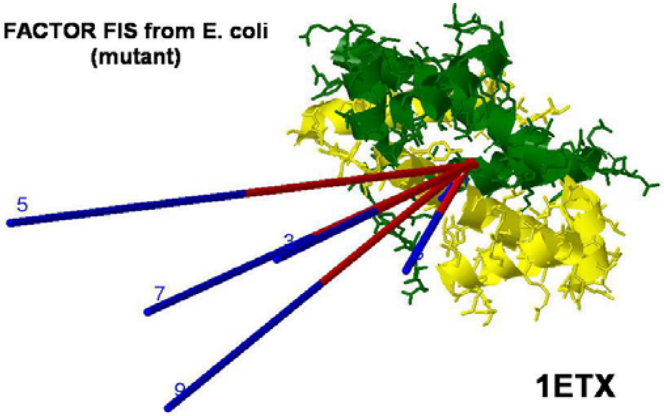

2STB
ANIONIC SALMON TRYPSIN IN COMPLEX WITH
SQUASH SEED INHIBITOR (CUCURBITA PEPO

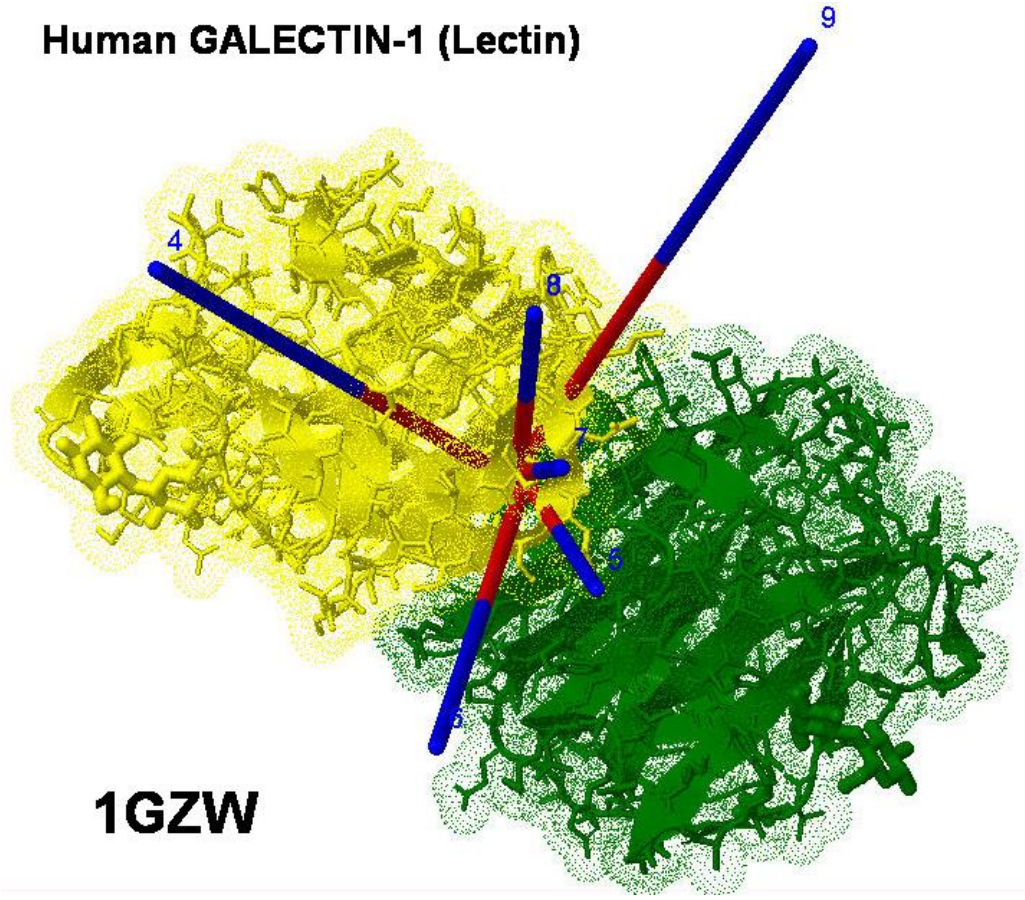

2ESW
RHO GUANINE NUCLEOTIDE
EXCHANGE FACTOR 7 (SH3 DOMAIN


1d1q
Yeast TYROSINE PHOSPHATASE
(LTP1) with SUBSTRATE


Human T-cell RECEPTOR, VIRAL
PEPTIDE (TAX), and HLA-A 0201
1AO7


Human a-THROMBIN in
complex with INHIBITOR
1D3P


FACTOR FIS from E. coli
(mutant)
1ETX




Some comments (from top to down):

NB: All proteins are in APO-forms without removing of prosthetic groups and ions (i.e. extra charges) .

General: **All moments start from the charge "center of gravity". Vectors are directed from negative to positive side of the moments. Numbers at positive ends correspond to pH at which calculation is done (usually at step 2 pH units). For most cases at pH 4-10 vectors lays in same plane and at pH of acid/alkaline denaturation the vector origins are changed. The dipole vectors (at pH=pI) was omitted to not miss order of others.**

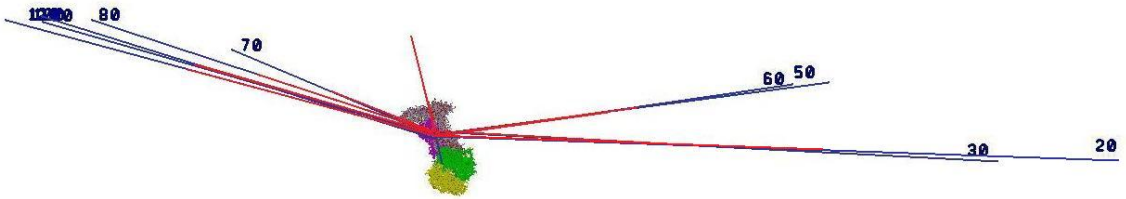
**1CRN** – **For small and hydrophobic proteins (like crambin) each electric moment has own origin, because small number of titrable groups.**

**2GJ7** – **In HLA-A2 complex all vectors are bring together but not overlapped.**

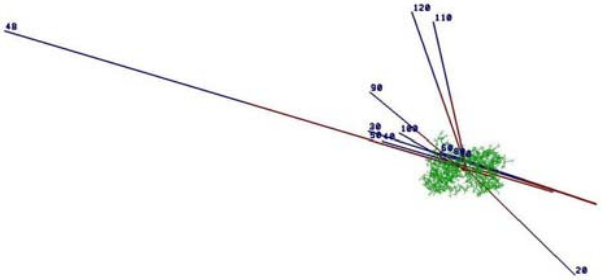
**1ST8 - Fructan Exo-Hydrolase has enormous large vectors (in comparison with many others proteins). Relative lengths are kept in same ratio.**

**1AO7 – In case of large complexes calculation of 3D-EPF derived moments can be very time consuming process. Here are shown only two vectors (at pH 4 and 8) witch consume 30 hours on our PHEMTO server.**

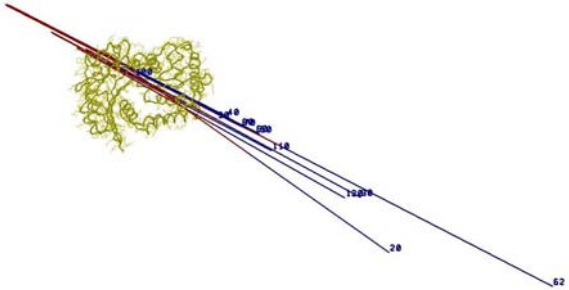
# Cytochrome Reductase (CytBC1)



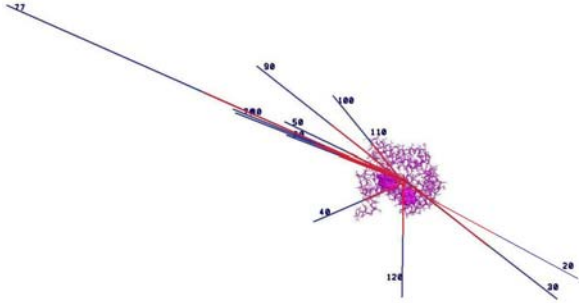
**ABCDEFGHIJGK-chains**



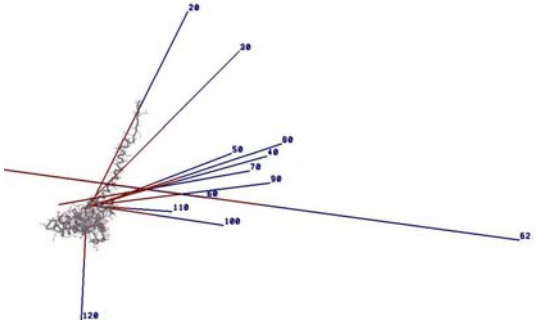
**A-chain**



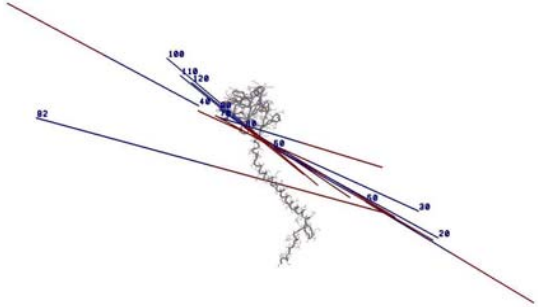
**B-chain**



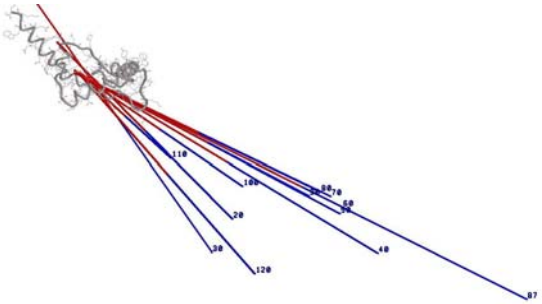
**C-chain**



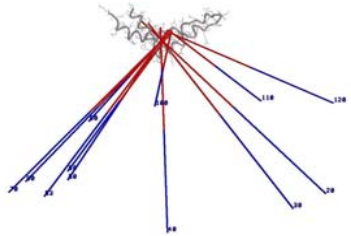
**D-chain**



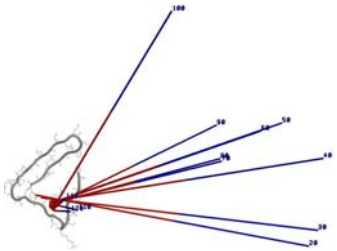
**E-chain**



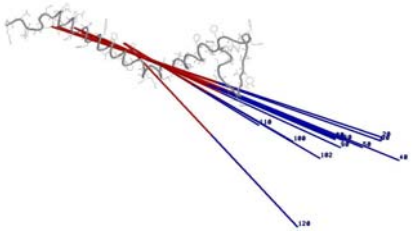
**F-chain**



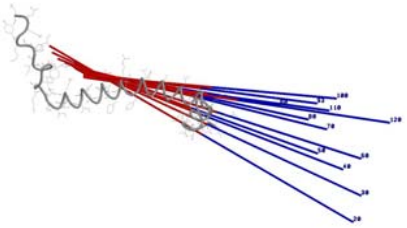
**H-chain**



**I-chain**



**J-chain**



**G-chain**

# pH DEPENDENT ELECTRIC MOMENTS (scalars) of CYTOCHROME REDUCTASE