PSSJランションセミナー, 2008年6月11日

PDBj: Protein Data Bank Japan 「日本蛋白質構造データバンク」

活動とサービスについて

# 中村春木



大阪大学蛋白質研究所 http://www.pdbj.org/



- •Structure Data curation and editing
- •Structure Data browsing and downloading

# PDBj members at IPR, Osaka Univ.





**Chemical Component** 



PROTEIN DATA BANK	Welcome to the Worldwide Biotem Data Dan					
	Home	wwPDB Agreement	Statistics	FAQ	News	Contact Us
Access the PDB FTP:						
RCSB PDB		lwide Protein Data Bank (wwP essing and distribution centers				
MSD EBI	PDB (US/	A) MSD-FRI (Furone) and PD	Bj (Japan) The	BMRB (U	SA) group	joined the
PDBj		n 2006. The mission of the wwf macromolecular structural dat				
Deposit Data to the PDB:	communit			ma pasmo	J. M. M. M. M. C. C.	givesi
RCSB PDB	This site r	provides information about serv	ices provided by	the indivi	dual memb	er organizations
MSD EBI						
PDBj	22-Janua	ary 2008				
BMRB	ZZ-Janus	ary-2000				
Search wwPDB Websites:	Time-st	amped Copies of PDB Ar	chive Availab	le via F	TP	
Search RCSB PDB	A time-st	amped snapshot of the PDB a	rchive (ftp://ftp.x	o,dbaww	ra) as of Ja	anuary 7, 2008
Search MSD EBI		added to ftp://snapshots.rcsl			3/	
Search PDBj	Disapshots of the FDD have been archived annually since 2004. It is hoped that these		hat these			
Search BMRB						
PDB Archive Snapshots		t at ftp://snapshots.rcsb.org/		s.sh may	be used to	make a local
PDB Remediation	copy of a	snapshot or sections of the s	napshot.			
Description	The direc	tory 20080107 includes the 48	,161 experiment	ally-deter	mined coor	dinate files that

were current as of January 7, 2008. Coordinate data are available in PDB, mmClF, and XML

formate. The date and time stamp of each file indicator the last time the file was modified

# International collaboration in wwPDB

- 1) Curation, data processing, and registration are made by all the members, collaborating with each other.
- 2) We have a single data archive, which is looked after by one "archive keeper (RCSB)".
- 3) Data format and new descriptions will be discussed among the members.

Rutgers

RCSB

**BMRB** 

UCSE

**EBI** 

**NIST** 

**PDB**j

4) Members are encouraged to develop their own browsers, viewers, and other APIs and services.

(Berman, Henrick & Nakamura (2003) Nat. Struct. Biol. 10, 980)



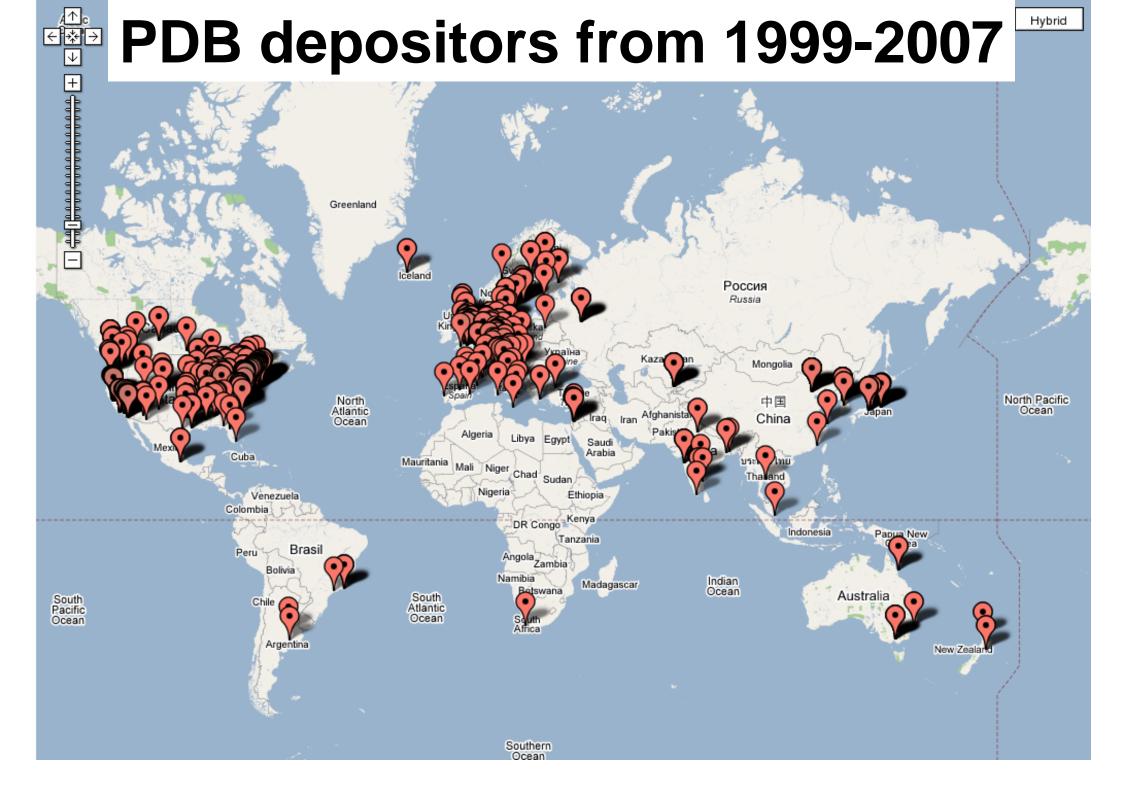




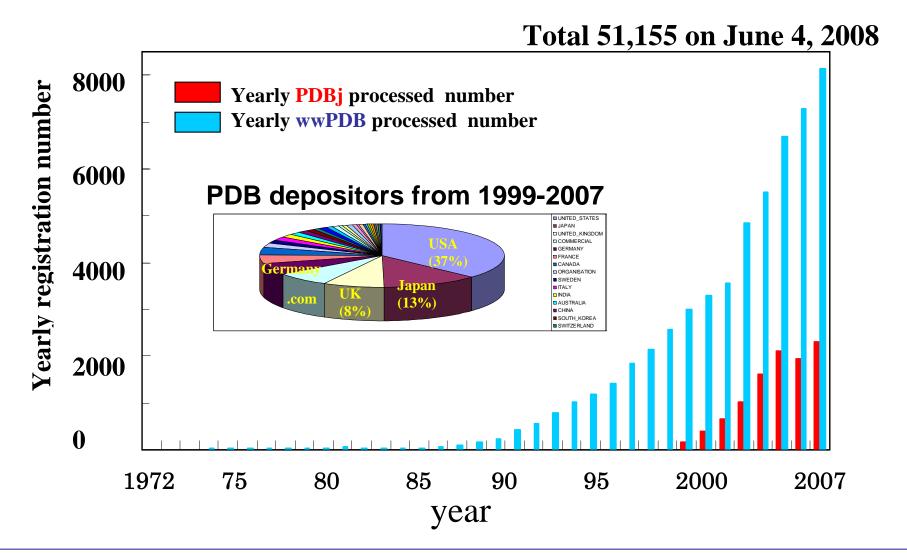








## Processed data numbers at PDBj



We process 25-30 % deposited data of the entire world, mainly from Asian and Oceania regions

## wwPDB FTP Traffic



• Approximately 6,235,000 files were downloaded in June 2007 (RCSB PDB, EBI-MSD, and PDBj)

## How are the data qualities kept?

- Quality of each structure is strictly examined when deposited. Both the depositor himself/herself and our primary annotators examine it. Without the approval, the PDBID cannot be authorized.
- Experimental information (Structure Factors/ Distance Restraints) are mandatory to be deposited together with the atom coordinates from February 1<sup>st</sup>, 2008.

English

Chinese

ヘルブ お問い合わせ

#### トップページ

データ登録 >>

ADIT: PDB Deposition ADIT-NMR

#### 検索 >>

Search PDB (xPSSS)

Sequence-Navigator

Structure-Navigator

EM Navigator

Search NMR Data (BMRB)

Status Search

#### サービス&ソフトウェア >>

Protein Globe

ASH

M: Graphic Viewer

#### 派生データベース >>

eF-site/eF-seek/eF-surf

eProtS.

ProMode.

#### ダウンロード >>

FTP Archive/rsvnc Service

#### 修正データについて

リンク集

日本蛋白質構造データバンク(PDBj: Protein Data Bank Japan)は、JST-BIRDの支援を受け、米国 RCSBおよび欧州EBIと協力して、生体高分子の立体構造データベースを国際的に統一化されたアーカイブ として運営するとともに、様々な解析ツールを提供しております。

#### データ登録

PDB登録



構造解析データ登録のご案内 >>

NMRデータ登録



#### 検索

PDB検索



PDB ID O Keywords

	Go
	-

詳細条件検索 >>

NMRデータ検索



- Accession number
- Deposition code





National Project on Protein Structural and Functional Analyses

Tanpaku.org

#### 最新情報

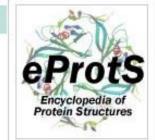
2008/1/10

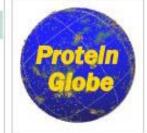
2008年3月3日に、PDBi講習会を大阪大学中之島センターで開催いたします。(お申し込 み/詳細)

2007/12/20

rsvncによるPDBアーカイブのダウンロードサービスを始めました。









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Go

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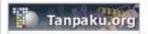
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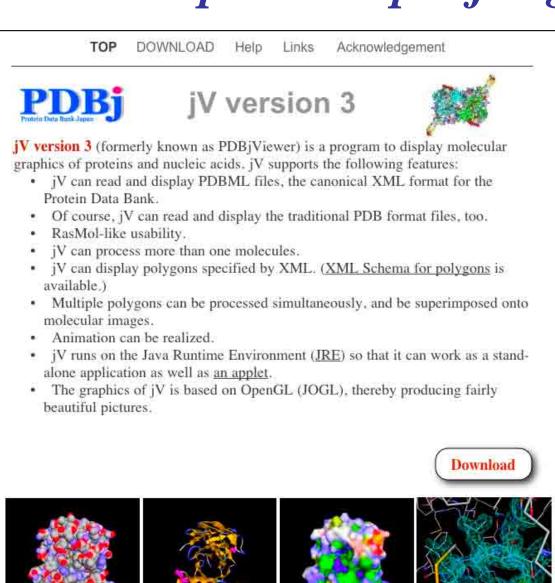




National Project on Protein Structural and Functional Analyses

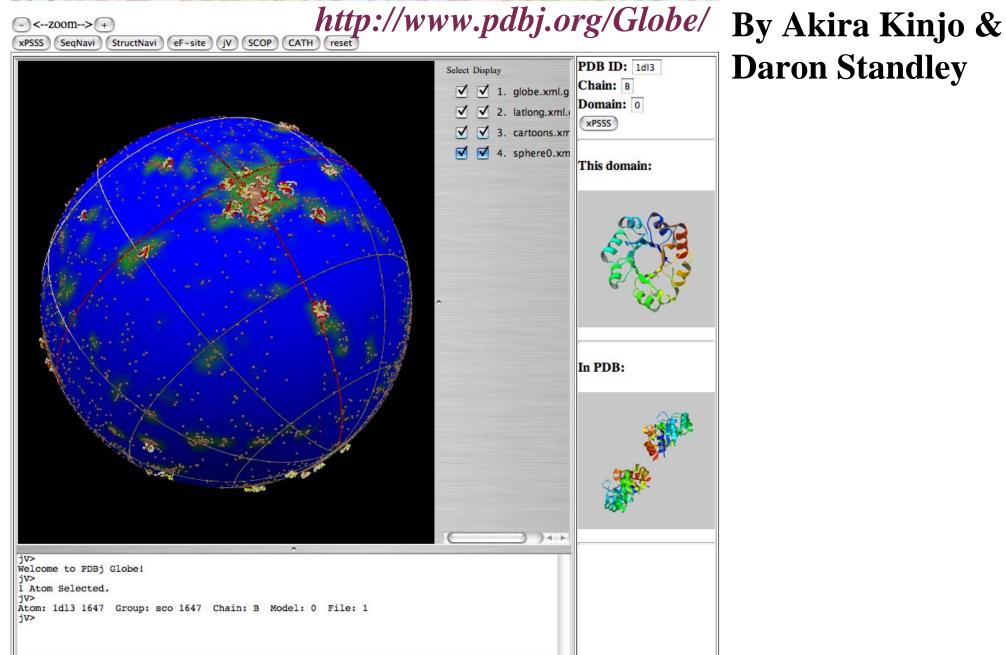


# Graphic viewer: jV version 3.5 Access to http://www.pdbj.org/jV/



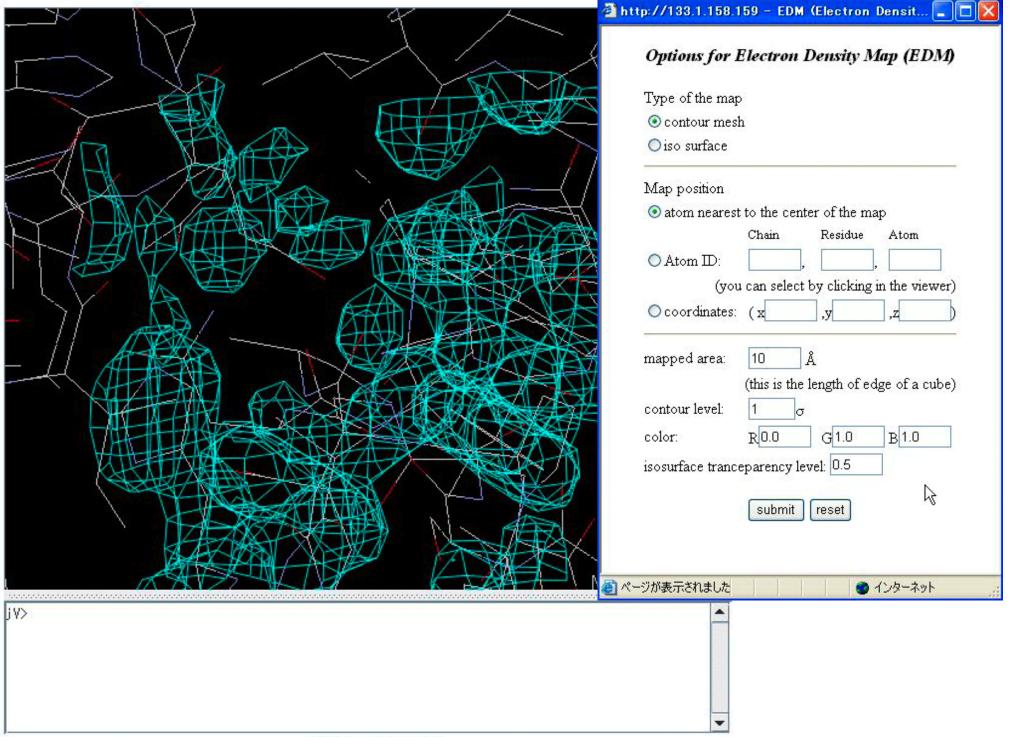
### PDBJ Protein Globe (pre-beta)

A graphical user interface (GUI) to the PDBj database. [Description | Tutorial]



### **Protein Globe**

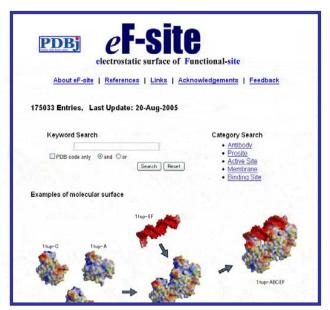
**Daron Standley** 



# Additional Information in our XML databse: PDBMLplus

Total number in PDBMLplus	51,155
GO Information (Biological Process, Molecular Function, Cellular Component)	20,186
<b>Extracted from Literatures by Annotators</b>	19,697
Information of binding site residues from HETATM	28,143
Function Information from Uni-Prot (ACT_SITE, BINDING, DNA_BIND, NP_BIND, ZN_FING, TRANSMEM)	27,573
Function Information from CATRES/extCATRES- EBI-CSA-EBI-	2,621 18,578
Primary Citation Information	45,268

## Development of other Databases and Services



Protein Molecular Surface Database, eF-site (Kinoshita & Nakamura)

Topics Introduction to	eProtS
Introduction to Decision to Decision Structural Decision Structural Decision Structural Decision by Christian Introduction by Historical Functions by Historical Functions by Historical Constitute of Chemisteria (Constitute) Statistical Constitute of Chemisteria (Constitute) Constitute of Chemisteria (Constitute) Constitute of Chemisteria (Constitute) Constitute of Chemisteria (Chemisteria (Chemist	Encyclopedia of Protein Structures
Japanese remon Japan Search	eProtS: Encyclopedia of Protein Structures
Recent Changes structure and function. The diversity of protein structure and function structure and	The ePwsS, Encyclopedia of Protein Structure, is a dictionary with pictures of the protein three-dimensional structures, for understanding the tertiary structures and the biological linetions for several selected protein molecules that are particularly important for biology. This Web site can be prepared for non-specialists of protein structures. When the moleculargraphics software, PDB[N] viewer, is available in your hardware system, you may be able to manipulate the protein molecules on the display interactively by mouse. (IE 5 flor later) or NN 6.0(or later) are recommended.)  Table of Contents

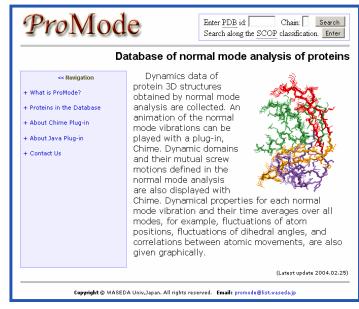
Encyclopedia of Protein Structures, eProtS (Kinjyo, Kudo, & Ito)



Search for Similar Surface, eF-seek (Kinoshita & Nakamura)

Keyword / ID S	earch		
Leywords:		Search	
MD8-ID:	Execute		
Movie Slots Re	shuffle		
About This Site	EMD8-ID: 1132	EMD8-ID: 1001	EMD8-ID: 1132

Electron Microscopy Navigator, EM-Navi (Suzuki)



### Protein Dynamics Database, **ProMode**

(Wako & Endo)



#### BioMagResBank-NMR experimental data (Akutsu, Harano & Nakatani)