(tertiary structure)   CASP

1.

(primary structure; DNA

)   (tertiary structure,

(three- dimensional)   )
(protein tertiary structure prediction)   [1,2,3,4].
(homology)
.   (high   sequence
similarity)   ,
(low sequence similarity)
.

(similarity)
.

(1)   (Comparative Modeling)
(2)   (Fold Recognition)
(3)   (New Fold)

Comparative
Modeling   (Homology Modeling   )
.

Fold Recognition
. Fold Recognition

New
Fold   (ab initio   de novo   ,
New Fold   )
.

Comparative Modeling   Fold Recognition
(, PDB, SCOP, CATH   )   ,

(homology)

Comparative Modeling

Fold Recognition

Comparative Modeling

(homology)

New Fold

(potential energy function)   (global optimization)

(grand challenge)   . Comparative
Modeling   Fold Recognition   New Fold
.   New Fold

2.   (CASP)

Post-Genome

(CASP,
http://PredictionCenter.llnl.gov/)   1994
2   [2,3,4]. CASP   community wide experiment on the
Critical Assessment of techniques for protein Structure Prediction
.   6   CASP6   2004
                                                        2004   12
                    (Gaeta)   .

CASP   (Lawrence Livermore National
Laboratory)

CASP

.

.

CASP6 266 2004

. (evaluation)

.

,

(Comparative Modeling, Fold Recognition, New Fold)

.

,

.

, .

CASP6   Fold Recognition
- Fold Recognition/Homology(FR/H) Fold
Recognition/Analogy(FR/A)   -   . FR/H
(homology)
, FR/A   FR/H
. CASP6
Comparative Modeling(CM)
FR/H   ,
FR/A   New Fold(NF)
.

CASP6 CM Ginalski (University of Texas, Dallas)
1   , Venclovas (Institute of Biotechnology, Lithuania),
Kolinski Bujnicki (Warsaw University), Skolnick (State University
of New York, Buffalo)   2, 3, 4   . FR/H
Ginalski GeneSilico (International Institute of Molecular and
Cell Biology, Poland)   1, 2   . FR/A Baker
(University of Washington, Seattle) Karplus (University of
California, Santa Cruz)   1, 2   .

CASP6　　NF　　　　　　　181　　　　　　　　　　. 1　　7
　　　　　　　(University of Washington, Seattle)　Baker　　　　　　　　　　,
2　　　　　　　　　　　　　　　(Warsaw University)
　　　　　　　(International Institute of Molecular and Cell Biology)
Kolinski　　　Bujnicki　　　　　　　. 3, 4, 5　　　　　　Ginalski
　　(University of Texas, Dallas), Karplus　　(University of California,
Santa Cruz), Skolnick　　(State University of New York, Buffalo)
　　　　　　　　　　　　　. 6　　　　　　　　　　　　(University
College London)　Jones　　　　　　　　.

　　[　　　]

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