

Z. H. Zhou, Ph.D. 周正洪博士

Curriculum Vitae

Title: Associate Professor with Tenure (since 2001)
Address: University of Texas Health Science Center at Houston (UTHSC) Medical School,
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Education:

- 1/1995** Ph.D., Biochemistry (Keck fellowship in computational biology),
Baylor College of Medicine, Houston, TX 77030. Advisor: Wah Chiu
- 10/1989** M.S. Physics, University of Science & Technology of China (USTC), Hefei,
China. Advisor: Lienchao Tsien (EM pioneer and founder of Electron
Microscopy Society in China). 硕士学位, 固体物理, 中国科学技术大学
(USTC), 安徽合肥
- 7/1986** B.S., Physics (with BS thesis research in chemistry), USTC, Hefei, China
学士学位, 激光物理, 中国科学技术大学

Academic Appointments:

Primary Appointments:

- 2/1995 – 6/1997 NLM/NIH sponsored postdoctoral trainee in **high performance computing**. Department of Mathematics and Department of Computer Sciences at the University of Houston, TX. Advisor: Dr. Ridgway Scott (Currently at the University of Chicago)
- 6/1997 – 8/2001 Assistant Professor, Department of Pathology and Laboratory Medicine, The University of Texas – Health Science Center at Houston, Medical School, Houston, TX
- 9/2001 – present Associate Professor (with tenure), Department of Pathology and Laboratory Medicine, The University of Texas – Health Science Center at Houston, Medical School, Houston, TX

Adjunct Positions:

- 9/1999 – present Adjunct Associate (since 2001) and Assistant (1999-2001) Professor, Department of Health Informatics, School of Health Information Sciences, University of Texas Health Science Center at Houston
- 6/2000 – present Adjunct associate professor, Structural and Computational Biology and Molecular Biophysics Program, Baylor College of Medicine, Houston, TX
- 9/1997 – present Faculty member of three graduate programs at the Graduate School of Biomedical Sciences (GSBS) at the University of Texas Health Science Center at Houston: (1) Biochemistry and Molecular Biology; (2) Virology and Gene Therapy; (3) Molecular Pathology

1998 – present Faculty member of two greater-Houston area inter-institutional graduate programs in the Houston area: (1) W. M. Keck Center for Computational Biology; (2) Houston-Area Molecular Biophysics Program (supported by NIH).

Awards and Honors:

- 2004 **Burton Award** from the American Microscopy Society
- 2002 **Established Investigator Award** from the American Heart Institute
- 2000 **Basil O'Connor Scholar Award** of the March of Dimes Foundation
- 1999 **Pew Scholar** in the Biomedical Sciences
- 1995 **NLM/NIH-sponsored postdoctoral trainee** (1995-1997).
- 1995 **Best Ph.D. Dissertation Award**, Rice Univ./Texas Medical Center Sigma Xi Society
- 1991 W. M. Keck pre-doctoral fellow in computational biology (1991-1995).
- 1992 Joshi Memorial Awards of best poster presentation, Biochem. Dept. Retreats (92' & 95')
- 1992 Best poster presentations, Ann. Meetings - Soc. of Chinese Bioscientists in America (92' & 93')
- 1989 中国科学技术大学第一届发明大奖赛特别奖 (1989)
- 1987 中国科学技术大学研究生会办公室主任 (1987-1988)
- 1988 中国科学技术大学优秀研究生奖 (1988)
- 1981 全国高等学校入学统考湖南省第二名 (1981)

Selected Professional Activities:

Grant reviewing:

- NIH **regular study section member**, Biomedical Library and Informatics Review Committee of the National Library of Medicine/NIH. Term: 2004 – 2008
- Ad hoc reviewer for the Medical Research Council grants (UK)
- User research grant application reviewer, SSRL (Stanford University)
- Frequent external reviewer for the John Sealy Memorial Endowment Grants, The University of Texas Medical Branch at Galveston, 1997 - present
- *Ad hoc* outside reviewer for the McLaughlin Fellowships applications of the University of Texas Medical Branch at Galveston.

Journal manuscript reviewing:

- Journal of Virology (frequent reviewer)
- Journal of Structural Biology (frequent reviewer)
- Structure
- Applied Bioinformatics
- Structure
- Science

Societies:

- Full member of American Society for Virology.
- Member of American Society for Microbiology Biology.
- Member of the American Biophysical Society
- Member of the American Society for Biochemistry and Molecular Biology
- Member of the Microscopy Society of America

Administrative activities and conference planning:

- Chair, Special Events Committee, Keck Center for Computation Biology of the Gulf Coast Consortia, UTH/Rice/BCM/UH/UTMB, 2003-2004
- Chair, seminar committee, Keck Center for Computation Biology of the Gulf Coast Consortia, UTH/Rice/BCM/UH/UTMB, organized invited seminars for the institutional program for the entire year of 2003
- Member of the planning committee for the 2002 Pew Scholars Annual Meeting in Puerto Vallata, Mexico: nominating invited speakers and planning the scientific sessions and chaired a session.
- Director, Departmental Management Information Systems group (1997-1999)
- Regular interviewer for the UTHSC medical school admissions office for medical students since 1997.
- Member, UTHSC Medical School Research Committee (2002-present)
- Member, UTHSC Medical School, Graduate School Education Committee (2000-2003)

Teaching Activities:

- The structural virology and herpesvirus sections in the Virology I course (GS040043, course coordinator Dr. Frank Marini and Dr. Rizvi) (two 2-hour lectures each year since 1999, ~10 students/semester).
- Seminar in Computational Biology, Rice Bios 592 (Spring and Fall semesters, 2003). This is a course offered to graduate students in the greater Houston area universities associated with the inter-institutional Keck Center for Computational Biology/Gulf Coast Consortia and the Houston-Area Biophysics and Molecular Biology Program.
- The structure biology section of Advanced Biochemistry (GS030024, course coordinator Dr. Kulmacz) (five 2-hour lectures each year, ~40 students enrolled 1998-2002)
- Problem Based Learning (Twenty-four 2-hour facilitating sessions each year since 1998, ~8 medical students/term).
- Principles in Pathology of Human Diseases (GS120043, course coordinator Dr. McMillin) (one lecture in 1999, ~20 students).
- One two-hour lecture on bioinformatics in Current Methods in Molecular Research (GS03.0102, course coordinator Dr. Lever). 2000.
- One two-hour lecture in the Biophysics course at Rice University (coordinator Dr. Phillips) 1999
- One lecture for the *SCBMB Adv. Topics* (BCM) course each year since 2000
- One seminar for the Center for Computational Biomedicine seminar course directed by Michael Brandt at the School of Health Information Sciences, UTHSC. 2002

Local Services:**UTHSC Medical School:**

- Regular weekly interviewer for Medical School Applicants for Admissions Committee (responsible for interview and writing report, about one interview/week in the fall, since 1997)
- Member of the Graduate Student Education Committee (meet monthly, since 2000)
- Member of the Research Committee (meet monthly, since 9/2002)

UTHSC Graduate School of Biomedical Sciences:

- Member of the Graduate School Admission Committee (reviewing all graduate student applications for the entire graduate school – for both MD Anderson Cancer Center and UT-Health Science Center at Houston, ~500 applications /year) 2004 -
- Member, the Molecular Pathology Program Admissions Committee and one of the three reviewers of all program applications
- Member, Admissions Committee of the Biochemistry and Molecular Biology Program and reviewer of foreign student applications in the program
- Frequent interviewer for the GSBS graduate admission
- Served or serving on the supervisory committees of Jennifer Brannan, Qing Xia, Pierrette Lo, Dr. Usman Qazi, Dr. Hong Amy Zhang (currently clinical fellow), Dr. Jing He (now assist. Prof. at Univ of New Mexico), Dr. Brian Bowman, Dr. Matt Baker, Mr. Juan Chang (BCM), Mr. Yifei Kong (BCM), Mr. Chris Booth (BCM)
- Served on the examining committees of Mr. Lihai Zhang (Chair, Dr. Kenneth Wu) and Stacy Boatman
- Served on the advisory committees of Ms Stacy Boatman, Tao Xue, Qing Xia, Jennifer Brannan, Pierrette Lo, Hong Amy Zhang.

Department of Pathology and Laboratory Medicine:

- Contributed substantially (once up to 30% of time effort), and continue to contribute, to the departmental services and once served as the director (appointment ended in 2/99) of the MIS Group, which is responsible for over 200 PCs in the departmental research and clinical operations. These services were critical to the departmental clinical and research enterprise.
- Database administrator of the departmental medical billing (97-99) and purchasing and capital assets databases (97-2001).
- Member, MIS service group (meeting once a week).
- Member, Seminar Committee (Chaired by Dr. D. Bick).
- Member, Graduate Admissions Committee (Chaired by Dr. Paul).
- Member, Research Committee (Chaired by Dr. Paul)
- Member, Graduate Curriculum Committee (Chaired by Dr. Stoops).

Community:

Administering eight Unix workstations and a 14 processor Linux cluster in the computer core laboratory, which are shared by researchers in the laboratories of Drs. Stoops (Pathology), Paul (Pathology), and Waxham (Neurobiology and Anatomy).

Peer-Reviewed Journal Publications:

1. Jia, C.-Z., Zhou, Z.-H., Xie, X.-S., Jin, T., Shen, H.-J., Xu, B., Xia, J.-D. (1990) Observation of an X-ray image by transmission electron microscope at HEFEI, In: *X-ray Microscopy in Biology and Medicine*, ed. by K. Shinohara et al., Japan Sci. Soc. Press, Tokyo/Springer-Verlag, Berlin, 247-250.
2. Xie, X., Jia, C., Zhou, Z.H., Zhang, Y., Zhao, Y., Wang, M. (1992) Progress of the soft x-ray microscopy project at Hefei, In: *X-Ray Microscopy III*, ed. by AG Michette, GR Morrison, CJ Buckley. Berlin Springer-Berlay. 157-159.
3. Zhou, Z.H., Chiu, W. (1993) Prospects for using an IVEM with a FEG for imaging macromolecules towards atomic resolution, *Ultramicroscopy*, **49**, 407-416.
4. Zhou, Z.H., Prasad, B.V.V., Jakana, J., Rixon, F.J. Chiu, W. (1994) Protein subunit structures in the herpes simplex virus A-capsid determined from 400 kV spot-scan electron

- cryomicroscopy, *J. Mol. Biol.*, **242**, 456-469. (featured on front cover)
5. Lu, G.Y., Zhou, Z.H., Jakana, J., Cai, D.Y., Chen, S.X., Wei, X.C., Gu, X.C., and Chiu, W. (1995) Three-dimensional structure of rice dwarf virus by electron cryomicroscopy, *High Tech. Let.* **5**, No 1, 1-4.
 6. Lamture, J.B., Zhou, Z.H., Kumar, A.S., Wensel, T.G. (1995) Luminescence properties of Terbium (III) complexes with 4-substituted dipicolinic acid analogues, *Inorganic Chem.*, **34**, No.4, 864-869.
 7. Zhou, Z.H., He, J., Jakana, J., Tatman, J.D., Rixon, F.J., Chiu, W. (1995) Assembly of VP26 in herpes simplex virus-1 inferred from structures of wild-type and recombinant capsids, *Nature Struct. Biol.*, **2**, No. 11, 1026-1030.
 8. Zhou, Z.H. (1996) (**review**) Three-dimensional reconstruction of macromolecular assemblies by electron cryomicroscopy, *Chinese J. Electr. Microsc.*, **15**(2-4), 291-300.
 9. Zhou, Z.H., Hardt, S., Wang, B., Sherman, M.B., Joanita, J., Chiu, W. (1996) CTF determination of images of ice-embedded single particles using a graphics interface, *J. Struct. Biol.*, **116**, 216-222.
 10. Johnson, O., Govindan, V., Park, Y., Zhou, Z.H. (1997) Custom virtual memory policies for an image reconstruction application, *Proceedings of the 4th International Conference on High Performance Computing*, IEEE Computer Society Press (Los Alamitos, CA). 517-521.
 11. Zhou, Z.H., Chiu, W., Haskell, K., Spears, H., Jakana, J., Rixon, F.J., Scott, L.R. (1998) Refinement of herpesvirus B-capsid structure on parallel supercomputers, *Biophysical J.*, **74**, 576-588.
 12. Zhou, Z.H., Macnab, S.J., Jakana, J., Scott, L.R., Chiu, W., Rixon, F.J. (1998) Identification of the sites of interaction between the scaffold and outer shell in HSV-1 capsids by difference electron imaging, *Proc. Natl. Acad. Sci. USA*, Vol. **95** (**6**), 2778-2783.
 13. Lu *, G., Zhou *, Z.H., Baker, M.L., Jakana, J., Cai, D., Wei, X., Chen, S., Gu, X., Chiu, W. (1998) Structure of double-shelled rice dwarf virus, *J. Virology*, Vol. **72** (**11**), 8541-8549. * Authors contributed equally.
 14. Zhang, H., Zhang, J., Yu, X., Lu, X., Zhang, Q., Jakana, J., Chen, D., Zhang, X., Zhou, Z.H. (1999) Visualization of protein-RNA interactions in cytoplasmic polyhedrosis virus, *J. Virology*, Vol. **73** (**2**), 1624-1629. (featured on front cover)
 15. Yu, X.-K., Lu, X.-Y., Zhang, H., Zhou, Z.H., Zhang, X., Zhang, J.Q. (1999) Structure of cytoplasmic polyhedrosis virus from *Bombyx mori*. *Acta Biochemica et Biophysica Sinica*, **31**(5): 563-566.
 16. Zhou, Z.H., Chen, D.H., Jakana, J., Rixon, F.J., Chiu, W. (1999) Visualization of tegument/capsid interactions and DNA in intact herpes simplex virus type 1 virions, *J. Virology*, Vol. **73** (**4**), 3210-3218. (featured on front cover)
 17. Saad, A., Zhou, Z.H., Jakana, J., Chiu, W., Rixon, F.J. (1999) Roles of triplex and scaffolding proteins in HSV-1 capsid formation suggested by the structures of recombinant particles. *J. Virology*. Vol. **73**(8), 6821-6830. (featured on front cover)
 18. Chen, D. H., Jiang, H., Lee, M., Liu, F., Zhou, Z.H. (1999) Three-dimensional visualization of tegument/capsid interactions in the intact human cytomegalovirus. *Virology*, Vol **260**, 10-16. (featured on front cover)
 19. Zhou, Z.H., Dougherty, M., Jakana, J., He, J., Rixon, F.J., Chiu, W. (2000) Seeing the

- herpesvirus capsid at 8.5 Å. *Science*, Vol. 288, 877-880.
20. Wu, L., Lo, P., Yu, X.K., Stoops, J.K, Forghani, B., Zhou, Z.H. (2000) Three-dimensional structure of human herpesvirus 8 capsid. *J. Virol.* Vol. 74(20), 9646-9654. (featured on front cover)
 21. Zheng, D., Xue, T., Chen, D., Zheng, M., Zhou, Z.H., Xu, W. (2000) Visualization of RHDV particles packaging genomic and subgenomic RNAs by electron cryomicroscopy. *J. Chinese Electr. Microsc. Soc.* Vol. 19, No. 5, 661-666.
 22. Shao, C., Zhou, Z.H., Lu, G. (2001) The three-dimensional structure of the rice dwarf virus core. *Science in China. Series C-Life Sciences*, Vol. 44, No. 2, 192-198.
 23. Zheng, D., Chen, D., Xue, T., Zheng, M., Zhou, Z.H., Xu, W. (2001) Three-dimensional structure of the rabbit hemorrhagic disease virus by electron cryomicroscopy and image reconstruction. *Chinese Science Bulletin.* Vol. 46, No. 12, 1005-1009. (featured on front cover)
 24. Zhou, Z.H., Liao, W., Cheng, R.H., Lawson, J.E., McCarthy, D.B., Reed, L.J., Stoops, J.K. (2001) Direct Evidence for the Size and Conformational Variability of the Pyruvate Dehydrogenase Complex Revealed by 3-D Electron Microscopy: the “Breathing” Core and its Functional Relationship to Protein Dynamics. *J. Biol. Chem.* Vol 276, 21704-21713.
 25. He, J., Schmid, M.F., Zhou, Z.H., Rixon, F.R., Chiu, W. (2001) Finding and Using Local Symmetry in Identifying Lower Domain Movements in Hexon Subunits of the Herpes Simplex Virus Type 1 B Capsid. *J. Mol. Biol.*, Vol. 309, 903-914. (featured on front cover)
 26. Zhou, Z.H., Baker, M.L., Jiang, W., Dougherty, M., Jakana, J., Dong, G., Lu, G., Chiu, W. (2001) Electron cryomicroscopy and bioinformatics suggest protein fold models for rice dwarf virus. *Nature Struct. Biol.*, Vol. 8, No 10, 868-873. (featured on front cover and highlighted in *Nature*, vol 413, page 11,2001)
 27. Chen, D.-H., Jakana, J., McNab, D., Mitchell, J., Zhou, Z.H., Dougherty, M., Chiu, W., Rixon, F.J. (2001) The pattern of tegument-capsid interaction in the herpes simplex virus type 1 virion is not influenced by the small hexon-associated protein VP26. *J. Virol.*, Vol. 75, No. 23, 11863-11867.
 28. Zhang, J., Feng, J., Liang, Y., Chen, D., Zhou, Z.H., Zhang, Q., Lu, X. (2001) Three-dimensional structure of the Chinese sacbrood bee virus. *Science in China (Series C)*, Vol. 44 No. 4, 443-449.
 29. Zhou, Z.H., McCarthy, D.B., O'Connor, C.M., Reed, L.J., Stoops, J.K. (2001) The remarkable structural and functional organization of the eukaryotic pyruvate dehydrogenase complexes. *Proc. Natl. Acad. Sci.* Vol. 98, No 26, 14802-14807.
 30. Chiu, W., Baker, M.L., Jiang, W., Zhou, Z.H. (2002) Deriving folds of macromolecular complexes through electron cryomicroscopy and bioinformatics. *Curr. Opin. Struct. Biol.*, 12(2), 263-269. (featured on the front cover)
 31. Zhang, H., Yu, X.-K., Lu, X.-Y., Zhang, J.-Q., Zhou, Z.H. (2002) Molecular interactions and viral stability revealed by structural analyses of chemically-treated cypovirus capsids. *Virology*, 298, 45-52. (featured on front cover)
 32. Liang, Y., Ke, E.Y., Zhou, Z.H. (2002) IMIRS: a high-resolution 3D reconstruction package integrated with a relational image database. *J. Struct. Biol.* 137, 292-304.

33. Liang, Y., Jakana, J., Yu, X.-K., Chiu, W., Zhang, J.-Q. and Zhou, Z.H. (2002) High-resolution imaging and preliminary 3D reconstruction of cytoplasmic polyhedrosis virus. *J. Chinese Electr. Microsc. Soc.* Vol. 21, No. 3, 326-330.
34. Li, L., Chen, D., Zhou, Z.H., Zhang, J. and Hu, Y. (2002) Comparative three-dimensional structure analyses of *Periplaneta fuliginosa* densovirus, *Chinese Science Bulletin*, Vol. 47, No. 23, 1807-1810.
35. Xia, Q., Jakana, J., Zhang, J.-Q., Zhou, Z.H. (2003) Structural comparisons of empty and full CPV: protein-RNA interactions and implications for endogenous RNA transcription mechanisms. *J. Biol. Chem.*, 278, 1094-1100.
36. Lo, P., Yu, X., Atanasov, I., Chandran, B., Zhou, Z.H. (2003) Three-dimensional localization of pORF65 in Kaposi's sarcoma-associated herpesvirus capsid. *J. Virol.*, 77, 4221-4230.
37. Zhou, Z.H.* and Chiu, W. (2003) Determination of icosahedral virus structures by electron cryomicroscopy at subnanometer resolution. *Advances in Protein Chemistry*. Vol. 64, 93-124 (Ed.) Chiu, W. & Johnson, J. *corresponding author
38. Lu, B.-Y., Atanasov, I., Zhou, Z.H. and Chang J.-Y. (2003) Reversible aggregation of mouse prion protein derivatives with PrP^{Sc}-like structural properties. *J. Prot. Chem.*, Vol. 22, No. 2, 115-126.
39. Zhou, Z.H.*, Zhang, H., Jakana, J., Lu, X.-Y., Zhang, J.-Q. (2003) Cytoplasmic polyhedrosis virus structure at 8 Å by electron cryomicroscopy: structural basis of capsid stability and mRNA processing regulation. *Structure*, Vol 11(6), 651-663. (featured on front cover and pre-viewed in *Structure* 11, 605-6107, 2003) *corresponding author
40. Gu, Y., Zhou, Z.H., McCarthy, D.B., Reed, L.J., Stoops, J.K. (2003) Protein dynamics of the pyruvate dehydrogenase complex: three-dimensional electron microscopy reveals the variable deposition of the peripheral pyruvate dehydrogenase component about the core. *Proc. Natl. Acad. Sci.* **100**(12): 7015-20.
41. Kong, Y., Ming, D., Wu, Y., Stoops, J.S., Zhou, Z.H., Ma, J. (2003) Conformational flexibility of pyruvate dehydrogenase complexes: a computational analysis by quantized elastic deformational model. *J. Mol. Biol.*, Vol. 330, 129-135.
42. Baker, M.L., Jiang, W., Bowman, B.R., Zhou, Z.H., Quijcho, F.A., Rixon, F.J., Chiu, W. (2003) Architecture of the herpes simplex virus major capsid protein derived from structural bioinformatics. *J. Mol. Biol.*, Vol. 331, 447-456.
43. Yu, X.-K., O'Connor, C.M., Atanasov, I., Damania, B., Kedes, D.H., Zhou, Z.H. (2003) Three-dimensional structures of the A, B, and C capsids of Rhesus monkey Rhadinovirus: insights into gammaherpesvirus capsid assembly, maturation and DNA packing. *J. Virol.*, Vol 77, 13182-13193. (feature on cover of Vol 78, No. 1)
44. Dai, W., Liang, Y., Zhou, Z.H. (2003) Web portal to an image database for high-resolution three-dimensional reconstruction. *J. Struct. Biol.*, 144:238-45.
45. Bortz, E., Whitelegge, J.P., Jia, Q., Zhou, Z.H., Stewart, J.P., Wu, T.-T., Zhou, Z.H., Sun, R., (2003) Identification of proteins associated with murine gammaherpesvirus-68 virions. *J. Virol.*, Vol 77, 13425-13432.
46. Chen, S., Chen, L., Zhang, Q., Deng, Y., Lin, W., Lu, X., Brannan, J., Zhou, Z.H.*, Zhang, J. (2004) Genetic, biochemical and structural characterization of a new densovirus isolated

from a chronically infected *Aedes albopictus* C6/36 cell line. *Virology*, 318, 122-133.

*corresponding author

47. Booth, C., Jiang, W., Baker, M.L., Zhou, Z.H., Ludtke, S.J., Chiu, W. (2004) A 9 Å Single Particle Reconstruction from CCD Captured Images on a 200 kV Electron Cryomicroscope. *J. Struct. Biol.* Vol. 147, 116-127 (featured on cover).
48. Wan, Y., Chiu, W., Zhou, Z.H. (2004) Full contrast transfer function correction in 3D cryo-EM reconstruction. *IEEE Proceedings of ICCAS 2004* (in press).
49. Yu, X., Shah, S., Atanasov, I., Lo, P., Liu, F., Britt, W. J. and Zhou, Z. H. (2005) Three-dimensional localization of the smallest capsid protein in the human cytomegalovirus capsid, *J. Virol.* **79**, 1327-1332.
50. Yu, X., Shah, S., Lee, M., Liu, J., Lo, P., Taylor, K. A., Liu, F. and Zhou, Z. H. (2005) Structural organization of human cytomegalovirus revealed by electron cryotomography and cryomicroscopy of intact and chemically treated viral particles, *J. Mol. Biol.* Submitted.
51. Yu, X., Trang, P., Shah, S., Atanasov, I., Kim, Y.-H., Bai, Y., Zhou, Z. H. and Liu, F. (2005) Dissecting human cytomegalovirus gene function and capsid maturation by ribozyme targeting and electron cryomicroscopy, *Proc. Natl. Acad. Sci. USA* Revised.
52. Dai, W., Q. Jia, E. Bortz, S. Shah, J. Liu, I. Atanasov, K. A. Taylor, R. Sun and Z. H. Zhou (2005) Unique structures of a tumour herpesvirus from electron cryomicroscopy and cryotomography, *Submitted*.

Book Chapters:

1. Zhou, Z. H. (2000) (review) Transmission electron cryomicroscopy and three-dimensional reconstruction of macromolecular complexes. In *Progress in Transmission Electron Microscopy* (Zhang, X. ed.), Springer-Verlag / Tsinghua University Press (Beijing, China). 309-328.
2. Zhou, Z.H.*, Stoops, J.K. and Reed, L.J., (2003) Structural and functional organization of pyruvate dehydrogenase complexes. In: *Thiamine: Catalytic Mechanisms in Normal and Disease States*, Jordan F. & Patel M.S. (Eds), Marcel Dekker Inc., New York. Chapter 18: pp 309-330 (DOI: 10.1081/B). *corresponding author.
3. Liu, F. and Zhou, Z.H. (2004) Comparative virion structures of human herpesviruses. In: *Human Herpesviruses: Biology, Therapy, and Immunoprophylaxis*. Roizman, B. et al. (Eds) Cambridge University Press. In press.
4. Mertens, P.P.C., Rao, S. and Zhou, H. (2004). Cypovirus, Reoviridae. In: *Virus Taxonomy, VIIIth Report of the ICTV* (C.M. Fauquet, M.A. Mayo, J. Maniloff, U. Desselberger, and L.A. Ball, eds), 522-533. Elsevier/Academic Press, London. (in press).
5. Zhou, Z. H. (2005). *Cypovirus*, in *Structure and Molecular Biology of Segmented Double-Stranded RNA Viruses*. P. J. T and M. L. Nibert eds. Wymondham, Norfolk, U.K., Horizon Scientific Press, In Press.