BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow the sample format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME	POSITION TITLE
Li, Wilfred Wenfeng	Executive Director, NBCR

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
College of Saint Rose, Albany, NY	B.A.	8/1985 – 8/1989	Dept. of Biology
University of Southern California, Los Angeles, CA	Ph.D.	9/1989 – 11/1994	Dept. of Biochemistry & Molecular Biology
University of Southern California, Los Angeles, CA	Research Associate	12/1994 – 3/1996	Same as Above
University of California, San Diego, CA (UCSD)	Postdoctoral Fellow	4/1996 – 6/1999	Dept. of Pharmacology, Signal Transduction
San Diego Supercomputer Center, UCSD	Sr. Postdoc. Fellow	7/1999 – 4/2004	Bioinformatics

NOTE: The Biographical Sketch may not exceed four pages. Items A and B (together) may not exceed two of the four-page limit. Follow the formats and instructions on the attached sample.

A. Positions and Honors. List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any Federal Government public advisory committee.

Research and/or professional experience:

1987	Summer Intern, Dept of Pharmacology and Toxicology, Albany Medical College, Albany, NY
1988	Summer Intern, Department of Nuclear Medicine, Roswell Park Cancer Institute, Buffalo, NY
1989 - 1994	Graduate Researcher, with A.S. Lee, USC.
1995 - 1996	Research Associate, Biochemistry and Molecular Biology, with A.S. Lee, USC.
1996 - 1999	Postdoctoral Fellow, Signal Transduction, with M. Karin, UCSD.
1999 - 2004	Sr. Postdoctoral Fellow, Bioinformatics, with P.E. Bourne, UCSD.
2000 - 2002	Instructor of Biological Databases & Genome Analysis, UCSD Extension
2003 - 2004	EOL technical lead, with M.A. Miller
2003 -	PRAGMA technical lead, with P.W. Arzberger
2004 - 2005	Acting Project Manager, National Biomedical Computation Resource, with P.W. Arzberger, UCSD
2004 -	Senior Fellow, San Diego Supercomputer Center
2005 -	Executive Director, National Biomedical Computation Resource
2005 - 2006	Adjunct Lecturer, School of Information Science and Technology, Osaka University, Japan
2006 -	co-lead, PRAGMA Biosciences Working Group
2007 -	co-investigator, group leader, NBCR
2007 - 2009	co-PI, TATRC Avian Flu Grid Project
2008 -	Adjunct Professor, College of Computer Science and Technology, Jilin University, PRC

Selected Workshops and Conferences:

1998	Gordon Mechanism of Toxicity Conference, participant
1999	MSI Life Science Modeling with Insight II workshop, participant
	MSI Homology Based Protein Design workshop, participant
2000	Develop Database Applications with Java—Oracle Workshop, participant
2000	LJIS2000 Quantitative Challenges in the Postgenomic Era Symposium, participant
2000	NPACI Parallel Computing Workshop, participant
2001	ISMB 2001, Copenhagen, Denmark, participant
2003	IBM DB2 UDB Programming Using Java Workshop, participant
2006	CCGrid 2006, Singapore, presenter
2008	Bangkok International Conference on Avian Influenza, Bangkok, Thailand, co-presenter
2010	PRAGMA 18, San Diego, CA, Program Chair

Selected Presentations:

1996	The XIth International Symposium on Microsomes and Drug Oxidations, oral presentation
2002	Bioinformatics Institute, Singapore, oral presentation and workshop
2002	Bioinformatics 2002, Boston, oral presentation
2002	PRAGMA 2002, Seoul, Korea, oral presentation
2003	PRAGMA 2003, Japan, oral presentation
2003	University of Manchester, UK, oral presentation
2003	Global Grid Forum 7, Japan, oral presentation
2003	National Yang-Ming University, Taipei, oral presentation and workshop
2005 - 2007	Southeast Asia International Joint Research and Training Program, NCHC, Taiwan, keynote speaker
2007	EPA International Science Forum on Computational Toxicology, speaker
2008	Health Grid 2008, Speaker
2008	International Symposium on Real World Computational Informatics, Tsukuba University, keynote speaker
2009	World Summit of Antivirals, Beijing, China, Session Chair and Presenter

Selected Program Committees:

2004-	PRAGMA 8, 9, 15-18
2004	ISMB 2004
2005	4th European Conference on Computational Biology/ISMB 2005
2005	BioGrid 06
2006-	NBCR Summer Institute
2008	Grid 2008

Journal Reviewers:

2003 -	Bioinformatics
2004 -	New Generation computing
2008 -	Future Generation Computer Systems
2008-	Data & Knowledge Engineering
2009-	Cluster Computing
2009-	Carbohydrate Research
2009-	Letters in Drug Design & Discovery-Online
2010-	PLoS Computational Biology
2010	PLoS ONE

Honors, Prizes, Society Memberships:

1988	Alpha Chi Chapter, Delta Epsilon Sigma, National Scholastic Honor Society
1985 -1989	College of Saint Rose Scholarship
1989	College of Saint Rose Dean's List
1989	Magna cum Laude
1989	Associate Member, State University of New York at Albany Chapter, Sigma Xi, the Scientific Research Society
1988 -1989	Who's Who among Students in American Universities & Colleges
1989	CSR Division of Natural Science Recognition of Outstanding Scholarship Award
1989 -1990	California Foundation for Biomedical Research Scholarship
1994	Harry J. Deuel, Jr. Award for Outstanding Graduates of the Department of Biochemistry and Molecular Biology
1994	USC School of Medicine Poster Competition 1st Prize
1993 -1994	K. Norris Cancer Center--Heidelberger Predoctoral Scholarship
1997 -1999	Tobacco Related Disease Research Program Fellowship, UCSD
2000	American Association for the Advancement of Science
2007	IEEE Engineering in Medicine and Biology Society
2008 -	IEEE Computer Society
2008 -	Biophysical Society

B. Selected peer-reviewed publications (in chronological order). Do not include publications submitted or in preparation.

1. Alexandre, S. **Li, W. W.** and A. S. Lee. (1992). A human HMG2 cDNA with a novel 3'-untranslated region. **Nucleic Acids Research.** *20(23): 6413*.
2. **Li, W. W.**, S. Alexandre, X. Cao, and A. S. Lee. (1993). Transactivation of the GRP78 promoter by Ca2+-depletion: a comparative analysis of the kinetics of induction by calcium ionophore A23187 and ER Ca2+-ATPase inhibitor thapsigargin. **Journal of Biological Chemistry.** *268: 12003-12009*.

3. **Li, W. W.**, L. Sistonen, R. I. Morimoto, and A. S. Lee. (1994). Stress induction of the mammalian GRP78/BiP protein gene: in vivo genomic footprinting and identification of p70CORE from human nuclear extract as a DNA-binding component specific to the stress regulatory element. **Molecular and Cellular Biology.** *14:* 5533-5546.
4. Cavigelli, M., **Li, W. W.**, A. Lin, B. Su, K. Yoshioka, and M. Karin. (1996) The Tumor Promoter Arsenite Stimulates AP-1 Activity by Inhibiting a JNK Phosphatase. **EMBO Journal.** *15:* 6269-6279.
5. Roy, B., **Li, W. W.**, and A. S. Lee. (1996) Calcium-sensitive transcriptional activation of the proximal CCAAT regulatory element of the grp78/BiP promoter by the human nuclear factor CBF/NF-Y. **Journal of Biological Chemistry.** *271:* 28995-29002.
6. **Li, W. W.**, Y. Hsiung, Y. Zhou, B. Roy and A. S. Lee. (1997) The human nuclear factor YY1 binds to and activates the stress-inducible core element of the mammalian GRP78/BiP promoter. **Molecular and Cellular Biology.** *17:* 54-60.
7. **Li, W. W.**, Y. Hsiung, V. Wong, K. Galvin, Y. Zhou, Y. Shi and A. S. Lee. (1997) Suppression of the stress-induction mediated by the grp78 core promoter element by dbpA and dbpB (YB-1) cold shock domain proteins. **Molecular and Cellular Biology.** *17:* 61-68.
8. B. V. B., Reddy, **Li, W. W.,** I. N. Shindyalov, and P. E. Bourne. (2000). Conserved Key Amino Acid Positions (CKAAPs) Derived from the Analysis of Common Substructures in Proteins. **Proteins: Structure, Function and Genetics.** *42:*148-163.
9. **Li, W. W.**, B. V. B. Reddy, I. N. Shindyalov, and P. E. Bourne. (2001). CKAAPs DB: A Conserved Key Amino Acid Positions Database. **Nucleic Acids Research,** *29:*329-331.
10. **Li, W.W.**, B.V.B. Reddy, John G. Tate, I.N. Shindyalov, and P.E. Bourne. (2002). CKAAPs DB: a conserved key amino acid positions database. **Nucleic Acids Research.**, 30: 409-411.
11. B.V.B. Reddy, **Li, W. W.**, and P. E. Bourne (2002). Conserved Key Amino Acid Positions Used to Morph Protein Folds. **Biopolymers.** 64(3):139-145.
12. **Li, W.W.**, G.B. Quinn, N.N. Alexandrov, P.E. Bourne, and I.N. Shindyalov. (2003). A Comparative Proteomics Resource: Proteins of *Arabidopsis thaliana*. **Genome Biology**. 4: R51.
13. **Li, W.W. ,** R.W. Byrnes, J. Hayes, A. Birnbaum, V.M. Reyes, A. Shahab, C. Mosley, D. Pekurovsky, G.B. Quinn, I.N. Shindyalov, H. Casanova, L. Ang, F. Berman, P.W. Arzberger, M. A. Miller, and P.E. Bourne. (2004). The Encyclopedia of Life Project: Grid Software and Deployment. **New Generation Computing**. *22: 127-136*.
14. Bourne, P.E., C.K.J. Allerston, W. Krebs, **Li, W.W.,** I.N. Shindyalov, A. Godzik, I. Friedberg, T. Liu, D. Wild, S. Hwang, Z. Ghahramani, L. Chen, and J. Westbrook. (2004). The Status of Structural Genomics Defined Through the Analysis of Current Targets and Structures. pp375-386. In **Pacific Symposium on Biocomputing.** Altman et al, eds. World Scientific, New Jersey.
15. Birnbaum, A., J. Hayes, **Li, W. W.**, M. A. Miller, P.W. Arzberger, P. E. Bourne, & H. Casanova. (2004). Grid Workflow Software for High-Throughput Proteome Annotation Pipeline. **Lecture Notes in Computer Science.** 3370: 68-81
16. Shahab, A., D. Chuon, T. Suzumura, **Li, W. W.**, R. W. Byrnes, K. Tanaka, L. Ang, S. Matsuoka, P. E. Bourne, M. A. Miller, & P. W. Arzberger. (2004). Grid Portal Interface for Interactive Use and Monitoring of High-Throughput Proteome Annotation. **Lecture Notes in Computer Science.** 3370: 53-67.
17. Web Services-based Data Integration for Life Science Computations. (2005) Sriram Krishnan, Brent Stearn, Karan Bhatia, Jerry Greenberg, **Li, W.W.** Peter Arzberger, and Kim Baldridge. **SDSC Technical Report** TR-2005-2,
18. Wei, X, **Li, W. W.**, O. Tatebe, G. Xu, H. Liang & J. Ju. (2005). Implementing data aware scheduling in Gfarm using LSFTM scheduler plugin mechanism. **Proceedings of the 2005 International Conference on Grid Computing and Applications (GCA'05).** Las Vegas: 3-10.
19. **Li, W.W.,** C.L. Yeo, O. Tatebe, K. Jeong, S. Hwang, S. Date, J. Kwak, S. Sekiguchi, L. Ang and P. W. Arzberger. (2005). Proteome Analysis using iGAP in Gfarm. **Proceedings of the 2nd Life Sciences Grid Workshop.** Singapore. In press.
20. X. Wei, **Li, W.W.**, O. Tatebe, G. Xu, L. Hu, and J. Ju, "Integrating Local Job Scheduler - LSF™ with Gfarm™," **Lecture Notes In Computer Science**, vol. 3758, pp. 197, 2005.
21. D. Abramson, A. Lynch, H. Takemaya, Y. Tanimura, S. Date, H. Nakamura, S. Hwang, K. Jeong, H.-c. Lee, P. W. Arzberger, K. Baldridge, **Li, W. W.**, and T. Molina, "Deploying Scientific Applications to the PRAGMA Grid testbed: Strategies and Lessons," Singapore, CCGrid 2006.
22. P. J. Hunter, **Li, W. W.**, A. D. McCulloch, and D. Noble, "Multi-scale Modeling Standards, Tools, Databases for the Physiome Project," **Computer**, (39) 48-54, 2006.
23. X. Wei, Z. Ding, **Li, W. W.**, O. Tatebe, J. Jiang, L. Hu, and P. W. Arzberger, "GDIA: A Scalable Grid Infrastructure for Data Intensive Applications," presented at IEEE International Conference on Hybrid Information Technology, ICHIT 2006, Cheju Island, Korea, 2006.
24. Z. Ding, Y. Luo, X. Wei, C. Misleh, **Li, W. W.**, P. W. Arzberger, and O. Tatebe, "My WorkSphere: Integrative Work Environment for Grid-unaware Biomedical Researchers and Applications," presented at Supercomputing Conference 2006, SC06, 2nd Grid Computing Environment Workshop, Tampa, Florida, 2006.

25. T. L. Bailey, N. Williams, C. Misleh, and **Li, W. W.**, "MEME: Discovering and analyzing DNA and protein sequence motifs," **Nucleic Acids Res**, 34: W369-373, 2006.
26. **Li, W. W.**, S. Krishnan, K. Mueller, K. Ichikawa, S. Date, S. Dallakyan, M. F. Sanner, C. Misleh, Z. Ding, X. Wei, O. Tatebe, and P. W. Arzberger, "Building Cyberinfrastructure for Bioinformatics Using Service Oriented Architecture," presented at the 6th IEEE International Symposium on Cluster Computing & the Grid, Singapore, 2006.
27. **Li, W. W.**, N. A. Baker, K. Baldridge, J. A. McCammon, M. H. Ellisman, A. Gupta, M. J. Holst, A. D. McCulloch, A. Michailova, P. Papadopoulos, A. Olson, M. Sanner, and P. W. Arzberger, "National Biomedical Computation Resource (NBCR): Developing End-to-End Cyberinfrastructure for Multiscale Modeling in Biomedical Research " **CTWatch Quarterly**, 2006.
28. S. Krishnan, B. Stearn, K. Bhatia, K. K. Baldridge, **Li, W. W.**, and P. W. Arzberger, "Opal: Simple Web Services Wrappers for Scientific Applications," presented at International Conference of Web Services, Chicago, USA, 2006.
29. Z. Ding, Y. Luo, D. Ma, P. W. Arzberger, **Li, W. W.**, and X. Wei. "Customized Plug-in Modules in Metascheduler Community Scheduler Framework 4 (CSF4) for Life Sciences Applications". **New Generation Computing**. 2007. In Press.
30. K. Ichikawa, S. Date, S. Krishnan, **Li, W. W.**, H. Nakamura and S. Shimojo. "Opal OP: an Extensible Grid-Enabling Wrapping Approach for Legacy Applications". The 3rd International Workshop on Grid Computing and Applications, Grid Asia 2007, Singapore, Proceedings.
31. Amaro, R. E.; Minh, D. D.; Cheng, L. S.; Lindstrom, W. M., Jr.; Olson, A. J.; Lin, J. H.; **Li, W. W**.; McCammon, J. A. Remarkable loop flexibility in avian influenza N1 and its implications for antiviral drug design. **J Am Chem Soc** 2007**,** 129, 7764-5.
32. Clementi, L.; Ding, Z.; Krishnan, S.; Wei, X.; Arzberger, P. W.; **Li, W. W**. In Providing dynamic virtualized access to grid resources via the web 2.0 paradigm, Grid Computing Environment 2007 (GCE 07), Reno, Nevada, 2007; Reno, Nevada, 2007.
33. Ding, Z.; Wei, X.; **Li, W. W.** In VJM-A Deadlock Free Resource CO-allocation Model for Cross Domain Parallel Jobs HPC Asia, Seoul, Korea, 2007; Seoul, Korea, 2007; pp 31-37.
34. Ichikawa, K.; Date, S.; Krishnan, S.; **Li, W. W.**; Nakata, K.; Yonezawa, Y.; Nakamura, H.; Shimojo, S. In OPAL OP: An Extensible Grid-Enabling Wrapping Tool For Legacy Applications, 3rd International Workshop on Grid Computing & Applications (GCA2007), Singapore, 2007; Singapore, 2007.
35. Cheng, L. S.; Amaro, R. E.; Xu, D.; **Li, W. W.**; Arzberger, P. W.; McCammon, J. A. Ensemble-based Docking Reveals Potential Antiviral Compounds Against Avian Influenza. **J Med Chem** 2008, 51: 3878-94.
36. Clementi, L., Krishnan, S., Goodman, W., **Li, W.W.**, Arzberger, P.W., Guillaume, V., Sanner, M. Services oriented architecture for managing workflows of avian flu grid. IEEE eScience 2008, Indianapolis, IN, 2008.
37. Ding Z, Wei X, Zhu Y, Yuan Y, **Li, W.W.** and Tatebe O: Implement the Grid Workflow Scheduling for Data Intensive Applictions as Scheduling Plug-ins. In: IEEE eScience 2008. Indianapolis, IN, 2008.
38. Lu, S.; Michailova, A.; Cheng, Y.; Yu, Z.; Kaiser, T. H.; **Li, W. W.**; Banks, R. E.; Holst, M.; McCammon, J. A.; Hoshijima, M.; McCulloch, A. D. Multi-Scale Modeling of Ventricular Myocytes: Contributions of structural and functional heterogeneities to excitation-contraction coupling in the normal and failing rodent heart. **IEEE Engineering in Medicine and Biology** 2009, 45-57.
39. Krishnan, S.; Clementi, L.; Ding, Z.; **Li, W. W.** Leveraging the Power of the Grid with Opal: A Guide to Biomedical Application Developers and Users. In **Handbook of Research on Computational Grid Technologies for Life Sciences, Biomedicine and Healthcare**, Cannataro, M., Ed. Milan, 2009. ISBN: 978-1-60566-374-6.
40. Ding, Z.; Wei, X.; Tatebe, O.; Papadopoulos, P. M.; Arzberger, P. W.; **Li, W. W.** Cyberinfrastructure for Biomedical Applications: Metascheduling as Essential Component for Pervasive Computing. In **Cyberinfrastructure Technologies and Applications**, Cao, J., Ed. Nova Science: 2009. **I**SBN**:** 978-1-60692-063-3.
41. Xu, D., I. Newhouse, H. Pao, R. E. Amaro, Warwick, P., J. A. McCammon, **Li**, **W. W.** and P. W. Arzberger**.** 2009. Distinct Glycan Topology for Avian and Human Sialo-Pentasaccharide Receptor Analogues upon Binding Different Hemagglutinins: A Molecular Dynamics Perspective. **J Mol Biol:** 387(2), 465-91.
42. Krishnan, S.; Clementi, L.; Ren, J.; Papadopoulos, P.; **Li, W. W.** *Design and evaluation of Opal 2: toolkit for scientific software as a service*, Int. Workshop on Cloud Services. Proceedings of ICWS 2009, Los Angeles, 2009.
43. Wei, X.; Ding, Z.; Yuan, Y.; **Li, W. W.**, VJM: a novel grid resource co-allocation model for parallel jobs. *Int j grid distributed computing* **2009,** 1, (2), 1-12.
44. Bailey, T. L.; Boden, M.; Buske, F. A.; Frith, M.; Grant, C. E.; Clementi, L.; Ren, J.; **Li, W. W.**; Noble, W. S., MEME Suite: tools for motif discovery and searching. *Nucleic Acids Res* **2009**, 37:W209-W213.

45. Newhouse, E. I.; Xu, D.; Markwick, P. R. L.; Pao, H. C.; Wu, K. J.; Amaro, R. E.; Alam, M.; McCammon, J. A.; **Li, W. W.**, Mechanism of Glycan Receptor Recognition and Specificity Switch for Avain, Swin and Human Adapted Influenza Virus Hemagglutinins: A Molecular Dynamics Perspective. *J Am Chem Soc* **2009**, 131(47):17430-42.
46. Dong KK, Nan K, Tilak S, Wu K, Zheng C, Schulze J, Arzberger PW and **Li WW**: Real Time Biomedical Data Streaming Platform (RIMES): a data-intensive virtual environment. In: International Workshop on HPC and Grid Applications (IWHGA 2010). May 28-31, 2010, Huangshan, Anhui, China, **2010**.
47. Sung JC, Van Wynsberghe AW, Amaro RE, **Li WW** and McCammon JA: Role of secondary sialic acid binding sites in influenza N1 neuraminidase. J Am Chem Soc 132: 2883-5, **2010**.
48. Ren J, Xie L, **Li WW** and Bourne PE: SMAP-WS: A Parallel Web Service for Structural Proteome-wide Ligand Binding Site Comparison. Nucleic Acids Res: In Press, **2010**.
49. Ren J, Williams N, Clementi L, Krishnan S and **Li WW**: Opal Web Services for Biomedical Applications. Nucleic Acids Res: In Press, **2010**.
50. Amaro RE and **Li WW**: Emerging methods for ensemble-based virtual screening. Curr Top Med Chem 10: 3-13, **2010**.