UAB SCHOOL OF ENGINEERING UAB SCHOOL OF MEDICINE

CURRICULUM VITAE
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Research Statement

Dr. Song's research group uses integrated multiscale computational modelling and experimental approaches to investigate the fundamental structural and functional mechanisms of the biomolecular interactions underlying apoptosis, apoptotic cell removal and cell adhesion and to identify molecular targets for modifying the aberrant apoptotic cell removal in tissue remodeling and tumor immunity, and for overcoming the drug resistance in breast cancer. Multiscale modelling of the protein complexes in regulating cell adhesion and collagen expression in tissue remodelling is another focus of the group. Dr. Song's group is also interested in the optimized design of biomaterials and small molecules/drugs for cell-based therapeutics, including the applications in immunoisolation nanotechnology. Methodology development for multiscale modelling of complex biological systems continues to be a focus of Dr. Song's research group.

Education Statement

Dr. Song's goals for education are to inspire the students' interest, motivate students to actively think and be committed in the course and research, teach students to critically read literatures, and help the students to develop critical and independent thinking, problem solving and team working skills, and good working ethic that are important for the students' future academic and professional development.

Education and Training

1985 - 1989	B.S. in Materials Science and Eng., Jilin University of Technology, Jilin, China
1993 - 1996	M.S. in Materials Science and Eng., Harbin University of Sci and Tech, Harbin, China
1996 - 1998	Ph.D. in Materials Science and Eng., Harbin Institute of Technology, Harbin, China
1998 - 2001	Post-Doc in Materials Science and Eng., Tsinghua University, Beijing, China
2001 - 2002	Post-Doc in Orthopedic Biomechanics, University of Pittsburgh, Pittsburgh, PA
2002 - 2005	Post-Doc in Computational Biology, Washington University in St. Louis, St. Louis, MO

Professional Experiences

2012 - current	Associate Professor (with Tenure), Department of Biomedical Engineering The University of Alabama at Birmingham (UAB)
2006 - 2012	Assistant Professor, Department of Biomedical Engineering, UAB
2005 - 2006	Research Instructor with Dr. Nathan A. Baker, Center for Computational Biology Dept. of Biochemistry and Molecular Biophysics, Washington University in St. Louis
2002 - 2005	Research Associate with Dr. Nathan A. Baker, Center for Computational Biology Dept. of Biochemistry and Molecular Biophysics, Washington University in St. Louis
2001 - 2002	Postdoctoral Fellow with Dr. Savio L-Y. Woo, Musculoskeletal Research Center, Dept. of Orthopedic Surgery, University of Pittsburgh
1998 - 2001	Postdoctoral Fellow with Dr. Yongnian Yan Center for Laser Rapid Forming & Bio-Manufacturing Engineering,

Dept. of Mechanical Engineering, Tsinghua University, China
1989 - 1993 Engineer, Harbin Bicycle Company, China

Other University Affiliations/Positions at UAB

2006 - present Associate Scientist, Center for Computational and Structural Dynamics, UAB
2006 - present Associate Scientist, BioMatrix Engineering and Regenerative Medicine Center, UAB
2006 - present Associate Scientist, Center for Metabolic Bone Disease, UAB
2007 - present Faculty of Medical Scientist Training Program, UAB
2007 - present Secondary Faculty, Department of Biochemistry and Molecular Genetics, UAB
2009 - present Associate Scientist, UAB Comprehensive Cancer Center, UAB
2010 - present Faculty of Graduate Biomedical Science, UAB
2011 - present Member, Center for Nanoscale Materials and Biointegration, UAB
2011 - present Faculty of Structural Biology Program, UAB
2011 - 2012 Associate Director, Center for Computational and Structural Dynamics, UAB

Awards and Honors

2000 Postdoctoral Fellowship, China National Science Foundation
2002 Scholarship for the Grace Hopper celebration of women in computing
2005 - 2006 Development Allocations Committee Award for computational resources NSF's Partnerships for Advanced Computational Infrastructure
2006 - 2007 Medium Resource Allocations Committee Award for computational resources NSF's Partnerships for Advanced Computational Infrastructure
2007 - 2008 UAB ADVANCE Faculty Research Awards through the sponsorship of NSF
2008 - 2009 The Development Allocation Committee Award for computational resources NSF's Partnerships for Advanced Computational Infrastructure
2008 - 2009 Startup/Educational Allocation award for computational resources NSF's Partnerships for Advanced Computational Infrastructure
2009 - 2015 NIH K25 Mentored Quantitative Research Career Development Award, NIH/NCI
2012 - 2017 NSF award from Biomedical Engineering Program in Division of Chemical, Bioengineering, Environmental, and Transport Systems at NSF
2012 – 2013 Extreme Science and Engineering Discovery Environment (XSEDE) grant MCB130026 (computational resources)
2017 Graduate Dean's Excellence in Mentorship Award for 2017

Professional Affiliations

Biophysical Society American Association for Cancer Research American Chemical Society
American Heart Association

Further Career Development

2006 Master Teacher Program
2008 - present Professional Development Seminar Series by UAB Center for Clinical and Translational Science
2009 Teaching Portfolio Workshop
2010 Excellence in Teaching Seminar Series by the UAB Office for Faculty Development and Faculty Affairs
2012 GRD 717 Course: Principles of Scientific Integrity

Teaching Contribution (* New courses I developed)

- BME 330 Biomechanics (Instructor), Spring 2007, UAB
- * BME 333 Biomechanics of Solids (Instructor), Spring 2008 – current, UAB
- * BME 480/580 Biomolecular Modeling (Instructor), Fall 2007, 2009, UAB
- * BME 690/790 Biomolecular Modeling (Instructor), Fall 2015, 2016, UAB

- BME 150 Computer Meth in EGR, Fall, 2013, UAB
- Lecture in "Mathematical Methods for Biophysics and Biochemistry (Bio-5329)" at Washington University in St. Louis
- Lab course development for "Modeling Biomolecular Systems II (BME-540)" at Washington University in St. Louis
- Advised graduate students, undergraduate and high school students at UAB, Washington University in St. Louis, University of Pittsburgh and Tsinghua University

Department, School and University Service at UAB:

- Graduate Program Committee, Department of Biomedical Engineering (2006 – 2013, 2016- present)
- Academic Research Excellence Committee, Department of Biomedical Engineering (2016 - present)
- Visibility & Recognition Committee, Department of Biomedical Engineering (2016 - present)
- Graduate Students Thesis Committees at UAB (2006 – present)
- Faculty advisor for Master and PhD students (2006 – present)
- Faculty Mentor, UAB Science and Technology Honor Program (2006 - present)
- Participate in UAB ADVANCE program (2006 - 2010)
- Computer and Networking Advisory Committee, School of Engineering (2007 - 2009)
- Department Strategic Planning Committee, Department of Biomedical Engineering (2007 - 2009)
- Faculty Interviewer of the candidates for other graduate programs (2007 - present)
  - Medical Scientist Training Program
  - Graduate Biomedical Sciences
- Equity and Diversity Committee, School of Engineering (2007 - 2009)
- Faculty Mentor, UAB CORD summer research internship for high school students (2008 - present)
- Faculty Advisor for Society of Women Engineers, School of Engineering (2011 - 2016)
- Organizer of Molecular and Modeling Simulations study group monthly meetings (2011 - 2014)
- Faculty Mentor, NSF REU program, Department of Physics (Summer 2011, 2012, 2014, 2015)
- Advisory Board for mentoring women in computing and technology (2010 - 2012)
- Faculty Judge for graduate research day (Spring 2011)
- Faculty Judge for UAB BME Research Symposium (Spring 2012)
- Associate Director of the Center for Computational and Structural Dynamics (2011 - 2012)
- Quality Assessment Committee, School of Engineering (2014 - present)
- BME Chair Search Committee (2015)
- School's representative on the UAB commission on the Status of Women (2016 – present)

Outreach Activities and Mentoring Female and Minority Students

- Actively involved with the activities in Community OutReach Development program at UAB, mentoring minority high school students (2008 - present)
- Faculty advisor for minority Undergraduate, Master and PhD students (2007 – present)
- Faculty Advisor for Society of Women Engineers, School of Engineering (2011 - 2016)
- Advisory Board of mentoring for women in computing and technology, UAB (2010 - 2012)
- Committee for Professional Opportunities for Women, Biophysical Society (2012 - 2015)
- Early Careers Committee, Biophysical Society (2015 - present)

Professional Service

- Grant Review Panel Member for the Bioengineering, Biotechnology and Biochemistry Panel for The Portuguese Foundation for Science and Technology, Lisbon, Portugal Oct. 2012
- Grant Review for Kentucky Science & Engineering Foundation, 2016
- Organizing committee for the 2013 Frontiers in Structure Biology of Membrane Proteins symposium

Editorial Boards:

MCB: Molecular & Cellular Biomechanics (2007 - present)

Journal of Bioprocessing & Biotechniques (2011 - present)
Journal of Thermodynamics & Catalysis (2011 - present)
Modelling and Simulation in Biotechnology (2016 – present)

Manuscript Reviewer

Biophysical Journal
Biomechanics and Modeling in Mechanobiology
Journal of Biological Chemistry
ACS Nano
Computational Biology and Chemistry
Medicinal Research Reviews
PLoS ONE
Computational Science & Discovery
IEEE Transactions on Biomedical Engineering
Journal of Biomechanics
Journal of Mechanics in Medicine and Biology
Materials & Design
International Journal of Computational Bioscience
Journal of Zhejiang University-SCIENCE B
Polymer Engineering and Science
Journal of Neurophysiology (panel review)
The Journal of Arthroscopic and Related Surgery (panel review)
Journal of Orthopedic Research (panel review)
Clinical Biomechanics (panel review)

Research Support

Ongoing Research Support

1. NSF CBET-1159859 (Song, PI) 10/1/2012 - 09/30/2017 (no-cost extension)
   Thrombospondin-1/calreticulin binding in regulating cell intermediate adhesion and collagen expression
2. 14GRNT2048002 (Bevensee, PI; role: collaborator) 07/01/2014 – 06/30/2017 (no-cost extension)
   AHA (Southeast Affiliate) Molecular Physiology of Na/Bicarbonate Cotransporters

Completed Research Support in the past 3 years

5K25 CA140791 (Song, PI) 08/14/2009 – 06/30/2015
NIH/NCI Protein Interactions Underlying Fas-Mediated DISC in Cholangiocarcinoma
Role: PI

R01GM038953 (Charles N. Falany, PI)
NIH/NIGMS Human Cytosolic Sulfotransferases 9/30/2010 - 8/31/2014
Role: co-investigator

NSF MCB130026 (Song, PI) NSF supported Extreme Science and Engineering Discovery Environment (XSEDE) grant 11/09/2012 – 11/08/2013
The Interaction of PEG-grafted PLL Copolymers with Biomembrane
Role: PI

PUBLICATIONS

*With my students and co-advised students' names underlined; * Corresponding author*

Peer-reviewed Journal Articles (in reverse chronological order)

1. Romone M. Fancy, Harrison Kim, Tong Zhou, Kurt R. Zinn, Donald J. Buchsbaum, **Yuhua Song***. Calmodulin Binding to Death Receptor 5-mediated Death-inducing Signaling Complex in Breast Cancer Cells. *Journal of Cellular Biochemistry,* 2017, Jan 16 [Epub ahead of print]. DOI:10.1002/jcb.25882. (Impact Factor: 3.446)
2. Romone M. Fancy, Lingyun Wang, Thomas Schmid, Qinghua Zeng, Hong Wang, Tong Zhou, Donald J. Buchsbaum, and **Yuhua Song***. Characterization of the Interactions between Calmodulin and Death Receptor 5 in Triple-Negative and Estrogen Receptor Positive Breast Cancer Cells: An Integrated Experimental and Computational Study. *The Journal of Biological Chemistry*, 2016, 291(24):12862-70. PMCID: PMC5095404 (Impact Factor: 4.573)
3. Hongyi Yang, **Yuhua Song***. Structural insight for roles of DR5 death domain mutations on oligomerization of DR5 death domain – FADD complex in the death-inducing signaling complex

formation: a computational study. *Journal of Molecular Modeling*, 2016, 22 (4): 89, page 1-12. (Impact Factor: 1.736) PMID: 26995783

4. Lingyun Wang, Joanne E, Murphy-Ullrich, **Yuhua Song***. Molecular insight for the effect of lipid bilayer environments on thrombospondin-1 and calreticulin interactions. *Biochemistry*, 2014, 53 (40), pp 6309–6322. PMID: 25260145 (Impact Factor: 3.377)
5. Romone Fancy, Lingyun Wang, Tiara Napier, Jiabei Lin, Gu Jing, Aaron Lucius, Jay M McDonald, Tong Zhou, **Yuhua Song***. Characterization of calmodulin and Fas death domain interaction: an integrated experimental and computational study. *Biochemistry, 2014, 53 (16), pp 2680–2688.* PMCID: PMC4007977 (Impact Factor: 3.377)
6. Qi Yan, Jay M McDonald, Tong Zhou, **Yuhua Song***. Structural Insight for the Roles of Fas Death Domain Binding to FADD and Oligomerization Degree of the Fas - FADD complex in the Death Inducing Signaling Complex Formation: A Computational Study. *Proteins: Structure, Function, and Bioinformatics, 2013, 81(3):377-85.* PMCID: PMC3556372 (Impact Factor: 3.181)
7. Di Pan, **Yuhua Song***. Effects of altered restraints in β1 integrin on the force-regulated interaction between the glycosylated I-like domain of β1 integrin and fibronectin III9-10: a steered molecular dynamic study. *Mol Cell Biomech, 2011, 8(3): 233-52.* PMID: 21977518.
8. Di Pan, Qi Yan, Yabing Chen, Jay M McDonald, **Yuhua Song*.** Trifluoperazine Regulation of Calmodulin Binding to Fas: A Computational Study. *Proteins: Structure, Function, and Bioinformatics,* 2011, 79(8): 2543-2556*.* PMCID: PMC3132223 (Impact Factor: 3.181)
9. John T. Wilson, Wanxing Cui, Veronika Kozlovskaya, Eugenia Kharlampieva, Di Pan, Zheng Qu, Venkata R. Krishnamurthy, Joseph Mets1, Vivek Kumar1, Jing Wen, **Yuhua Song**, Vladimir V. Tsukruk, and Elliot L. Chaikof. Cell Surface Engineering with Polyelectrolyte Multilayer Thin Films. *J Am Chem Soc,* 2011, 133(18): 7054-7064. PMID: 21491937 (Impact Factor: 8.981)
10. Qi Yan, Joanne E. Murphy-Ullrich, **Yuhua Song***. Molecular and Structural Insight for the Role of Key Residues of Thrombospondin-1 and Calreticulin in Thrombospondin-1- Calreticulin Binding. *Biochemistry,* 2011, 50(4): 566-573. PMCID: PMC3037594 (Impact Factor: 3.377)
11. Di Pan, **Yuhua Song***. Role of Altered Sialylation of the I-like Domain of β1 Integrin in the Binding of Fibronectin to β1 Integrin: Thermodynamics and Conformational Analyses. *Biophys J*, 2010, 99 (1): 208-217*.* PMCID: PMC2895365 (Impact Factor: 4.692)
12. Qi Yan, Joanne E. Murphy-Ullrich, **Yuhua Song***. Structural Insight for the Role of Thrombospondin-1 Binding to Calreticulin in Calreticulin-Induced Focal Adhesion Disassembly. *Biochemistry,* 2010, 49(17): 3685-3694. PMCID: PMC2943676 (Impact Factor: 3.377)
13. Yawar J. Qadri, **Yuhua Song**, Catherine M. Fuller and Dale J. Benos. Amiloride Docking to Acid-sensing Ion Channel-1. *J Biol Chem,* 2010, 285(13): 9627-9635. PMCID: PMC2843212 (Impact Factor: 5.498)
14. Yawar J. Qadri, Bakhrom K. Berdiev, **Yuhua Song**, Howard L. Lippton, Catherine M. Fuller, and Dale J. Benos. Psalmotoxin-1 docking to human acid sensing ion channel-1. *Journal of Biological Chemistry*, 2009, 284(26): 17625-17633. PMCID: PMC2719401 (Impact Factor: 5.498)
15. Anthony N. Vomund, Sarah Stuhlsatz-Krouper, **Yuhua Song** and William A. Frazier. Breaking an Extracellular α-β Clasp Activates β3 Integrins. *Biochemistry*, 2008, 47 (44): 11616-11624. PMID: 18841997 (Impact Factor: 3.377)
16. Jonathan Suever, Yabing Chen, Jay M McDonald, **Yuhua Song*.** Conformation and Free Energy Analyses of the Complex of Ca2+-Bound Calmodulin and the Fas Death Domain. *Biophys. J.* 2008, 95(12): 5913-5921. PMCID: PMC2599819 (Impact Factor: 4.692)
17. Yuemin Liu, Di Pan, Susan L. Bellis, **Yuhua Song***. Effect of Altered Glycosylation on the Structure of the I-like Domain of beta1 Integrin: A Molecular Dynamics Study. *Proteins: Structure, Function, and Bioinformatics*, 2008, 73(4): 989-1000. PMID: 18536010 (Impact Factor: 3.181)
18. Sun Joo Lee, **Yuhua Song**, Nathan A. Baker. Molecular dynamics simulations of asymmetric NaCl and KCl solutions separated by phosphatidylcholine bilayers: potential drops and structural changes induced by strong Na+-lipid interactions and finite size effects. *Biophys. J.* 2008, 94(9): 3565-3576. PMCID: PMC2292386 (Impact Factor: 4.692)

19. Shyam Rele, **Yuhua Song**, Robert P. Apkarian, Zheng Qu, Vincent P. Conticello and Elliot L. Chaikof. D-Periodic Collagen-Mimetic Microfibers. *J Am Chem Soc.* 2007, 129(47): 14780-14787. PMID: 17985903 (Impact Factor: 8.981)
20. Yuhui Cheng, Jason K. Suen, Deqiang Zhang, Stephen D. Bond, Yongjie Zhang, **Yuhua Song**, Nathan A. Baker, Chandrajit L. Bajaj, Michael J. Holst and J. Andrew McCammon. Finite element analysis of the time-dependent Smoluchowski equation for acetylcholinesterase reaction rate calculations. *Biophys J,* 2007*,* 92(10): 3397-406. PMCID: PMC1853150 (Impact Factor: 4.692)
21. **Yuhua Song**, Victor Guallar, Nathan A. Baker. Molecular dynamics simulation of salicylate effects on the micro- and mesoscopic properties of a dipalmitoylphosphatidylcholine bilayer. *Biochemistry,*2005, 44(41), 13425-13438. PMCID: PMC2435121 (Impact Factor: 3.377)
22. Deqiang Zhang, Jason Suen, Yongjie Zhang, **Yuhua Song**, Zoran Radic, Palmer Taylor, Michael J. Holst, Chandrajit Bajaj, Nathan A. Baker, J. Andrew McCammon. Tetrameric mouse acetylcholinesterase: continuum diffusion rate calculations by solving the steady-state smoluchowski equation using finite element methods. *Biophys J,* 2005, 88(3):1659-1665. PMCID: PMC1305222 (Impact Factor: 4.692)
23. **Yuhua Song**, Yongjie Zhang, Chandrajit L. Bajaj, Nathan A. Baker. Continuum diffusion reaction rate calculations of wild type and mutant mouse acetylcholinesterase: adaptive finite element analysis. *Biophys J.* 2004, 87(3):1558-1566. PMCID: PMC1304562 (Impact Factor: 4.692)
24. **Yuhua Song ,** Yongjie Zhang , Tongye Shen , Chandrajit L. Bajaj , J. Andrew McCammon and Nathan A. Baker. Finite element solution of the steady-state Smoluchowski equation for rate constant calculations. *Biophys J.* 2004, 86(4):2017-2029. PMCID: PMC1304055 (Impact Factor: 4.692)
25. **Yuhua Song**, Richard E. Debski, Volker Musahl, Maribeth Thomas, Savio L-Y. Woo. A three dimensional finite element model of the human anterior cruciate ligament – a computational analysis with experimental validation. *J Biomech*. 2004, 37(3):383-390. PMCID: PMC1304055 (Impact Factor: 3.252)
26. **Yuhua Song**, Yongnian Yan, Renji Zhang. Manufacture of the die of auto-mobile deck part based on rapid prototyping and rapid tooling technology. *Journal of Materials Processing Technology*, 2002, 20(1-3):237-242 (Impact Factor: 1.726)
27. **Yuhua Song**, Yongnian Yan, Renji Zhang, Qingping Lu, Da Xu. Boundary model between casting and matrix and its influence on the dimensional accuracy analysis of rapid tooling. *Proceeding of the institution of mechanical engineers Part B - Journal of Engineering Manufacture*, 2002, 216 (8):1123-1134 (Impact Factor: 0.699)
28. **Yuhua Song**, Yongnian Yan, Renji Zhang Qingping Lu, Da Xu. 3-D nonlinear coupled thermomechanical finite element analysis of the dimensional accuracy for casting dies in rapid tooling. *Finite Elements in Analysis and Design*, 2001, 38 (1):79-91. (Impact Factor: 1.346)
29. **Yuhua Song**, Kaifing Zhang, Zongren Wang, Faxi Dao, Yongnian Yan, Renji Zhang. Coupled thermo-mechanical analysis of plastics thermoforming. *Polymer Engineering and Science*, 2000, 40(8):1736-1746. (Impact Factor: 1.296)
30. **Yuhua Song**, Kaifing Zhang, Zongren Wang, Faxi Diao. 3-D FEM analysis of temperature field and thermal stress for plastics thermoforming. *Journal of Materials Processing Technology*, 2000, 97(1):35-43. (Impact Factor: 1.726)
31. **Yuhua Song**, Kaifeng Zhang, Zongren Wang, Faxi Diao. Study on the warpage of plastics vacuum- forming process. *Journal of Reinforced Plastics and Composites*, 1999, 18(10): 931-941. (Impact Factor: 0.823)
32. **Yuhua Song**, Yongnian Yan, Renji Zhang. Coupled thermo-mechanical FEM aanalysis of laminated object manufacturing. *China Mechanical Engineering*. 2000, 11(Suppl):37-40.
33. **Yuhua Song**, Kaifeng Zhang, Zongren Wang. 3-D FEM analysis of temperature field for plastic sheet thermoforming. *Journal of Plasticity Engineering*, 1998, 5(4):33-41
34. Kaifeng Zhang, **Yuhua Song**, Zongren Wang. Study of latent heat disposal during FEM analysis of 3-D temperature field of plastic thermoforming. *Material Science and Tech*, 1998, 6(2):83-87

35. **Yuhua Song**, Shanzhi Ren, Fengyu Qing. The experimental research and realization on computer about 3-Dimensional shrinkage prediction of ductile iron casting. *Materials Science & Technology*, 1997, 5(1):114-116
36. Kaifeng Zhang, **Yuhua Song**. Analysis of thickness distribution control process of vacuum forming part by rigid visco-plastic shell FEM. *Journal of Plasticity Engineering*, 1997, 4(3):38-42

Invited Talks and Peer-reviewed Abstracts for Conference Presentation

1. Hongyi Yang, Joanne E. Murphy-Ullrich, **Yuhua Song***. Molecular Insights for the Role of Key Residues of Calreticulin in its Binding Activities. *Biophysical Society 60th Annual meeting,* 2016.
2. Romone Fancy, Donald J. Buchsbaum, Tong Zhou, **Yuhua Song***. Calmodulin-DR5 binding in breast cancer: Independent of TRA-8 sensitivity. [abstract]. In: *Proceedings of the 106th Annual Meeting of the American Association for Cancer Research*; 2015 Apr 18-22; Philadelphia, PA. Philadelphia (PA): AACR; *Cancer Res 2015*;75 (15 Suppl):Abstract nr 2931. doi:10.1158/1538-7445.AM2015-2931
3. Lingyun Wang, Joanne E. Murphy-Ullrich, **Yuhua Song***. Effect of an apoptotic membrane raft on the conformational and dynamical changes of calreticulin. *Biophysical Society 59th Annual meeting,* February, 2015.
4. Romone Fancy, Hong Wang, Tong Zhou, **Yuhua Song***. Calmodulin binding to DR-5 and the role of CaM-DR-5 binding in DR-5-mediated DISC formation in breast cancer. [abstract]. In: *Proceedings of the 105th Annual Meeting of the American Association for Cancer Research*; 2014 Apr 5-9; San Diego, CA. Philadelphia (PA): AACR; *Cancer Res* 2014;74 (19 Suppl):Abstract nr 2282. doi:10.1158/1538-7445.AM2014-2282
5. Lingyun Wang, Joanne E, Murphy-Ullrich, **Yuhua Song***. Molecular insight for the effect of lipid raft on thrombospondin-1 and calreticulin interactions. *Biophysical Society 58th Annual meeting, February, 2014*
6. **Yuhua Song**. Protein interactions underlying death receptor-mediated death inducing signaling complex in apoptosis. *International Conference on Oncology and Therapy, Beijing, July, 2013* (Invited Talk).
7. **Yuhua Song**. The Role of Thrombospondin-1 Binding to Calreticulin in Focal Adhesion Disassembly – A Computational Study. *International Conference on Biomedical Engineering, Beijing, June, 2013* (Invited Talk).
8. Tiara Napier, Romone Fancy, Tong Zhou, John Mountz, **Yuhua Song***. Effect of the combined treatment of TRA-8, an agonistic DR5 antibody, and tamoxifen on breast cancer cells. [abstract]. In: *Proceedings of the 104th Annual Meeting of the American Association for Cancer Research*; 2013 Apr 6-10; Washington, DC. Philadelphia (PA): AACR; *Cancer Res* 2013;73 (8 Suppl):Abstract nr 2955. doi:10.1158/1538-7445.AM2013-2955.
9. Lingyun Wang, **Yuhua Song***. Structural and dynamical changes for different types of lipid bilayer by different length of poly-L-lysine: MD simulations. *Biophysical Society 57th Annual meeting*, February, 2013
10. Romone Fancy, Tiara Napier, Lingyun Wang, Gu Jing, Jay M McDonald, Tong Zhou, **Yuhua Song***. Characterize calmodulin/Fas death domain interaction with combined ITC, CD and computational studies. *BMES 2012 Annual Meeting,* October 2012.
11. Romone Fancy, Tiara Napier, Gu Jing, Jay M McDonald, Tong Zhou, **Yuhua Song***. Quantitative characterization of calmodulin and Fas death domain interactions. [abstract]. In: *Proceedings of the 103rd Annual Meeting of the American Association for Cancer Research*; 2012 Mar 31-Apr 4; Chicago, IL. Philadelphia (PA): AACR; *Cancer Res* 2012;72(8 Suppl):Abstract nr 4754. doi:1538-7445.AM2012-4754
12. Lingyun Wang, Di Pan, Qi Yan, Russell Green, **Yuhua Song***. Activation mechanisms of αVβ3 integrin by binding to fibronectin: a computational study. *Biophysical Society 56th Annual meeting*, February 2012.

13. Qi Yan, Jay M McDonald, **Yuhua Song*.** Structural insight for the role of Fas binding to FADD and oligomerization degree of Fas/FADD complex in death inducing signaling complex formation. [abstract]. In: *Proceedings of the 102nd Annual Meeting of the American Association for Cancer Research*; 2011 Apr 2-6; Orlando, FL. Philadelphia (PA): AACR; *Cancer Res* 2011;71(8 Suppl):Abstract nr 19. doi:10.1158/1538-7445.AM2011-19.
14. Qi Yan, Joanne E, Murphy-Ullrich, **Yuhua Song*.** Molecular and structural insight for the role of key residues of thrombospondin-1 and calreticulin in thrombospondin-1- calreticulin binding. *Biophysical Society 55th Annual meeting*, March 2011.
15. Di Pan, Qi Yan, Yabing Chen, Jay M McDonald, **Yuhua Song*.** Conformational and thermodynamics analyses of the regulation of trifluoperazine in camodulin binding to Fas: Implications for cancer chemotherapy. [abstract]. In: *Proceedings of the 101st Annual Meeting of the American Association for Cancer Research*; 2010 Apr 17-21; Washington, DC. Philadelphia (PA): AACR; *Cancer Res* 2010;70 (8 Suppl):Abstract nr 96.
16. Di Pan, **Yuhua Song*.** Effect of the conjugation of PEG to the PLL on the micro- and mesoscopic properties of a POPC bilayer. *Biophysical Society 54th Annual meeting*, February 2010.
17. Qi Yan, Joanne E, Murphy-Ullrich, **Yuhua Song*.** Modeling of the structural basis of thrombospondin-1 and calreticulin interactions. *Biophysical Society 53th Annual meeting*, March 2009.
18. Di Pan, Qi Yan, **Yuhua Song*.** Effect of Trifluoperazine on Ca2+ -Bound Calmodulin binding to Fas Death Domain for DISC Formation. *Biophysical Society 53th Annual meeting*, March 2009.
19. Jonathan Suever, Yabing Chen, Jay M. McDonald, **Yuhua Song*.** Conformation and Free Energy Analyses of the Complex of Ca2+-Bound Calmodulin and the Fas Death Domain. Southeastern Meeting of the American Society for Biomechanics, April 2008.
20. Di Pan, **Yuhua Song*.** Effect of Altered Glycosylation on Binding Affinity of Beta1 I-Like Domain with Fibronectin. Southeastern Meeting of the American Society for Biomechanics, April 2008.
21. Yuemin Liu, Susan L. Bellis, **Yuhua Song*.** Effect of Altered Glycosylation on the Structure of the I-like Domain of β1 Integrin: A Molecular Dynamics Study. *Biophysical Society 52th Annual meeting*, Feb. 2008.
22. **Yuhua Song.** Multiscale Modeling in Biomechanics and Biology: Molecular to Continuum. *Symposium Frontiers in Biological Sciences,* July 2007.
23. **Yuhua Song,** Nathan A. Baker. Molecular dynamics simulation of the asymmetric salicylate and monovalent ion solution around model lipid bilayers. *Biophysical Society 51th Annual meeting*, March 2007.
24. **Yuhua Song,** Nathan A. Baker. Effect of salicylate on electromechanical properties of a model biomembrane. *Huntsville Simulation Conference sponsored by The Society for Modeling & Simulation International*, Oct. 2006
25. **Yuhua Song,** Nathan A. Baker. Effect of salicylate on ion distributions in a model biomembrane: molecular dynamics simulations. *Biophysical Society 50th Annual meeting*, Feb. 2006.
26. **Yuhua Song**, Victor Guallar, Nathan A. Baker. Molecular dynamics simulation of salicylate effects on the micro- and mesoscopic properties of a dipalmitoylphosphatidylcholine bilayer. *Gibbs Conference on Biothermodynamics*. Oct. 2005.
27. **Yuhua Song,** Nathan A. Baker. Effect of salicylate on lipid bilayer mechanics and electrostatics. *Biophysical Society 49th Annual meeting*, Feb. 2005.
28. **Yuhua Song ,** Yongjie Zhang , Tongye Shen , Chandrajit L. Bajaj , J. Andrew McCammon and Nathan A. Baker. Finite element solution of the steady-state diffusion equation for rate constant calculations. *Biophysical Society Meeting*. Feb. 2004.
29. **Yuhua Song ,** Yongjie Zhang , Tongye Shen , Chandrajit L. Bajaj , J. Andrew McCammon and Nathan A. Baker. Computational modeling of biomolecular diffusion. *17th Annual Gibbs Conference on Biothermodynamics*. Sep. 2003.

30. **Yuhua Song**, Richard E. Debski, Maribeth Thomas, Savio L-Y. Woo. Force and stress distribution of the ACL is affected by the ACL wrapping around the femoral condyle under anterior tibial load, *Orthopedic Research Society Meeting*, Feb. 2003 in New Orleans, LA.
31. **Yuhua Song**, Richard E. Debski, Jorge Gil, Savio L-Y. Woo. Development of a 3-D non-linear finite element model of human knee joint. BED-9C, Joint Biomechanics I, Advances in Bioengineering, *American Society of Mechanical Engineers Meeting*, New Orleans, Nov. 2002.
32. **Yuhua Song**, Richard E. Debski et al. Stress distribution within the anteromedial and posterolateral bundles of ACL under anterior tibial load. *10th Annual symposium on computational methods in orthopaedic biomechaics*, Dallas, TX, Feb. 9, 2002.
33. **Yuhua Song**, Yongnian Yan, Da Xu, Renji Zhang and Qingping Lu. Application of the dimensional accuracy analysis in rapid tooling. *The 8th International Conference on Rapid Prototyping*, June, 2000, TOKYO, Japan, pp364-370.
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