CURRICULUM VITA

JOSHUA S. YUAN
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Professional Experience

2013 – now Associate Professor
Department of Plant Pathology and Microbiology
Faculty of Institute for Plant Genomics and Biotechnology
Texas A&M Energy Institute
Graduate Program in Biotechnology
Texas A&M University (TAMU), College Station, TX

2015 – now Director
Synthetic and Systems Biology Innovation Hub (SSBiH)
Texas A&M University (TAMU), College Station, TX

2013 – now Chief Scientific Advisor
SynShark LLC

2008 – 2013 Assistant Professor in Bioinformatics and Systems Biology
Department of Plant Pathology and Microbiology
Institute for Plant Genomics and Biotechnology
Texas A&M University, College Station, TX

2004 – 2008 Director, Institute of Agriculture (UTIA) Genomics Hub
Genomics Scientist, Department of Plant Sciences,
University of Tennessee, Knoxville, TN

2001 – 2004: Microarray Core Manager, Ernest Gallo Clinic & Research Center
University of California, San Francisco, CA

2000 – 2001: Senior Research Associate, BASF Plant Sciences LLC, RTP, NC

(Promotion to Full Professor Passed College and Departmental Evaluation Unanimously, and the Package is Forwarded to the University Administration)

Education

Sungrant Fellow		National Renewable Energy Lab	2008
Ph.D.	Major: Plant Functional Genomics Minor: Statistics	University of Tennessee	Dec. 2007
M.S.	Plant Sciences	University of Arizona	Aug. 2001
B.S.	Major: Biology Minor: International Economics	Fudan University	Jul. 1997

Research Program (~$10 Million extramural competitive funding as the leading PI)

Project Name (for representative projects only)	***Agency***	***Amount***	***Role***
Upgrading Lignin-cointaing Biorefinery Waste for Bioplastics	DOE EERE	$2.5 Million	PI
Develop Synthetic Crop through Photorespiration Re-channeling and Terpenoid Biosynthesis Optimization, Phase 2	DOE ARPA E	$3 Million	PI
Synthetic Design of Microorganisms for Lignin Fuel	DOE EERE	$2.4 Million	PI
Develop Synthetic Crop through Photorespiration Re-channeling and Terpenoid Biosynthesis Optimization, Phase 1	DOE ARPA E	$1.9 Million	PI

Novel Strategy to Improve Plant Biomass by Manipulating PHB Gene Function	Sungrant	$69,985	PI
Biodesign of Lignin-Derived Terpene Biofuel	State of Texas	$150,000	PI
Structure Dynamics-Guided Enzyme Improvement	Sungrant	$34,966	Co-PI
Manipulating Lipid Profile of Microalgae through Synergistic Chemical Treatment	State of Texas	$200,000	PI
National Alliance for Advanced Biofuels and Bioproducts	DOE EERE	$166,592	Co-I
Pending:			
Southern Institute for Bioenergy Sciences (SIBES)	DOE OS	$70 million	PI

Recognition

- Sigma Delta Gamma Outstanding Graduate Student, 2007
- BMC Bioinformatics All Time Most Viewed Article 2012 – 2014, Top Ten Most Viewed Now: http://old.biomedcentral.com/bmcbioinformatics/mostviewed/alltime
  Yuan et al., Statistical analysis of realtime PCR
- BMC Bioinformatics Most Viewed Article of the Year, in 2011 and 2012:
  Yuan et al., Statistical analysis of realtime PCR
- Insect Science Most Download of the Year of 2011:
  Shi et al., Molecular approaches to study the insect gut symbiotic microbiota at the 'omics' age

Teaching

BESC489/PLPA689: Genome Informatics, Fall, 2009 – 2017; Evaluation: 4.67/5.00
BESC357/PLPA657: Biotechnology for Biofuels and Bioproducts, Spring, 2009 – 2017; Evaluation: 4.34-4.90/5.00

Editorial Positions & Synergistic Activities

2016	Session Chair	Two Sessions for AICHE Annual Conference
2014 – 2015	Review Panel	NSF Sustainable Energy
2014	Session Chair	Special Session in Synthetic Biology, Society for Industrial Microbiology and Biotechnology, 36th Symposium for Biotechnology for Fuels and Chemicals
2011 – 2015	Review Panel	US DOE JGI CSP and Synthetic Biology
2011 – 2013	Board of Director	MidSouth Comp Biol & Bioinformatics Society
2008 – now	BMC Research Notes	Associate Editor
2009	US-China Bioenergy Forum	Co-Chair
2010	Biofuels	Guest Editor for Special Issue

Peer-Reviewed Publications (Corresponding or Co-Corresponding author marked with ***)**

1. Xin Wang, Changpeng Xin, Wei Liu, Yi Zheng, Runzhe Li, Susie Y. Dai, Xinguang Zhu, Peter Rentzepis, ***Joshua S. Yuan****, Enhanced limonene production in cyanobacteria reveals photosynthesis limitations, *Proceedings of National Academy of Sciences, USA*, In press.
2. Shangxian Xie; Qining Sun, Yunqiao Pu, Furong Lin, Su Sun, Xin Wang, Arthur J. Ragauskas, ***Joshua S. Yuan****, Advanced chemical design for efficient lignin bioconversion, *ACS Sustainable Chemistry & Engineering*, In press.
3. Runze Li, Jie Chen, Tom C. Cesario, Xin Wang, ***Joshua S. Yuan***, Peter M. Rentzepis Synergistic reaction of silver nitrate, silver nanoparticles, and methylene blue against bacteria, *Proceedings of the National Academy of Sciences, USA,* In press.

4. Hasan Sadeghifar, Tyrone Wells, Rosemary K. Le, Fatemeh Sadeghifar, ***Joshua S. Yuan***, Arthur J. Ragauskas, Fractionation of organosolv lignin using acetone: water and properties of the obtained fractions, *ACS Sustainable Chemistry & Engineering*, In press.
5. Gaia Pigna, Taniya Dhillon, Elizabeth M Dlugosz, ***Joshua S Yuan***, Connor Gorman, Piero Morandini, Scott C Lenaghan, C Neal Stewart, Methods for suspension culture, protoplast extraction, and transformation of high biomass yielding perennial grass *Arundo donax*, *Biotechnology Journal*, In press.
6. Yan Shi, Qiang Li, Xin Wang, Shangxian Xie, Liyuan Cai, ***Joshua S. Yuan****, Directed bioconversion of Kraft lignin to polyhydroxyalkanoate by *Cupriavidus basilensis* B-8 without any pretreatment, *Process Biochemistry*, In press.
7. Tyron Wells Jr., Rosemary K. Le, Parthapratim Das, Xianzhi Meng, Ryan Stocklosa, Adita Bhalla, David B. Hodge, ***Joshua S. Yuan*** and arthu J. Raguaskas, Conversion of corn stover alkaline pre-treatment waste streams into biodiesel via *rhodococci*, RSC Advances, In press.
8. Clifford J Unkefer, Richard T Sayre, Jon K Magnuson, Daniel B Anderson, Ivan Baxter, Ian K Blaby, Judith K Brown, Michael Carleton, Rose Ann Cattolico, Taraka Dale, Timothy P Devarenne, C Meghan Downes, Susan K Dutcher, David T Fox, Ursula Goodenough, Jan Jaworski, Jonathan E Holladay, David M Kramer, Andrew T Koppisch, Mary S Lipton, Babetta L Marrone, Margaret McCormick, István Molnár, John B Mott, Kimberly L Ogden, Ellen A Panisko, Matteo Pellegrini, Juergen Polle, James W Richardson, Martin Sabarsky, Shawn R Starkenburg, Gary D Stormo, Munehiro Teshima, Scott N Twary, Pat J Unkefer, Joshua S Yuan, José A Olivares, Review of the algal biology program within the National Alliance for Advanced Biofuels and Bioproducts, *Algal Research*, 2016, In Press.
9. Elise van Buskirk, Jin Su, Ian Silverman, Sager Gosai, Brian Gregory, ***Joshua S. Yuan***, Henry Daniell, Terpene metabolic engineering via nuclear or chloroplast genomes profoundly and globally impacts off-target pathways through metabolite signaling, *Plant Biotechnology Journal*, 2016, 14, 1862–1875.
10. Lu Lin, Yanbing Cheng, Yunqiao Pu, Su Sun, Xiao Li, Mingjie Jin, Elizabeth A. Pierson, Dennis Gross, Bruce E. Dale, Susie Y. Dai, Arthur J. Ragauskas, ***Joshua S. Yuan****, Systems biology-guided biodesign of consolidated lignin conversion, *Green Chemistry*, 2016, 18, 5536-5547.
11. Xueyan Chen, Ugur Uzuner, Man Li, Weibing Shi, ***Joshua S. Yuan***, Susie Y. Dai, Phytoestrogens and Mycoestrogens Induce Signature Structure Dynamics Changes on Estrogen Receptor α, *International Journal of Environmental* Research *and Public Health*, 2016, 13 (9), 869

12. Shangxian Xie, Authur J. Ragauskas, ***Joshua S. Yuan****, Lignin conversion: opportunities and challenges for the integrated biorefinery, *Industrial Biotechnology,* 2016*,* 12 (3), 161-167.
13. Cheng Zhao, Shangxian Xie, Yunqiao Pu, Rui Zhang, Fang Huang, Arthur J. Ragausaks, ***Joshua S. Yuan****, Synergistic enzymatic and microbial conversion of lignin for lipid, *Green Chemistry*, 2016, 18, 1306-1312.

14. Juan Yu[$], Yixiang Zhang[$], Chao Di[$], Qunlian Zhang, Kang Zhang, Chunchao Wang, Qi You, Hong Yan, Susie Y. Dai, ***Joshua S. Yuan****, Wenying Xu and Zhen Su, JAZ7 negatively regulates dark-induced leaf senescence in *Arabidopsis*, *Journal of Experimental Botany*, 2016, 67 (3): 751-762.
15. Su Sun[$], Shangxian Xie[$], Hu Chen, Xin Qin, Yanbing Cheng, Yan Shi, Susie Y. Dai, Xiaoyu Zhang, ***Joshua S. Yuan****, Genomic and molecular mechanisms for efficient biodegradation of aromatic dye, *Journal of Hazardous Material*, 2016, 9, 302:286-295.
16. Donald R. Ort, Sabeeha S. Merchant, Jean Alric, Alice Barkan, Robert E. Blankenship, Ralph Bock, Roberta Croce, Maureen R. Hanson, Julian M. Hibberd, Stephen P. Long, Thomas A. Mooreo, James Moroney, Krishna K. Niyogi, Martin A. J. Parry, Pamela P. Peralta-Yahya, Roger C. Prince, Kevin E. Redding, Martin H. Spalding, Klaas J. van Wijk, Wim F. J. Vermaas, Susanne von Caemmerer, Andreas P. M. Weber, Todd O. Yeates, ***Joshua S. Yuan***, and Xin Guang Zhu, Redesigning photosynthesis to sustainably meet global food and bioenergy demand, *Proceedings of National Academy of Sciences, USA*, 2015, 112(28), 8529–8536.
17. Bo Li, Shan Jianga, Xiao Yua, Cheng Cheng, Sixue Chen, Yanbing Cheng, ***Joshua S. Yuan***, Daohong Jiang, Ping He, Libo Shan, Phosphorylation of trihelix transcriptional repressor ASR3 by MAP KINASE4 negatively regulates Arabidopsis immunity, *Plant Cell*, 2015, 27(3):839-856.
18. Shangxian Xie, Xing Qin, Yanbing Cheng, Weichuan Qiao, Su Sun, Scott Sattler, Zhanguo Xin, Susie Y. Dai, Katy Gao, Bin Yang, Xiaoyu Zhang, and ***Joshua S. Yuan****, Simultaneous conversion of all cell wall components with oleaginous fungi without chemical pretreatment, *Green Chemistry*, 2015,17, 1657-1667.
19. Xin Wang, Don Ort, and ***Joshua S. Yuan****, Photosynthetic terpene hydrocarbon production for fuels and chemicals, *Plant Biotechnology Journal*, 2015,13:137-46.
20. Aravind Ravindran, Neha Jalan, ***Joshua S. Yuan***, Nian Wang and Dennis C. Gross, Comparative genomics of *Pseudomonas syringae pv. syringae* strains B301D and HS191 and insights into intrapathovar traits associated with plant pathogenesis, *MicrobiologyOpen*, 2015, 4(4): 553-573.
21. Shangxian Xie, Ryan D. Syrenne, Su Sun, ***Joshua S. Yuan****, Exploration of Natural Biomass Utilization Systems (NBUS) for advanced biofuel--from systems biology to synthetic design, *Current Opinion in Biotechnology*, 2014, 27:195-203.
22. Yixiang Zhang, Peng Gao, Zhuo Xing, Shumei Jin, Zhide Chen, Lantao Liu, Nasie Constantino, Xingwang Wang, Weibin Shi, ***Joshua S. Yuan****, and Susie Y. Dai, Application of an improved proteomics method for abundant protein cleanup: molecular and genomic mechanisms study in plant defense, *Molecular and Cellular Proteomics*, 2013, 12(11): 3431-42.
23. Wusheng Liu, ***Joshua S. Yuan***, and C. Neal Stewart Jr., Advanced genetic tools for plant biotechnology, *Nature Review Genetics*, 2013, 14, 781–793
24. Weibing Shi, Shangxian Xie, Su Sun, Xueyan Chen, Xin Zhou, Lantao Liu, Peng Gao, Nikos C. Kyprides, En-Gyu No, ***Joshua S. Yuan****,* Comparative genomic analysis of the endosymbionts of herbivorous insects reveals eco-environmental adaptations: biotechnology applications. *PLoS Genetics,* 2013, 9(1): e1003131.
25. Shangxian Xie, Su Sun, Susie Y. Dai, and ***Joshua S. Yuan****, Efficient coagulation of microalgae in cultures with filamentous fungi, *Algal Research*, 2013, 2(1): 28-33.
26. Nageswara-Rao, M., C. Kwit, S. Agarwal, M.T. Patton, J.A. Skeen, ***J.S. Yuan***, R.M. Manshardt. C.N. Stewart Jr. Sensitivity of a real-time PCR method for the detection of transgenes in a mixture of transgenic and non-transgenic seeds of papaya (*Carica papaya* L.) *BMC Biotechnology*, 2013, 13:69.

27. Yixiang Zhang, Sanmin Liu, Susie Y. Dai, ***Joshua S. Yuan****, Integration of shot-gun proteomics and bioinformatics analysis to explore plant hormone responses, *BMC Bioinformatics*, 2012, S15: S8.
28. Dongxia Yao, Wenying Xu, ***Joshua S. Yuan***, and Zhen Su, Comparative genome analysis and network modeling of NAC transcriptional factors to dissect the regulatory mechanisms for cell wall biosynthesis, *BMC Bioinformatics*, 2012, S15: S10.
29. Weibing Shi, Ugur Uzuner, Lingxia Huang, Palmy R Jesudhasan, Suresh D Pillai, ***Joshua S Yuan****, Comparative analysis of insect gut symbionts for composition–function relationships and biofuel application potential, *Biofuels*, 2011, 2 (5): 529-544.
30. Sanmin Liu, Lantao Liu, Ugur Uzuner, Xin Zhou, Manxi Gu, Weibing Shi, Yixiang Zhang, Susie Y. Dai, and ***Joshua S. Yuan****, HDX-Analyzer: A novel package for statistical analysis of protein structure dynamics, *BMC Bioinformatics*, 2011, 12: S1: S43.
31. ***Joshua S Yuan****, Xinwang Wang, C. Neal Stewart, Biomass feedstock: diversity as a solution, *Biofuels*, 2011, 2 (5): 491-493.
32. Weibing Shi, Shi-you Ding, ***Joshua S. Yuan****, Comparison of insect gut cellulase and xylanase activity across different insect species with distinct food sources, *BioEnergy Research*, 2011,4: 1-10.
33. Carl E. Sams, Dilip R. Panthee, Craig S. Charron, Dean A. Kopsell, ***Joshua S. Yuan*** , Selenium regulates gene expression for glucosinolate and carotenoid biosynthesis in Arabidopsis, *Journal of the American Society for Horticultural Science*, 2011, 136(1):23-34.
34. Danner H, Boeckler GA, Irmisch S, ***Yuan JS***, Chen F, Gershenzon J, Unsicker SB, Köllner TG: Four terpene synthases produce major compounds of the gypsy moth feeding-induced volatile blend of *Populus trichocarpa*. *Phytochemistry,* 2011, 72(9):897-908.
35. Ugur Uzunner, Weibing Shi, Lantao Liu, Sanmin Liu, Susie Y. Dai, ***Joshua S. Yuan****, Enzyme structure dynamics of xylanase I from *Trichoderma longibrachiatum*, 2010, *BMC Bioinformatics*, 11, S6: S12.
36. Chao Di, Wenying Xu, Zhen Su, ***Joshua S. Yuan****, Comparative genome analysis of PHB gene family reveals deep evolutionary origins and diverse gene function, 2010, *BMC Bioinformatics*, 11, S6: S22.
37. Yanhui Peng, Laura G. Abercrombie, ***Joshua S. Yuan***, R.D. Sammons, Patrick J. Tranel, and C.N. Stewart Jr., Characterization of de novo transcriptome for a non-model plant, Conyza canadensis (horseweed), using GS-FLX 454 pyrosequencing, 2010, *Pest Management Science*, 66: 1053–1062
38. Weibing Shi, Jianzhong Sun, Ryan Syrenne, ***Joshua S. Yuan****, Molecular approaches to study the insect gut symbiotic microbiota at the 'Omics' age, 2010, *Insect Science*, 17: 199-219.
39. ***Joshua S. Yuan***, Laura L.G. Abercrombie, Yongwei Cao, Matthew D. Halfhill, Xin Zhou, Yanhui Peng, Jun Hu, Murali R. Rao, Gregory R. Heck, Thomas J. Larosa5 R. Douglas Sammons, Xinwang Wang, Priya Ranja, Denita H. Johnson, Phillip A. Wadl, Brian E. Scheffler, Timothy A. Rinehart, Robert N. Trigiano,C. Neal Stewart, Jr., Functional genomics analysis of glyphosate resistance in *Conyza canadensis* (horseweed), 2010, *Weed Sciences*, 58: 109-117.
40. Yixiang Zhang, Peng Gao, ***Joshua S. Yuan****, Plant internactome and protein-protein interaction network, *Current Genomics*, 2010, 11: 40-46.
41. Stewart, C. N., Jr., Y. Peng, L. G. Abercrombie, M. D. Halfhill, M. R. Rao, P. Ranjan, J. Hu, R. D. Sammons, G. R. Heck, P. J. Tranel, ***J. S. Yuan*** 2010. Genomics of glyphosate resistance. Pp in V. Nandula (ed). Glyphosate Resistance in Weeds. Wiley-Blackwell.

42. Zhanyou Xu, Dandan Zhang, Jun Hu, Xin Zhou, Xia Ye, Kristen Reichel, Nathan R. Stewart, Ryan D. Syrenne, Xiaohan Yang, Peng Gao, Weibing Shi, Crissa Doeppke, Rob Sykes, Jason Burris, Joe Bozell, Max Z. Cheng, Douglas Hayes, Nikki Labbie, Mark Davis, C. Neal Stewart Jr., ***Joshua S. Yuan****, Comparative genome analysis of lignin biosynthesis gene families across the plant kingdom, *BMC Bioinformatics*, 2009, 10, S11: S3.
43. Hu, J., P.J. Tranel, C.N. Stewart, Jr., and ***J.S. Yuan***. 2009. Molecular and genomic mechanisms of non-target site herbicide resistance. Pp149-161 In: Stewart, C.N., Jr. (Ed.) Genomics of Weedy and Invasive Plants, Blackwell Scientific Publishing, Ames Iowa
44. ***Joshua S. Yuan,*** Sari J. Himanen, Jarmo K. Holopainen, Feng Chen, and C. Neal Stewart, Jr. Smelling global warming: changes of ecological function of plant volatile organic compounds, *Trends in Ecology and Evolution*, 2009, 24: 323-331.
45. Xin Zhou, Zhen Su, Doug Rammons, Yanhui Peng, Patrick R. Tranel, C. Neal Stewart Jr., and ***Joshua S. Yuan****, Novel software package for cross-platform transcriptome analysis (CPTRA), *BMC Bioinformatics*, 2009, 10, S11: S16.
46. Trigiano, R.N., X.W. Wang, L.L. Good, D. Panthee, B.E. Scheffler, T.A. Rinehart, D. Johnson, P.A. Wadl, N.R. Stewart, ***J.S. Yuan***, C.N. Stewart, Jr. Microsatellites from *Conyza canadensis* (horseweed). *Molecular Ecology Resources*, 2009, 9:1375-1379.
47. Wayra Navia-Gine, ***Joshua S. Yuan***, Feng Chen, and Kenneth L. Korth, Regulation of an insect-induced E-(beta)-ocimene synthase and other terpene synthases of *Medicago truncatula*. *Plant Physiology and Biochemistry*, 2009, 47: 416-425.
48. Panthee, D.R., J.J. Marois, D.L. Wright, ***J.S. Yuan***, and C.N. Stewart Jr. Differential expression of genes in soybean in response to the causal agent of Asian soybean rust, (*Phakopsora pachyrhizi Sydow*), is soybean growth stage-specific. 2009, *Theoretical and Applied Genetics,* 118: 359-370.
49. ***Joshua S. Yuan***, Kelly H. Tiller, Hani Al-Ahmad, Nathan R. Stewart, C. Neal Stewart Jr., Plants to power: Bioenergy to fuel the future, *Trends in Plant Sciences,* 2008, 13:421-429.
50. ***Joshua S. Yuan****,* Tobias G. Köllner, Greg Wiggins, Jerome Grant, Nan Zhao, Xiaofeng Zhuang, Jörg Degenhardt and Feng Chen Elucidation of the genomic basis of indirect plant defense against insects, *Plant Signaling & Behavior*, 2008, 3: 720 - 721
51. Jason Abercrombie, Matthew Halfhill, Priya Ranjan, Murali Rao, Arnold Saxton, ***Joshua S. Yuan***, C. Neal Stewart Jr., Transcriptional profiling of *Arabidopsis thaliana* grown under arsenate stress reveals antioxidant activity and repression of the phosphate starvation response, *BMC Plant Biology,* 2008, 8:37.
52. ***Joshua S. Yuan,*** Tobias G. Köllner, Greg Wiggins, Jerome Grant, Jörg Degenhardt, and Feng Chen, Molecular and genomic basis of volatile-mediated indirect defense against insects in rice, *Plant Journal,* 2008, 55: 491-503
53. ***Joshua S. Yuan,*** David W. Galbraith, Susie Y. Dai, Patrick Griffin, and C. Neal Stewart Jr., Plant systems biology comes of age, *Trends in Plant Sciences,* 2008, 13: 165-171.
54. Maria Cekanova, ***Joshua S. Yuan***, Xiuoon Li, and Seung Joon Baek, Gene alterations by PPARγ agonists in human colorectal adenocarcinoma HCT-116 cells. 2008, *International Journal of Oncology*, 32: 809-819.
55. ***Joshua S. Yuan****, Donglin Wang, C. Neal Stewart Jr., Statistical methods for efficiency adjusted real-time PCR quantification, 2008, *Biotechnology Journal*, 3: 112-123.
56. ***Joshua S. Yuan,*** Nathan R. Stewart, Jason Burris, C Neal Stewart Jr. Statistical methods for transgene detection with real-time PCR, 2007, *BMC Bioinformatics*, 8, S7: S6.
57. D.R. Panthee, ***Joshua S. Yuan***, D.L. Wright, J.J. Marois, D. Mailhot and C.N. Stewart Jr., Global gene expression analysis in soybean in response to the causal agent of Asian soybean rust (*Phakopsora pachyrhizi* Sydow), 2007, *Functional and Integrative Genomics*, 7: 291.
58. ***Joshua S. Yuan***, Pat Tranel, and C. Neal Stewart Jr., Non-target herbicide resistance: a family business, 2007, *Trends in Plant Sciences,* 12: 6.

59. ***Joshua S. Yuan***, Xiaohan Yang, Jinru Lai, Hong Lin, Zong-ming Chen, Hiroyuki Nonogaki, and Feng Chen, Comparative genomic analysis of endo-β-mannanase gene families in Arabidopsis, rice and poplar, 2007, *Functional and Integrative Genomics*: 7: 1.
60. Feng Chen, Leland Cseke, Hong Lin, Ara Kirakosyan, ***Joshua S. Yuan***, and Peter Kaufman, 2006, The study of plant natural product biosynthesis in the pre-genomics and genomics Eras, Book Chapter in *Nature Products from Plants*, pp: 203-220.
61. Yue Yang, ***Joshua S. Yuan***, Jeannine Ross, Joseph P. Noel, Eran Pichersky and Feng Chen, An *Arabidopsis* thaliana methyltransferase capable of methylating farnesoic acid, 2006, *Archives of Biochemistry and Biophysics*, 448:123.
62. Dhar, M.S., ***Joshua S. Yuan***, Sarah B. Elliott and Sommardahl C., A type IV P-type ATPase affects insulin-mediated glucose uptake in adipose tissue and skeletal muscle in mice, 2006, *Journal of Nutritional Biochemistry*, 17: 811.
63. ***Joshua S. Yuan***, Ann Reed, Feng Chen, and C. Neal Stewart Jr., Statistical analysis of real-time PCR data, 2006, *BMC Bioinformatics*, 7:85.

Invited Book Chapters and Editorial

64. ***Joshua S Yuan****, Yinbo Qu, Shizhong Li, C Neal Stewart, US–China collaborative biofuel research: towards a global solution for petroleum replacement, *Biofuels*, 2011, 2 (5): 487-489.
65. Yuanchun Shi, Shizhong Li, ***Joshua S Yuan****, Biomass utilization toward energy independence and sustainable economic development in China, *Biofuels*, 2011, 2 (5): 501-502.
66. Ryan D. Syrenne*, Weibing Shi**, C. Neal Stewart Jr., ***Joshua S. Yuan****, 'Omics' Platforms: Importance of 21st Century Genome-enabled Technologies, as Book Chapter in press in Seed Developmental Research for Improved Seed Quality and Crop Yield
67. Stewart, C. N., Jr., Y. Peng, L. G. Abercrombie, M. D. Halfhill, M. R. Rao, P. Ranjan, J. Hu, R. D. Sammons, G. R. Heck, P. J. Tranel, ***J. S. Yuan*** 2010. Genomics of glyphosate resistance. Pp in V. Nandula (ed). Glyphosate Resistance in Weeds. Wiley-Blackwell.
68. Hu, J., P.J. Tranel, C.N. Stewart, Jr., and ***J.S. Yuan****. 2009. Molecular and genomic mechanisms of non-target site herbicide resistance. Pp149-161 In: Stewart, C.N., Jr. (Ed.) Genomics of Weedy and Invasive Plants, Blackwell Scientific Publishing, Ames Iowa
69. Feng Chen, Leland Cseke, Hong Lin, Ara Kirakosyan, ***Joshua S. Yuan***, and Peter Kaufman, 2006, The study of plant natural product biosynthesis in the pre-genomics and genomics Eras, Book Chapter in *Nature Products from Plants*, pp: 203-220.
70. ***Joshua S. Yuan*** and C. N. Stewart Jr., 2005, Real-time PCR statistics. *PCR Encyclopedia 1*: 101127-101149.

Selected Speech at Conferences and Peer Institutes

1. Biological and Chemical Design of Lignin Conversion – The Path to Integrated Biorefinery, Department of Energy, Environmental & Chemical Engineering, Washington University, Saint Louis, MO, April, 2016
2. Biological and Chemical Design of Lignin Conversion, International Conference for Biomolecular Engineering, Singapore, Jan. 2016
3. Rewiring Photosynthesis for Terpene Production, 2015 AICHE Annual Conference, Salt Lake City, UT, November, 2015
4. Advanced Biological and Chemical Design for Lignin Bioconversion, 2015 AICHE Annual Conference, Salt Lake City, UT, November, 2015
5. Systems Biology-Guided Biodesign of Consolidated Lignin Conversion, 2015 AICHE Annual Conference, Salt Lake City, UT, November, 2015
6. Systems Biology-Guided Biodesign of Lignin-to-Bioplastics Conversion, 3rd International Frontiers in Biorefining Conference, St. Simons Island, GA, October 2014

7. Lignin to Fuels and Chemicals -- Converting the waste material to the valuable, National Innovation Summit, Washington, DC, June 2014
8. An Enabling Platform for Algal Biofuel and Bioproducts, National Innovation Summit, Washington, DC, June 2014
9. Synthetic Feedstock for Terpenoid Fuels & Chemicals, 36th Symposium on Biotechnology for Fuels and Chemicals, Clearwater, FL, May 2014
10. Feedstock Lignin Modification Enhances Oleaginous Fungus Conversion of Sorghum Biomass, 35th Symposium on Biotechnology for Fuels and Chemicals, Portland, OR, May, 2013
11. 'Omics' Exploration of Plant Insect Interaction for Biotechnology Applications, Invited Speaker for Graduate Student Association, Plant Research Center, University of Tennessee, Knoxville, November 2013
12. Systems Biology-Guide Synthetic Design of Plant and Microorganisms to Overcome Technical Barriers in Advanced Biofuels, Invited Speaker for Bioproducts, Sciences & Engineering Laboratory (BESL), Washington State University and Pacific Northwest National Laboratory, May 2013
13. Reverse Design of Natural Biomass Utilization Systems (NBUS) for Biofuels and Bioproducts, Departmental Seminar Speaker, Department of Entomology, Louisiana State University, October 2012
14. An Enabling Platform for Algal Biofuel and Bioproducts, World Congress on Industrial Biotechnology, Orlando, FL, June, 2012
15. The Pathway Toward Autotrophic Hydrocarbon and JP-8 Production, 34th Symposium on Biotechnology for Fuels and Chemicals, New Orleans, LA, June, 2012
16. Proteomics Analysis Cattle Rumen to Guide the Reverse Design of Biorefinery, Plant and Animal Genome, San Diego, CA, January, 2012
17. Systems Biology Guided Reverse Design of Biorefinery, 33rd Symposium on Biotechnology for Fuels and Chemicals, Seattle, WA, May, 2011
18. Structure Dynamics-Guided Enzyme Improvement, 33rd Symposium on Biotechnology for Fuels and Chemicals, Seattle, WA, May, 2011
19. From Systems Biology to Bioenergy Feedstock Improvement, Green Revolution 2.0: Food + Energy and Environmental Security, Long Beach, CA, October, 2010
20. From Network to Gene Function – How Systems Biology can Help Plant Insect Interaction, International Plant Resistance to Insects Workshop, Charleston, SC, March, 2010
21. Novel Solutions for the Next Generation Biofuels, US-China Bioenergy Forum, US-China Relationship Conference, Beijing, China, October, 2009
22. Biotechnology Platforms and Solutions for the Future Biofuels, International Symposium on Biofuels and Biotechnology, Beijing, China, October, 2009
23. Comparative and Functional Genomics Analysis of Lignin Biosynthesis Gene Families. National Sungrant Conference, Washington, DC, March, 2009
24. Meta-analysis-Derived Gene Co-regulatory Network for Plant Insect Interaction, MidSouth Bioinformatics Conference, Starkville, MS, February, 2009
25. Cross-platform Sequencing Analysis to Dissect the Molecular Mechanisms for Non-target Site Herbicide Resistance in Horseweed. Plant and Animal Genome, San Diego, CA, January 2009
26. Novel Platforms and Strategies for Bioenergy Research. International Bioenergy Symposium, Qingdao, Shandong, China, October, 2008
27. Genomic, Transcriptomic, Proteomic and Functional Analysis of Candidate Genes for Bioenergy Feedstock Improvement, 30th Symposium on Biotechnology for Fuels and Chemicals, New Orleans, May 2008

28. Metabolic, Genomic, and Biochemical Analysis of Novel Genes Involved in Rice Indirect Defense against Herbivore Insects, 5th International Symposium of Rice Functional Genomics, Tsukuba, Japan, October 2007
29. Efficiency Adjusted Real-time PCR Data Analysis, The Fourth Annual Conference of the MidSouth Computational Biology and Bioinformatics Society, New Orleans, LA, February 2007
30. Non-target Herbicide Resistance: a Family Business, Weedy and Invasive Plant Workshop, Plant and Animal Genome Conference XV, San Diego, CA, January 2007
31. Identifying and Characterizing Rice Terpene Synthase Genes Involved in Insect Defense Using An Integrated Functional Genomic Approach, Secondary Metabolism Minisymposium, Annual Conference American Society of Plant Biologist 2006, Boston, MA, August 2006