

Curriculum Vitae

Yu Deng, Ph.D

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Department of Biological and Agricultural Engineering
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Education background

August 2007 – May 2011: **Ph.D**, Chemical and life science engineering, Virginia Commonwealth University, Richmond, USA;
Research area: Characterization and genetic analysis of the cellulolytic microorganism *Thermobifida fusca*.

September 2005-June 2007: **Master of Engineering**, Jiangnan University, Wuxi, China, June 2007;
Research area: Fermentation and characterization of *Streptococcus zooepidemicus* on hyaluronic acid production

September 2001-June 2005: **Bachelor of Engineering**, Jiangnan University, Wuxi, China, June 2005;

Research and Work Experience

August 2013 – present: Assistant Professor, Department of Biological and Agricultural Engineering, Kansas State University-Olathe, USA;

May, 2011- June 2013: Postdoctoral Research Associate, Thayer School of Engineering, Dartmouth College, USA;

August, 2007-May, 2011: Graduate Research Assistant, Virginia Commonwealth University.

Research interests: Metabolic engineering, Synthetic biology, Genetic engineering, Systems biological engineering, Fermentation engineering.

Awards and Honors

08/2010, Dissertation Award, Graduate School, Virginia Commonwealth University

10/2010, Graduate school travel grant, Virginia Commonwealth University

Publications

1. Jilai Zhou, Daniel Olson, Aaron Argyros, **Yu Deng**, Walter van Gulik, Johannes van Dijken, and Lee Lynd. Atypical glycolysis in *Clostridium thermocellum*, 2013, Applied and Environmental Microbiology, 3000-3008
2. **Yu Deng**, Daniel G. Olson, Jilai Zhou, Christopher D. Herring, Arthur J. Shaw, Lee R. Lynd. Redirecting carbon flux through exogenous pyruvate kinase to achieve high ethanol yields in *Clostridium thermocellum*. 2013, Metabolic Engineering, 15:151-158
3. **Yu Deng**, Stephen S. Fong. Laboratory evolution and multi-platform genome re-sequencing of the cellulolytic actinobacterium *Thermobifida fusca*. 2011, Journal of Biological Chemistry 286: 39958-39966
4. **Yu Deng**, Stephen S. Fong. Metabolic engineering of *Thermobifida fusca* for direct aerobic bioconversion of untreated lignocellulosic biomass to 1-propanol. 2011, Metabolic Engineering, 13:570-577
5. **Yu Deng**, Stephen S. Fong. Development and application of a PCR-targeted gene disruption method for studying CelR function in *Thermobifida fusca*. 2010, Applied and Environmental Microbiology 76: 2098-2106
6. **Yu Deng**, Stephen S. Fong. Influence of culture aeration on the cellulase activity of *Thermobifida fusca*. Applied Microbiology and Biotechnology 85: 965-9742
7. **Yu Deng**, Dengru Liu, Guocheng Du, Xiufen Li, Jian Chen. Preparation and characterization of hyaluronan/chitosan scaffold cross-linked by 1-ethyl-3-(3-dimethylaminopropyl) carbodiimide. 2007, Polymer International 56: 738-745
8. **Yu Deng**, Guocheng Du, Xiufen Li, Dengru Liu, Jian Chen. A pretreatment process for hyaluronan extraction based on characteristics of fermentation broth. The Chinese Journal of Process Engineering 2007, 7: 380-384
9. Liming Liu, **Yu Deng**, Yin Li, Jian Chen. Effect of nutrient and environmental factors on glycolytic flux in *Torulopsis glabrata*. Chinese Journal of Applied & Environmental Biology 2006, 12: 688-692

US Patent:

Yu Deng, Daniel Olson, Johannes Pieter van Dijken, Arthur Joseph Shaw IV, Aaron Argyros, Trisha Barrett, Nicky Caiazza, Christopher D. Herring, Stephen Rogers, Frank Agbogbo. Engineering microorganisms to increase ethanol production by metabolic redirection, 2013.

Chinese Patents:

1 Jian Chen, Dengru Liu, Long Liu, **Yu Deng**, Guocheng Du. Process for composite modification of hyaluronic acid and carboxymethyl cellulose
PRC Invention Application Publication (Source: SIPO)
Publication No. CN 1837265 published on 27-Sep-2006
Application No. CN 200610039972.7 filed on 25-Apr-2006

2 Jian Chen, **Yu Deng**, Long Liu, Guocheng Du, Xiufeng Li, Dengru Liu. Process for preparing hyaluronic acid-chitosan crosslinked biocompatible materials
PRC Invention Application Publication (Source: SIPO)
Publication No. CN 1844215 published on 11-Oct-2006
Application No. CN 200610040084.7 filed on 28-Apr-2006

3 Jian Chen, Dengru Liu, Long Liu, **Yu Deng**, Guocheng Du. Process for preparing carboxymethyl cellulose crosslinked amide derivative
PRC Invention Patent Publication (Source: SIPO)
Publication No. CN 100369935 C published on 20-Feb-2008
Application No. CN 200610039971.2 filed on 25-Apr-2006

Conferences (presenter underlined)

Oral presentations

1 **Yu Deng**, Daniel Olson, Lee Lynd. Redirecting carbon flux in *Clostridium thermocellum* to increase ethanol yield. AIChE annual meeting, October 28 – November 2, 2012, Pittsburgh, PA.

2 **Lee R. Lynd**, Dan Olson, **Yu Deng**, Julie Paye, Xiongjun Shao, Evert Holwerda, Jon Lo, Jilai Zhou, Liz Mearls, Marybeth Maloney, Douwe van der Veen, Hans van Dijken, Chris Herring, Davie Hogsett, Joe Shaw, Adam Guss, Steve Brown. *Clostridium thermocellum*: Metabolic Engineering & Plant Cell Wall Solubilization. Clostridium XII conference, September 10-12 Nottingham, 2012 UK

3 **Yu Deng**, Stephen S. Fong. Multi-Platform genome re-sequencing of evolved strains of the cellulolytic actinobacterium *Thermobifida fusca*. AIChE annual meeting, November 7-12, 2010, Salt Lake City, UT.

Poster presentation

1 **Jonathan Lo**, Daniel Olson, Adam Guss, **Yu Deng**, Aaron, Argyros, Chris Herring, A. Joe, Shaw, Douwe van der Veen, Ranjita Biswas, Lee Lynd, Paul Gilna. Improving ethanol production in **Clostridium thermocellum**. September 10-12 Nottingham, 2012 UK

2 **Yu Deng**, Daniel Olson, Jilai Zhou, Christopher Herring, Arthur J. Shaw, Hans van Dijken, Lee Lynd, Redirecting carbon flux in *Clostridium thermocellum* to increase ethanol yield. Bioenergy Science Center annual retreat July 16-18, Chattanooga, 2012.

3 **Yu Deng**, Daniel Olson, Christopher Herring, Joe Shaw, Lee Lynd. Redirection of carbon flux in *Clostridium thermocellum* for achieving high ethanol yield. 34th Symposium on Biotechnology for Fuels and Chemicals, New Orleans April 30-May 3, 2012

4 **Yu Deng**, Daniel Olson, Lee Lynd. Application of a genome-scale metabolic model to identify flux distributions in glycolysis pathway of *Clostridium thermocellum*. Bioenergy Science Center annual retreat, July, 15-17, 2011 Chattanooga, TN.

5 **Yu Deng**, Stephen S. Fong. Development and application of a PCR-targeted gene disruption method for studying CelR function in *Thermobifida fusca*. ASM General Meeting, May 24-27, 2010, San Diego, CA