

## Kevin V. Solomon

**PhD** Chemical Engineering, Massachusetts Institute of Technology, 2012.

**MS** Chemical Engineering Practice, 2008, Massachusetts Institute of Technology.

**BS** Chemical Engineering & Bioengineering, McMaster University, 2006.

### *Academic Experience:*

Purdue University, Assistant Professor, Agricultural and Biological Engineering; 2016 – present, full time.

### *Non-academic experience:*

University of California, Postdoctoral Scholar, Chemical Engineering, 2015, full time.

Massachusetts Institute of Technology, Graduate Research Assistant, Chemical Engineering, 2006-2012, full time.

*Professional Organizations:* American Chemical Society; American Institute of Chemical Engineers; International Metabolic Engineering Society; Society of Biological Engineers, ASABE, Society of Industrial Microbiology & Biotechnology

### *Honors and Awards:*

- 2018, Most Outstanding Faculty, Purdue University Residences
- 2017, Purdue nominee for Foundation for Food & Agriculture Research New Innovator
- 2016, Purdue nominee for Searle Scholars Program
- 2014, Distinguished Young Scholar Seminar Series, UW-Seattle
- 2013, Nucleic Acids Research Travel Award – Intl. Conf. on Biomolecular Eng., Ft. Lauderdale, FL

### *Service Activities (past five years):*

#### *Internal*

- Member, College of Agriculture Dean Search Committee (2017)
- Member, Food Science/EEE Faculty Search Committee (2017)
- Member, Diversity Action Team in Agriculture (2017 – present)
- ABE Undergraduate Academic Advisor (2017 – present)
- Advisor, SBE Student Chapter (2017 – present)
- Diversity Ambassador (2016 – present)
- Member, Agricultural & Biological Engineering Graduate Committee (2016 – present)
- Advisor, Purdue Biomakers *iGEM Team* (2016 – present)
- Advisor, Soybean Product Innovation Team (2016 – present)

#### *External*

- Reviewer: Metabolic Engineering; Applied Microbiology & Biotechnology; Biotechnology & Bioengineering; Journal of Biological Engineering; Biochemical Engineering Journal; Biotechnology for Biofuels; Molecular Microbiology; ACS Synthetic Biology; Nature Communications
- Session Chair: American Chemical Society, American Institute of Chemical Engineers, Society of Industrial Microbiology & Biotechnology

### *Publications (past five years):*

1. J Beal\*, T Haddock-Angelli\*, G Baldwin\*, M Gersharter, A Dwijayanti, M Storch, M Lizarazo, R Rettberg, iGEM Interlab Study Contributors (including E Foster, J Rickus, **KV Solomon**), Quantification of Bacterial Fluorescence using Independent Calibrants, *PLoS ONE*, 13(6): e0199432 (2018).

2. JK Henske, SE Wilken, **KV Solomon**, CE Smallwood, V Shutthanandan, JE Evans, MK Theodorou, MA O'Malley, Metabolic characterization of anaerobic fungi provides a path forward for consolidated bioprocessing of crude lignocellulose, *Biotechnology & Bioengineering*, 115 (4): 874-884 (2018).
3. S Seppälä, SE Wilken, D Knop, **KV Solomon**, MA O'Malley\*. The importance of sourcing enzymes from non-conventional fungi for metabolic engineering & biomass breakdown, *Metabolic Engineering*, 44: 45-59 (2017).
4. SP Gilmore, JK Henske, JA Sexton, **KV Solomon**, S Seppälä, JI Yoo, LM Huyett, A Pressman, JZ Cogan, V Kivenson, X Peng, YP Tan, DL Valentine, MA O'Malley\*. Genomic analysis of methanogenic archaea reveals a shift towards energy conservation, *BMC Genomics*, 18: 639 (2017).
5. ET Hillman, LR Readnour, **KV Solomon\***, Exploiting the natural product potential of fungi with integrated -omics and synthetic biology approaches, *Current Opinion in Systems Biology*, 5: 50-56 (2017).
6. CH Haitjema, SP Gilmore, JK Henske, **KV Solomon**, R de Groot, A Kuo, S Mondo, AA Salamov, K LaButti, Z Zhao, J Chinquy, K Barry, HM Brewer, SO Purvine, AT Wright, B Boxma, T van Alen, JHP Hackstein, SE Baker, K Barry, IV Grigoriev, MA O'Malley\*, A Parts List for Fungal Cellulosomes Revealed by Comparative Genomics, *Nature Microbiology*, 2:17087, (2017).
7. S Seppälä, **KV Solomon**, SP Gilmore, JK Henske, MA O'Malley\*, Mapping the membrane proteome of anaerobic gut fungi identifies a wealth of carbohydrate binding proteins and transporters, *Microbial Cell Factories*, 15: 212, (2016).
8. GJ Li et. al (+140 additional authors, including **KV Solomon**, JK Henske, CH Haitjema, SP Gilmore, MK Theodorou, MA O'Malley), Fungal diversity notes 253-366: taxonomic and phylogenetic contributions to fungal taxa, *Fungal Diversity*, 78 (1): 1-237, (2016).
9. **KV Solomon**, E Ovadia, F Yu, W Mizunashi, MA O'Malley\*. Mitochondrial targeting increases specific activity of a heterologous valine assimilation pathway in *Saccharomyces cerevisiae*, *Metabolic Engineering Communications*, 3:68-75, (2016).
10. **KV Solomon**, CH Haitjema, JK Henske, SP Gilmore, D Borges-Rivera, A Lipzen, HM Brewer, SO Purvine, AT Wright, MK Theodorou, IV Grigoriev, A Regev, DA Thompson, MA O'Malley\*. Early-branching gut fungi possess a large, comprehensive array of biomass degrading enzymes. *Science*, 351 (6278): 1192 - 1195, (2016).
11. **KV Solomon**, JK Henske, MK Theodorou, MA O'Malley\*. Robust and effective methodologies for cryopreservation and DNA extraction from anaerobic gut fungi. *Anaerobe*, 38: 39 – 46, (2016).
12. CH Haitjema, **KV Solomon**, JK Henske, MK Theodorou, MA O'Malley\*. Anaerobic Gut Fungi: Advances in Isolation, Culture, and Cellulolytic Enzyme Discovery for Biofuel Production. *Biotechnology and Bioengineering*, 8(111): 1471-1482, (2014).
13. **KV Solomon**, CH Haitjema, DA Thompson, MA O'Malley\*. Extracting data from the muck: deriving biological insight from complex microbial communities and non-model organisms with next generation sequencing. *Current Opinion in Biotechnology*, 28:103-110, (2014).
14. **KV Solomon**, TS Moon, B Ma, TM Sanders, KLJ Prather\*. Tuning primary metabolism for heterologous productivity. *ACS Synthetic Biology*, 2(3):126-135, (2013).

#### *Presentations*

1. Microbiomes and Microbial Communities for Agriculture and Bioenergy: “Unlocking the animal mycobiome for bioenergy and animal health”, AIChE Annual Meeting, Minneapolis, MN, 2017.
2. Synthetic Biology Panel: Harnessing the animal mycobiome with synthetic biology for antibiotic-free livestock. University & Industry Consortium Annual Fall Meeting, Indianapolis, IN, October 2016.
3. R Chatterjee, YH Wang, KZ Lee, E Hillman, L Readnour, **KV Solomon\***. “Engineering modular tunable biosensors responsive to cellular health for gene regulation and pathway optimization”, 2017 Annual SIMB Meeting, Denver, CO, 2017