

KEVIN V SOLOMON, PH.D.

Assistant Professor of Chemical & Biomolecular Engineering • University of Delaware
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RESEARCH AREAS

Creation of next generation microbial biomanufacturing platforms. Current efforts employ **systems biology** approaches to elucidate the **regulatory and biosynthetic potential** of plant-biomass degrading anaerobic fungi, develop a **synthetic biology** toolkit to engineer these organisms for consolidated bioprocessing, and create more flexible **gene-editing** tools for biotech. We also employ **protein engineering** to optimize microbial bioproduction against metabolic stress and engineer novel bionanomaterials.

EDUCATION

- 2015** **Postdoctoral Scholar**, Chemical Engineering, University of California, Santa Barbara, CA
Systems Biology of Lignocellulolytic Non-model Anaerobic Fungi
Advisor: Michelle A. O'Malley, Ph.D.
- 2012** **Ph.D.**, Chemical Engineering, Massachusetts Institute of Technology (MIT), Cambridge, MA
Development of Glucose Valves for Metabolic Eng. Applications in «E. coli»
Advisor: Kristala L. Jones Prather, Ph.D.
- 2008** **M.S.**, Chemical Engineering Practice, Massachusetts Institute of Technology, Cambridge, MA
- 2006** **B. Eng**, Chemical Engineering & Bioengineering, McMaster University, Hamilton, ON, Canada
Honors: *Summa cum laude*
Senior thesis: *A novel immobilized enzyme reactor system utilizing the unique inverse phase transition behavior of ELP-fusion proteins*
Advisor: Carlos Filipe, Ph.D.

PROFESSIONAL EXPERIENCE

- 2021 –** **Assistant Professor**, Chemical & Biomolecular Engineering, University of Delaware (*eff. Jan '21*)
- 2019 –** **Academic Member**, Engineering Biology Research Consortium (EBRC)
Council Member, EBRC (2020-present)
- 2016 – 2020** **Assistant Professor**, Agricultural & Biological Engineering, Purdue University (*end Dec '20*)
Faculty Affiliate, Purdue University Interdisciplinary Life Science (PULSe) (2016 – present)
Faculty Affiliate, Laboratory of Renewable Resources Engineering (LORRE) (2017 – present)
Member, Purdue Institute of Inflammation, Immunology and Infectious Disease (2018–present)
- 2012 – 2015** **Postdoctoral Scholar**, Chemical Engineering, Univ. of California, Santa Barbara (UCSB)
- 2006 – 2012** **Graduate Research Assistant**, Chemical Engineering, Massachusetts Institute of Technology
- 2003 – 2006** **NSERC Undergraduate Research Assistant**, Chemical Engineering, McMaster University

SUMMARY OF SCHOLARLY ACTIVITY

- H-index = 15; i10 = 16 (Google Scholar)
- >1100 total citations (Google Scholar)
- 23 peer-reviewed publications
- 2 book chapters
- 3 patents granted, 3 patents pending
- 29 invited presentations and seminars
- Congressional testimony before 116th US House of Representatives
- Directing 5 PhD students
- 3 MS degrees conferred
- >40 undergraduate projects advised
- \$2.2 M raised extramurally since 2016, \$1.7M to research program

SELECTED HONORS & AWARDS

- 2019** US Department of Energy Early Career Award
- 2019** Congressional testimony before the 116th US Congress
- 2019** Teaching for Tomorrow Fellow, Purdue University
- 2018** Most Outstanding Faculty, Purdue University Residences
- 2017** Genewiz Empower New Faculty Award
- 2014** Distinguished Young Scholar Seminar Series, UW-Seattle
- 2013** Nucleic Acids Research Travel Award – Intl. Conf. on Biomolecular Eng., Ft. Lauderdale, FL
- 2011** Invited Webinar, Best of BIOT, American Chemical Society
- 2010** Genopole Travel Grant, International Conference on Synthetic Biology, Paris, France
- 2010** Science Education Leadership Award, Synthetic Biology Engineering Research Center

2009 – 2011 Natural Sciences & Engineering Research Council of Canada (NSERC) PGS D Scholar
2008 NSERC PGS M Scholar
2006 NSERC Julie Payette PGS M Scholar – *1 of 24 awarded annually in Canada*
2006 Lemelson Presidential Fellow, MIT
2006 Society of Chemical Industry Merit Award
2005 Kimberly-Clark Scholar
2004 NSERC Undergraduate Student Research Award
2002 Atomic Energy Canada Ltd. (AECL) Scholar
2001 Governor General's Bronze Medal
2001 Ontario Scholar

TEACHING EXPERIENCE

2016 – present **Instructor**, Biological Engineering, Purdue, West Lafayette, IN
2012 – 2015 **Guest Lecturer**, UCSB – invited lectures on synthetic biology, transcriptomics & chemical kinetics
2012 **Trainee, Graduate Student Teaching Certificate**, MIT Teaching and Learning Laboratory, Cambridge, MA
2010 **Lab Instructor**, MIT iGEM Team, MIT, Cambridge MA
2010 **Instructor & Course Development**, Molecular Biology Lab Fundamentals Bootcamp, Synthetic Biology Engineering Research Center (SynBERC), Cambridge, MA
2009 **Teaching Assistant**, ICE I – Continuous Process Design, MIT, Cambridge, MA
2005 **Teaching Assistant**, Problem Solving & Technical Comm., McMaster University, Hamilton, ON, Canada
2005 **Teaching Assistant**, Introduction to Professional Engineering, McMaster University, Hamilton, ON, Canada

CONSULTING EXPERIENCE

2007 **Pharmaceutical Development**, GlaxoSmithKline, Research Triangle Park, NC
2007 **Process Development**, BASF, Ludwigshafen, Germany

PUBLICATIONS

Peer-Reviewed Journal Articles

(* corresponding author, [Solomon Lab members](#), [mentored undergrads \(iGEM Team\)](#), [Solomon Lab undergrads](#))

1. [C Hooker](#), [KZ Lee](#), [KV Solomon*](#), Leveraging the biotechnology potential of anaerobic fungi, *Current Opinion in Biotechnology*, 59, 103-110 (2019). (invited)
2. RM RedCorn, [ET Hillman](#), [KV Solomon](#), AS Engelberth*, Xanthobacter-dominated biofilm as a novel source for high-value rhamnose, *Applied Microbiology & Biotechnology*, 103 (11): 4525-4538 (2019).
3. [C Hooker](#), [E Hillman](#), [J Overton](#), [A Ortiz-Velez](#), [M Schacht](#), [A Hunnicutt](#), N Mosier, [KV Solomon*](#), Hydrolysis of untreated lignocellulosic feedstock is independent of S-lignin composition in newly classified anaerobic fungal isolate, *Piromyces* sp. UH3-1, *Biotechnology for Biofuels*, 11:293 (2018).
4. 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).
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). (invited)
 - **Work Prior to Purdue**
6. [KV Solomon](#), JK Henske, SP Gilmore, A Lipzen, IV Grigoriev, D Thompson, MA O'Malley*. Catabolic repression in early-diverging anaerobic fungi is partially mediated by natural antisense transcripts, *Fungal Genetics & Biology*, 121:1-9 (2018).
7. JK Henske, SP Gilmore, CH Haitjema, [KV Solomon*](#), MA O'Malley*. Biomass-degrading enzymes are catabolite-repressed in anaerobic gut fungi, *AIChE J*, 64 (12): 4263-4270 (2018). (Invited Article, Founders Issue Honoring Jay Bailey)
8. 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).

9. 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). (invited).
10. 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).
11. 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).
12. 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).
13. 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).
14. **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). – **Most downloaded in the past 90 days (4/26/16)**
15. **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). – **featured in popular press such as BBC, CNBC, Forbes, Newsweek, Phys.org and Science 2.0, and highlighted in Trends in Biochemical Science, Nature Biotech, and Nature Reviews Microbiology**
16. **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). – **Top 10 most downloaded in the past 90 days (2/18/16)**
17. 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). (invited)
18. **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). (invited)
19. **KV Solomon**, TS Moon, B Ma, TM Sanders, KLJ Prather*. Tuning primary metabolism for heterologous productivity. *ACS Synthetic Biology*, 2(3):126-135, (2013). – **Top 10 most read of Q2 2013**
20. **KV Solomon**, TM Sanders, KLJ Prather*. A dynamic metabolite valve for the control of central carbon metabolism. *Metabolic Engineering*, 14(6): 661-671, (2012).
21. **KV Solomon** and KLJ Prather*. The zero-sum game of pathway optimization: Emerging paradigms for tuning gene expression. *Biotechnology Journal*, 6(9): 1064-1070, (2011). (invited)
22. CH Martin, DR Nielsen, **KV Solomon** & KLJ Prather*. Synthetic Metabolism: Engineering Biology at the Protein and Pathway Scales. *Chemistry & Biology*, 16: 277-286, (2009). (invited)
23. E Leonard, D Nielsen, **K Solomon**, & KJ Prather*. Engineering microbes with synthetic biology frameworks. *Trends in Biotechnology*, 26: 674-681, (2008). (invited)

Technical Conference Papers & Published Editorials

1. K Atherton, VK Chang, K Fitzgerald, A Kikla, C Roleck*, A Santos, E Hillman, KZ Lee, S Lee, P Lengemann, J Rickus, **K Solomon**. Engineering the lung microbiome to degrade inhaled carcinogens, *PLoS iGEM Reports*, (2018). <https://bioconverse.breezio.com/article/4919611915891640257/engineering-the-human-lung-microbiome-to-degrade-inhaled-carcinogens>
2. S Mohan, C Roleck, P Rudin, B Clark, E Foster, A Kikla, S Magill, M Aronson, R Budde, H Kubo, A Liu, H Lysandrou, C Martin, A Petrucciani, J Welch, S Ha, J Rickus, & **K Solomon**. Engineering *E. coli* for phosphate bioremediation with genes from polyphosphate-accumulating organism *Microlunatus phosphovorius*, *PLoS iGEM Report 17-05*, (2017). <http://blogs.plos.org/collections/igem-report-17-05/>

3. **KV Solomon***. 4th International Conference on Biomolecular Engineering Tackles New Challenges with Synthetic Biology. *ACS Synthetic Biology*, 2(2):68-71, (2013).

Manuscripts currently under review/in preparation

(* corresponding author, †equal contribution, Solomon Lab members, mentored undergrads (iGEM Team), Solomon Lab undergrads)

Submitted/preprint available

1. KZ Lee, V Basnayake Pussepitiya †, YH Lee †, S Loesch-Fries, M Harris, S Hemmati, **KV Solomon***, Engineering Tobacco Mosaic Virus, Barley Stripe Mosaic Virus, and their Virus-Like-Particles for Synthesis of Biotemplated Nanomaterials, *submitted*, preprint: <https://doi.org/10.22541/au.159414778.89024447>, 2020
2. C Sweet, A Aayush, LR Readnour, **KV Solomon**, David Thompson*, A General Method for Rapid Purification of Elastin-like Polypeptides from E. coli by Organic Solvent Extraction and Precipitation, *submitted*, 2020
3. KZ Lee, MA Mechikoff, A Kikla, A Liu, P Pandolfi, F Gimble, **KV Solomon***, NgAgo-enhanced homologous recombination in *E. coli* is mediated by DNA endonuclease activity, *bioRxiv*, <https://doi.org/10.1101/597237>, 2019.

Final revisions for submission/resubmission

4. CL Swift, KB Louie, BP Bowen, HM Brewer, SO Purvine, A Salamov, SJ Mondo, **KV Solomon**, AT Wright, TR Northen, IV Grigoriev, NP Keller, MA O'Malley*, Anaerobic gut fungi are an untapped reservoir of natural products, *internal revision*
5. YH Lee†, KZ Lee†, RG. Susler, CA. Scott, LS Loesch-Fries, MT Harris, **KV Solomon***, Fabrication of a novel virus biotemplate: Genetically engineered Barley Stripe Mosaic Virus (BSMV) virus-like particles (VLPs) produced from Escherichia coli, *internal revision*
6. I Okekeogbu, U Aryal, **KV Solomon**, Kari Clase*, Proteomics analysis of phage Ochi17-infected *Mycobacterium smegmatis* reveals molecular activities involved in mycobacteriophage-mycobacteria arms race, *internal revision*
7. MA Mechikoff, KZ Lee, P Pandolfi, K Fitzgerald, E Hillman, **KV Solomon***, A highly-sensitive and potentially high throughput method for screening and evaluation of programmable endonucleases, *internal revision*

Book Chapters

1. M Ladisch, E Ximenes, N Mosier, A Engelberth, **K Solomon**, Bioprocess Engineering, in: Industrial Microbiology, Wiley, in: Industrial Microbiology, 1st ed., ed. By DB Wilson, H Sahm, KP Stahmann, M Koffas, 2019 (Wiley)
2. V Dollhofer*, D Young, SM Podmirseg, M Reilly, Y Li, C Hooker, **K. Solomon**, M Elshahed, N Youssef, K Fliiegerová, Y Chen, GW Griffith, MK Theodorou, M O'Malley. The biotechnological potential of anaerobic gut fungi, *Accepted for publication* in: The Mycota Vol. II: Genetics and Biotechnology, 3rd ed., ed. by J. Philipp Benz and Kerstin Schipper (Springer)

CONGRESSIONAL TESTIMONY

1. Engineering Our Way to a Sustainable Bioeconomy: Hearings before the House Science, Space, and Technology Subcommittee on Research and Technology, US House of Representatives, 116th Congress (2019) (Testimony of **Kevin Solomon**). <https://www.congress.gov/event/116th-congress/house-event/109051>

PATENTS AND TECHNOLOGY DISCLOSURES

Patents pending

1. **Kevin Solomon**, Kok Zhi Lee, Michael Harris, Yu-Hsuan Lee, Loretta Sue Loesch-Fries. Methods For Manufacturing Nanoparticles With Tunable Length And High Stability Using Barley Stripe Mosaic Virus-Derived Biotemplates, US Provisional Patent Application 62/811, 756, filed Feb 2019. Patent pending
2. **Kevin Solomon**, Kok Zhi Lee. NgAgo as a DNA-guided gene editing tool in prokaryotes and eukaryotes, US Provisional Patent Application 62/643, 814, filed Mar 2018. Patent pending
3. **Kevin Solomon**, Kok Zhi Lee, Ethan Hillman, Yu Hong Wang. Tunable, synthetic transcriptional regulators responsive to environmental triggers, US Provisional Patent Application 62/597, 951, filed Dec 2017. Patent pending

■ **Work Prior to Purdue**

Patents granted

4. Michelle A. O'Malley, **Kevin V. Solomon**, and Charles H. Haitjema. Proteins from Anaerobic Fungi and Uses Thereof, US Patent 10, 717, 768, issued 21 Jul 2020.
5. Michelle A. O'Malley, **Kevin V. Solomon**, Wataru Mizunashi, Fujio Yu. Bioproduction of Methyl Methacrylate, US Patent 10, 676, 766, issued 9 Jun 2020. (Licensed in 2018 by Mitsubishi-Rayon)
6. **Kevin Solomon**, Tae Seok Moon, Kristala L Prather. Glucose Valves and other Metabolite Valves, US Patent 8,835,138, issued 16 Sep 2014.

Technology Disclosures

7. Invention Disclosure and Provisional Patent – Michelle A. O'Malley, **Kevin V. Solomon**, and Charles H. Haitjema. Production of Biofuels from Novel Fungal Strains and Enzymes Derived Therefrom, US Provisional Patent Application 62/296,064, filed Feb 2016. → merged with US Patent 10, 717, 768

INVITED SEMINARS AND PRESENTATIONS

1. "Tools to accelerate development of non-conventional microbes", Innovative Engineering of Metabolism, 2020 AIChE Annual Meeting, virtual, November 2020.
2. Microbial biotechnology and engineered systems, International Symposia on Microbial Ecology 18 (ISME18), Cape Town, South Africa, Aug 2020. *Rescheduled to 2022 due to COVID-19 pandemic.*
3. "Enabling tools for biomanufacturing in anaerobic fungi from renewable plant biomass", 42nd Symposium on Biomaterials, Fuels and Chemicals, New Orleans, LA, April 2020. *Cancelled due to COVID-19 pandemic.*
4. Department of Energy 2020 Genomic Sciences Program (GSP) Annual Principal Investigator (PI) Meeting, Washington, DC, Feb 2020.
5. Spring Seminar Series, Department of Chemical & Biomolecular Engineering, University of Delaware, Newark, DE, Jan 2020.
6. "Enabling tools for metabolic engineering in anaerobic fungi", AfroBiotech, Atlanta, GA, Oct 2019.
7. Fall Seminar Series, "Engineering sustainable chemistry via systems and synthetic biology", Depauw University, Greencastle, IN, Sep 2019.
8. "Development of genetic and epigenetic strategies to optimize biomass-degrading capabilities in anaerobic fungi", 14th Annual DOE Joint Genome Institute Genomics of Energy & Environment Meeting, San Francisco, CA, April 2019.
9. "Tool development to exploit Neocallimastigomycota for bioenergy", 30th Fungal Genetics Conference, Pacific Grove, CA, March 2019.
10. Breakout Session: "Cross-Cutting Biology –Bridging Models from Plants to Animals to Humans", CTSI Retreat, West Lafayette, IN, Jan 2019
11. "Microbial Enhanced Oil Recovery", NSF-IUCRC Planning Meeting: Center for Bioanalytical Metrology, Indianapolis, IN September 2018.
12. "Developing early-diverging anaerobic gut fungi as an emerging platform for consolidated bioprocessing", Microbial Factories, SIMB Annual Meeting, Chicago, IL, August 2018.
13. "Open Access & Open Science: Lessons Learned from Synthetic Biology", Great Lakes Science Boot Camp, West Lafayette, IN, July 2018.
14. Spring Seminar Series, Microbiology Department, University of Illinois, Urbana-Champaign, IL, April 2018.
15. Spring Seminar Series, Department of Chemical Engineering, University of Maine, Ororo, ME, February 2018.
16. Spring Seminar Series, Botany & Plant Pathology, Purdue University, West Lafayette, IN, February 2018.
17. Microbiomes and Microbial Communities for Agriculture and Bioenergy: "Unlocking the animal mycobiome for bioenergy and animal health", AIChE Annual Meeting, Minneapolis, MN, 2017.
18. Fall Seminar Series, Biochemistry Division, Department of Chemistry, Purdue University, West Lafayette, IN, November 2016.

19. Synthetic Biology Panel: Harnessing the animal mycobiome with synthetic biology for antibiotic-free livestock. University & Industry Consortium Annual Fall Meeting, Indianapolis, IN, October 2016.

■ **Work prior to Purdue**

20. Winter Seminar Series, Department of Biochemistry, Purdue University, West Lafayette, IN, February 2016

21. Department of Chemical Engineering, Columbia University, New York, NY, February 2015

22. Department of Chemical & Biomolecular Engineering, NC State University, Raleigh, NC, February 2015

23. Department of Chemical & Biomolecular Engineering, Tulane University, New Orleans, LA, January, 2015

24. Wisconsin Energy Institute, University of Wisconsin, Madison, WI, January 2015

25. Department of Chemical & Biomolecular Engineering, UCLA, Los Angeles, CA, January 2015

26. Department of Agricultural & Biological Engineering, Purdue University, West Lafayette, IN, December 2014

27. Fall Seminar Series, Department of Chemical and Biological Engineering, Rensselaer Polytechnic Institute, Troy, NY, September 2014

28. Distinguished Young Scholar Seminar Series, Department of Chemical Engineering, University of Washington, Seattle, WA, August 2014

29. Best of BIOT: Upstream Processes – Metabolic Engineering and Synthetic Biology, ACS BIOT Webinar Series, October 2011

SELECTED CONTRIBUTED PRESENTATIONS (*speaker, Solomon Lab members, Solomon Lab undergrads)

1. KZ Lee*, MA Mechikoff, A Kikla, A Liu, P Pandolfi, F Gimble, **KV Solomon**. Development of prokaryotic Argonautes as more flexible gene-editing tools in bacteria, Engineering Biology Research Consortium (EBRC) Virtual Seminar Series, 2020

2. **KV Solomon***. “Enabling tools for Synthetic Biology in Anaerobic Fungi” 2nd Central US Synthetic Biology Workshop, Madison, WI, 2019.

3. Zachary Hartley*, KZ Lee, **KV Solomon**. “Developing a Cell-Free System for Assessing On/Off-Target Activities of Argonaute-Based Gene-Editing Tools”, Purdue Undergraduate Research Conference, West Lafayette, IN, 2019. – **third place in the College of Agriculture Oral Presentation Recipients**

4. **KV Solomon***. “Tool development to manipulate early-branching anaerobic fungi as a platform for biotechnology”, 257th Annual Meeting of the American Chemical Society, Orlando, FL, 2019.

5. KZ Lee*, A Liu, A Kikla, F Gimble, **KV Solomon**. “Characterization of a mesophilic prokaryotic Argonaute for gene-editing”, 257th Annual Meeting of the American Chemical Society, Orlando, FL, 2019. – **featured in Genetic Engineering & Biotechnology News**

6. **KV Solomon***, “Global regulation of lignocellulolytic proteins from anaerobic fungi in response to substrate lignin content and composition”, 255th ACS Meeting, New Orleans, LA, 2018.

7. 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

8. E Hillman, C Hooker, A Ortiz-Velez, **KV Solomon***, “Anaerobic fungi robustly degrade untreated forestry products of variable lignin composition”, 253rd ACS Meeting, San Francisco, CA, 2017.

9. E Hillman*, A Ortiz-Velez, C Hooker, **KV Solomon**, “Optimized colony PCR rapidly profiles the extensive untapped biosynthetic potential for fuels and medicines in isolated anaerobic fungi”, NOBCChE Northeast Midwest Regional Meeting, Pittsburgh, PA, 2017.

■ **Work Prior to Purdue**

10. **KV Solomon***, JK Henske, SP Gilmore, S Seppala, MD Reith, MA O’Malley, “Novel gut fungal transporters for improved fuel and energy production”, 251st ACS Annual Meeting, San Diego, CA 2016

11. JK Henske*, **KV Solomon**, MK Theodorou, IV Grigoriev, MA O’Malley, “Deciphering the regulation of biomass degradation by anaerobic fungi”, 251st ACS Annual Meeting, San Diego, CA, 2016

12. SP Gilmore*, JA Sexton, JK Henske, **KV Solomon**, MK Theodorou, MA O’Malley, “Bottom-up construction of synthetic microbial pairs inspired by nature”, 251st ACS Annual Meeting, San Diego, CA, 2016

13. **KV Solomon**, S Seppala, MA O'Malley*, "Novel Gut Fungal Sugar Transporters for Improved Bioprocess Efficiency," AIChE Annual Meeting, Salt Lake City, UT, 2015
14. CH Haitjema*, SP Gilmore, **KV Solomon**, MA O'Malley. "Engineering cellulose-degrading complexes from anaerobic gut fungi", 249th ACS Annual Meeting, Denver, CO, 2015
15. JH Henske*, **KV Solomon**, MA O'Malley. "Novel co-culture approach to compartmentalize biomass deconstruction and biofuel production", 249th ACS Annual Meeting, Denver, CO, 2015
16. J Sexton, **KV Solomon**, JK Henske, MK Theodorou, D Valentine, MA O'Malley*. "Reconstructing anaerobic microbiomes from the 'bottom-up': New techniques to decipher interwoven metabolism", 249th ACS Annual Meeting, Denver, CO, 2015
17. **KV Solomon**, JK Henske, CH Haitjema, D Borges-Rivera, DA Thompson, A Regev, MA O'Malley*, "Deciphering transcriptional regulation patterns for novel enzyme discovery," International Conference on Biological Engineering (ICBE), Austin, TX, January 2015
18. **KV Solomon***, JK Henske, CH Haitjema, D Borges-Rivera, DA Thompson, MA O'Malley. "RNAseq reveals substrate-specific lignocellulosic degradation responses in anaerobic gut fungi", AIChE Annual Meeting, Atlanta, GA, 2014
19. **KV Solomon***, JK Henske, CH Haitjema, D Borges-Rivera, DA Thompson, MA O'Malley. "Deciphering global regulatory patterns for cellulase discovery in anaerobic fungi", 1st Annual SEED Conference, Manhattan Beach, CA, 2014
20. **KV Solomon**, JK Henske, CH Haitjema, D Borges-Rivera, DA Thompson, MA O'Malley*. "Engineering Anaerobic Gut Fungi for Lignocellulose Breakdown", DOE Annual Genomic Science Contractor-Grantee Meeting XII, 2014
21. MA O'Malley*, JK Henske, **KV Solomon**, CH Haitjema. "Engineering anaerobic gut fungi for the production of fuels and bioactive compounds", 247th ACS Annual Meeting, Dallas, TX, 2014
22. **KV Solomon***, CH Haitjema, D Borges-Rivera, DA Thompson, MA O'Malley. "Discovery and Regulation of Biomass-Degrading Enzymes From Anaerobic Gut Fungi Using Next-Generation Sequencing", AIChE Annual Meeting, San Francisco, CA, 2013
23. **KV Solomon**, CH Haitjema, D Borges-Rivera, DA Thompson, A Regev, MA O'Malley* , "Transcriptomic Analysis Reveals Novel Lignocellulolytic Enzymes from Anaerobic Gut Fungi," American Chemical Society Spring Meeting, New Orleans, LA, 2013 – **highlighted by national ACS press release**
24. **KV Solomon**, CH Haitjema, D Borges-Rivera, DA Thompson, MA O'Malley*. "Engineering Anaerobic Gut Fungi for Lignocellulose Breakdown", International Conference on Biological Engineering, Fort Lauderdale, FL, January, 2013
25. **KV Solomon***, KJ Prather. "Tuning of Glycolytic Flux for Heterologous Production with a 'Glucose Valve'", AIChE Annual Meeting, Minneapolis, MN, 2011
26. **KV Solomon***, TS Moon, KJ Prather . "Glucose Valves: Tuning primary metabolism for heterologous production", 241st ACS Annual Meeting, Anaheim, CA, 2011 – **selected as "Best of BIOT Division" and invited as a webinar**
27. **KV Solomon***, TS Moon, SH Yoon, KLJ Prather. "Glucose Valves: A New Device for Pathway Engineering", Intl.Conference on Synthetic Biology, Évry, France, 2010
28. **KV Solomon***, TS Moon, KJ Prather. "A Glucose Valve For Pathway Engineering", AIChE Annual Meeting, Salt Lake City, UT, 2010
29. **KV Solomon***, KJ Prather. "Glucose Valves: Tuning Primary Metabolism for Pathway Optimization", SynBERC Fall Retreat, Cambridge, MA, 2010
30. **KV Solomon***, KJ Prather. "Antisense RNA Mediated Redirection of Glycolytic Flux for Heterologous Pathway Production", NOBCCChE Annual Meeting, Atlanta, GA, 2010

SELECTED POSTER PRESENTATIONS (*speaker; mentored undergrad; Solomon Lab @ Purdue member)

1. M Mechikoff*, KZ Lee, P Pandolfi, **KV Solomon**. "Positive Selection Screens for DNA Endonuclease Activity", 257th Annual Meeting of the American Chemical Society, Orlando, FL, 2019.

2. KZ Lee*, A Kikla, A Liu, **KV. Solomon**, “An uncharacterized N-terminal domain participates in DNA cleavage in prokaryotic Argonautes”, SIMB Annual Meeting, Chicago, IL, August 2018. – **best student poster award in Biocatalysis**
 3. **KV Solomon**, “Early-diverging anaerobic gut fungi as an emerging platform for biomass degradation”, Metabolic Engineering 12, Munich, Germany, 2018
 4. A Liu*, KZ Lee, A Kikla, A Murfee, **KV. Solomon**, “Argonaute as a programmable gene repression tool *in E. coli*”, Indiana Academy of Sciences Symposium, Indianapolis, IN 2017.
 5. KZ Lee*, A Murfee, A Liu, A Kikla, **KV Solomon**. “NgAgo Inducibly Represses Gene Expression at Sites Programmed with P-ssDNA.” 4th ABE Graduate Symposium | Sigma Xi Poster Competition, West Lafayette, IN, 2017.
 6. L Readnour*, E Hillman, KZ Lee, R Chatterjee, YH Wang, **KV Solomon**. “Development of Novel ELP-Based Transcriptional Regulators for Improved Biomanufacturing.” 4th ABE Graduate Symposium | Sigma Xi Poster Competition, West Lafayette, IN, 2017.
 7. E Hillman*, C Hooker, A Ortiz-Velez, **KV Solomon**. “Anaerobic Fungi: Regulating microbial environments in ruminant guts without antibiotics.” 4th ABE Graduate Symposium | Sigma Xi Poster Competition, West Lafayette, IN, 2017.
 8. C Hooker*, E Hillman, A Ortiz-Velez, **KV Solomon**. “Anaerobic fungal enzymes efficiently degrade diverse agricultural and food wastes for bioenergy.” 4th ABE Graduate Symposium | Sigma Xi Poster Competition, West Lafayette, IN, 2017.
 9. YH Wang*, R Chatterjee, E Hillman, **KV Solomon**. “Using Elastin-Like Polypeptides for Better Retention of Biofuels”, 2016 SURF Symposium, Purdue University, West Lafayette, IN 2016.
 10. R Chatterjee*, YH Wang, E Hillman, **KV Solomon**. “Improving Biofuel Production with Tunable Transcriptional Regulation via Elastin-like Polypeptides”, MASI Poster Symposium, DowAgroSciences, Indianapolis, IN 2016.
 11. KZ Lee*, S Mohan, **KV Solomon**, “Reprogramming bacterial stress responses for improved biofuel and value-added chemical production”, 3rd ABE Graduate Symposium, W. Lafayette, IN, 2016
 12. A Ortiz-Velez*, E Hillman, **KV Solomon**. “Identification of gut fungi and their potential as a vast source of drug candidates”, MASI Poster Symposium, DowAgroSciences, Indianapolis, IN 2016.
- **Work Prior to Purdue**
13. **KV Solomon***, SP Gilmore, JK Henske, MA O’Malley. “Antisense RNA exclusively regulate key genes in anaerobic fungi”, AIChE Annual Meeting, San Francisco, CA 2016.
 14. **KV Solomon***, JH Henske, SP Gilmore, S Seppala, MA O’Malley. “Mining sugar transporters from gut fungi for improved fuel & energy production”, 3rd Annual SEED (Synthetic Biology: Engineering, Evolution, Design) Conference, Chicago, IL, 2016.
 15. **KV Solomon***, JK Henske, CH Haitjema, D Borges-Rivera, DA Thompson, MA O’Malley. “Engineering Anaerobic Gut Fungi for Lignocellulose Breakdown”, Department of Energy Genomic Science Contractor-Grantee Meeting, Washington, DC, 2015
 16. **KV Solomon***, E Ovadia, MA O’Malley. “Engineering the valine assimilation pathway to produce biochemicals and fuels in *S. cerevisiae*”, Metabolic Engineering X, Vancouver, BC, Canada, 2014
 17. **KV Solomon***, JK Henske, CH Haitjema, D Borges-Rivera, DA Thompson, A Regev, MA O’Malley. “Identification and regulation of novel cellulases within anaerobic gut fungi”, 9th JGI User Meeting, Walnut Creek, CA, 2014
 18. **KV Solomon***, JK Henske, CH Haitjema, D Borges-Rivera, DA Thompson, A Regev, MA O’Malley. “Engineering Anaerobic Gut Fungi for Lignocellulose Breakdown”, 4th Annual SoCal SysBio. Conference, Irvine, CA, 2014
 19. **KV Solomon***, CH Haitjema, D Borges-Rivera, DA Thompson, A Regev, MA O’Malley “Transcriptomic analysis of an anaerobic fungus reveals novel cellulolytic genes”, 4th International Conference on Biomolecular Engineering, Ft. Lauderdale, FL, 2013
 20. **KV Solomon***, KLJ Prather. “Tuning Glycolysis for Heterologous Production”, Biochemical and Molecular Eng XVII, Seattle, WA, 2011

21. **KV Solomon***, KLJ Prather. "Glucose Valves for Microbial Chemical Factories", SynBERC Site Visit, Emeryville, CA, 2011
22. **KV Solomon***, KLJ Prather. "Redirecting primary metabolism for heterologous pathway production", SynBERC Site Visit, Emeryville, CA, 2010
23. **KV Solomon***, TS Moon, SH Yoon, KLJ Prather. "Antisense mediated redirection of glycolytic flux for heterologous pathway production", SynBERC Fall Meeting, Cambridge, MA, 2009 – **won Honorable Mention in Poster competition**
24. **KV Solomon***, TS Moon, SH Yoon, D Nielsen, KLJ Prather. "Antisense mediated redirection of glycolytic flux", SynBERC Site Visit, Berkeley, CA, 2009

FUNDING AND SUPPORT (~ \$1.7 M in active and completed support to Solomon Lab, ~\$2.2 M total)

Active Support

- 2020 – 2023** NSF CBET, Collaborative Research: Protein engineering & processing of plant viral templates for controlled nanoparticle synthesis, KV Solomon (PI), MT Harris, S Loesch-Fries, S Hemmatti (CoPIs) (**\$833, 198 total; \$295, 281 to Solomon Lab**)
- 2019 – 2024** DOE Early Career Award, Genetic tools to optimize lignocellulose conversion in anaerobic fungi and interrogate their genomes, KV Solomon (PI) (**\$750, 000 total**)
- 2019 – 2021** Showalter Research Trust, Sequence specific contributions to NgAgo stability and function for gene-editing applications, KV Solomon (PI) (**\$75, 000 total**)
- 2018 – 2021** DOE FICUS (JGI/EMSL) Community Science User Program, Epigenetic regulation of anaerobic fungi for increased lignocellulose degradation, KV Solomon (PI), SD Briggs (CoPI); allocation of sequencing and proteomic resources (**estimated value of \$150, 000 total**)

Completed Support

- 2018 – 2020** Pioneer Oil-IEDC, Microbial Enhanced Oil Recovery in the Illinois Basin via in situ activation of native microbes with custom nutrient formulations, KV Solomon (PI) (**\$128, 633 direct**)
- 2019** NanoChem, Unrestricted Gift, KV Solomon (PI) (**\$10, 000 direct**)
- 2019** PRF Summer Faculty Grant, Development of Prokaryotic Argonautes for Gene Editing, KV Solomon (PI) (**\$8, 000 direct**)
- 2018 – 2019** NSF EAGER: Universal, programmable sensor-regulator elements for dynamic control and optimization of microbial biomanufacturing, KV Solomon (PI) (**\$112, 958 total**)
- 2017** Genewiz Empower Startup Award, KV Solomon (PI) (**\$5, 000 direct**)
- 2016 – 2018** Pioneer Oil, Microbial Enhanced Oil Recovery via *in situ* activation of native microbes with custom nutrient formulations, KV Solomon (PI) (**\$156, 718 total**)

UNIVERSITY & DEPARTMENTAL SERVICE @ PURDUE

- 2020** Member, ABE/EEE Faculty Search Committee
- 2019 – 2020** ABE Undergraduate Recruitment Committee
- 2019** Member, Food Science Fermentation Science Faculty Search Committee
- 2017 – 2020** Member, Diversity Action Team in Agriculture, MAR Subcommittee Co-Chair
- 2017 – 2020** ABE Undergraduate Academic Advisor for ~40 students
- 2017 – 2020** Advisor, SBE Student Chapter
- 2016 – 2020** Member, Department of Agricultural & Biological Engineering Graduate Committee
- 2016 – 2020** Advisor, Purdue iGEM Team
- 2016 – 2020** Director of undergraduate and high school student research projects (MASI, SURF, PASA)
- 2016 – 2017** Advisor, Soybean Product Innovation Team
- 2016 – 2018** Diversity Ambassador
- 2017 – 2018** Member, College of Agriculture Dean Search Committee
- 2017 – 2018** Member, Food Science/EEE Faculty Search Committee
- 2016 – 2017** Member, College of Agriculture Honors Committee
- 2016** Program Lead, proposed Sustainable Aviation BioEnergy Research Center (SABER)

Broadening Participation of African Americans: Founding member of Diversity Ambassadors initiative to increase the enrollment and retention of African American students. Program establishes partnerships with HBCUs by facilitating inter-institutional exchanges. Funded by Purdue Office of the Provost's Inaugural Diversity Transformation Award (2016; \$100K/ 2 yrs.).

Active Participant in K-12 and Graduate Outreach: Purdue Agribusiness Science Academy (PASA) enrichment program for middle school and high school students from urban communities in Chicagoland and Indianapolis areas;

Molecular Agriculture Summer Institute (MASI) provides enrichment opportunities for high school students and summer research for undergrads.

Providing educational opportunities beyond the classroom: Provide technical and advisory support to the student-led Purdue Biomakers team that competes annually in the International Genetic Engineered Machines (iGEM) Competition. Competition attracts more than 200 student teams from across the globe to design and build innovative solutions to grand challenges in medicine, manufacturing, food, and ethics with biology. 2016 team entry recognized with a *Silver Medal* and submitted for publication as a PLoS iGEM Report.

EXTERNAL SERVICE & OTHER PROFESSIONAL ACTIVITIES

- Policy:** EBRC Microbiome Technical Roadmap (2020)
- Editorial Boards:** Associate Editor, *Frontiers in Fungal Biotechnology* (2020 –); Review Editor, *Frontiers in Bioengineering and Biotechnology – Synthetic Biology* (2019-)
- Reviewer:** Journals: *ACS Synthetic Biology, AIChE Journal, Applied Microbiology & Biotechnology, Biochemical Engineering Journal, Bioengineering & Translational Medicine, Biotechnology for Biofuels, Biotechnology & Bioengineering, Biotechnology Journal, ISME Journal, Journal of Biological Engineering, Molecular Biotechnology, Molecular Microbiology, Metabolic Engineering, Metabolic Engineering Communications, Nature Chemical Biology, Nature Communications, PLoS One* (2009-present)
- Panels: DOE – JGI Community Science Program (2016-2019), EMSL User Science Programs (2020), NSF-CBET (2016- 2018, 2020), USDA NIFA (2019), NSF (2019, 2020), NSF-MCB (2020).
- Grants: Ontario Genomics Institute LSRP: Natural Resources and the Environment: Sector Challenges - Genomic Solutions (2015); Notre Dame Eck Institute for Global Health (2016); VENI, Technologiestichting STW (2016); Genome British Columbia – Sector Innovation Program (2017), Deutsche Forschungsgemeinschaft (2018).
- Outreach:** MASI (2016-2019); PASA Summer Institute (2016-2019); UCSB Research Experience for Teachers (RET) Program Mentor (2013); Panelist for under-represented minorities interested in pursuing a Ph.D. (PVAMU, 2012); MIT Summer Research Program Mentor (2008 - 2010); Organizer of Synthetic Biology Symposium (PVAMU, 2008)

Conference Programming

American Chemical Society – Biochemical Technology Division Annual National Meeting

Session Chair

Synthetic Biology and -OMICS Approaches to Engineer Microbial Communities, 2016

Microbial and Non-Model Hosts: Strain Engineering and Process Development, 2017

Microbial Metabolic Engineering, 2018, 2019

Poster Session Area Coordinator, 2017, 2019

Upstream Area Coordinator (Symposium Organizer), 2020

American Institute of Chemical Engineers Annual Meeting

Session Chair

Advances in Metabolic Engineering of Photosynthetic/Non-Model Organisms, 2017

Advances in Metabolic Engineering, 2018

Synthetic Biology Applications, Metabolic Engineering 2019

Afrobiotech Conference 2020 [Society for Biological Engineering (AIChE)]

Organizing Committee

Session Chair: Metabolic Engineering and Synthetic Biology

2020 Central US Synthetic Biology Conference

Organizing Committee

International Conference on Biomolecular Engineering

Session Chair: Metabolic Engineering for Fuels, Chemicals and Pharmaceuticals, 2017

Society for Industrial Microbiology & Biotechnology Annual Meeting

Session Chair

Photosynthetic and Non-Conventional Organisms in Metabolic Engineering, 2017

Utilization of Lignin and Alternate Feedstocks, 2018

Professional Memberships

American Chemical Society (Biotechnology Division) (ACS-BIOT)

American Institute of Chemical Engineers (AIChE)
 American Society of Agricultural & Biological Engineers (ASABE)
 International Metabolic Engineering Society (IMES)
 Society of Biological Engineers (SBE)

Treasurer, NSF-sponsored Synthetic Biology Engineering Research Center (SynBERC) Student Leadership Council (SLC) (2009 – 2011)

Managed \$20K+ budget for nationwide student-led initiatives including professional development opportunities, student inter-institute exchanges and outreach symposia at primarily minority serving institutions. Provided critical assessment of Center activities to NSF ERC leadership

Co-chair, SynBERC SLC (2009)

Developed and led nationwide student initiatives to foster interest in synthetic biology and develop center-wide collaborations. Provided critical assessment of Center activities to NSF ERC leadership

TEACHING

Purdue Agricultural & Biological Engineering

| Date | Course | Title | Course Enrollment | Course Evaluation | Teaching Evaluation |
|--------|---------|---|-------------------|-------------------|---------------------|
| F2016 | ABE 591 | Principles of Systems & Synthetic Biology | 14 G/UG | 4.3/5.0 | 4.2/5.0 |
| Sp2017 | ABE 440 | Cell & Molecular Design Principles | 23 UG | 3.7/5.0 | 4.0/5.0 |
| Sp2017 | AGR493I | Ag Study Abroad: Ireland Spring Break | 36 UG | NA | NA |
| F2017 | ABE 591 | Principles of Systems & Synthetic Biology | 15 G/UG | 4.3/5.0 | 4.6/5.0 |
| Sp2018 | ABE 440 | Cell & Molecular Design Principles | 32 UG | 4.5/5.0 | 4.7/5.0 |
| F2018 | ABE 591 | Principles of Systems & Synthetic Biology | 20 G/UG | 4.8/5.0 | 4.8/5.0 |
| Sp2019 | ABE 440 | Cell & Molecular Design Principles | 31 UG | 4.5/5.0 | 4.6/5.0 |
| Su2019 | ABE495 | Industrial Microbial Biotechnology (Study Abroad) | 16 UG | 4.5/5.0 | 4.9/5.0 |
| F2019 | ABE 540 | Principles of Systems & Synthetic Biology | 16 G/UG | 4.5/5.0 | 4.8/5.0 |
| Sp2020 | ABE 440 | Cell & Molecular Design Principles | 38 UG | 4.6/5.0 | 4.7/5.0 |

STUDENTS AND MENTORSHIP

Advisor

- Faculty Academic advisor (**2017 – present**) to ~40 students currently enrolled in Agricultural & Biological Engineering
- Purdue iGEM Team (**2016 – present**) – provide technical and material support to team of 7 independent undergraduate researchers developing microbial systems to address grand engineering challenges and compete in the International Genetically Engineered Machines Competition @ MIT

| YEAR | PROJECT | ACHIEVEMENT |
|------|--|--------------|
| 2016 | Phosphorus reclamation via engineered <i>E. coli</i> | Silver Medal |
| 2017 | Benzene degradation via engineered lung microbiome treatment | Silver Medal |
| 2018 | Low cost, paper based diagnostic test for yeast infections | Bronze Medal |
| 2019 | Biological Control of Rice Blast Fungus in Crops | Bronze Medal |
| 2020 | Argonaute-based diagnostic assay for COVID-19 | |

- Soybean Product Innovation Competition (**2016 – 2017**) – provide technical and material support to team of 4 undergraduate/graduate students developing novel soy-based products (2016 – compostable toothbrushes; 2017 – biodegradable prescription bottles)
- Society of Biological Engineers (**2016 – present**) – faculty advisor to this student academic/professional development club affiliated with AIChE's SBE

Postdoctoral Scholars

Dr. Jake Englaender (**2017-2019**), PhD '16, Biology, RPI (AgroSpheres)

Graduate Students

Kok Zhi Lee (**2016 – present**), Agricultural & Biological Engineering, Degree Objective: PhD, '20
Defense Threat Reduction Agency Travel Award, Central US Synthetic Biology Workshop 2019
Carol D. Litchfield Best Student Poster Presentation Award at SIMB 2018

Ethan Hillman (2016 – present), Agricultural & Biological Engineering, Degree Objective: PhD, '20
NSF Graduate Research Fellowship Program (Honorable mention, 2017)
Purdue University College of Engineering Outstanding Graduate Research Award (2020)
PULSe 5 Minute Thesis presentation competition winner (2020)

Casey Hooker (2016 – present), Agricultural & Biological Engineering, Degree Objective: PhD, '21
NSF Graduate Research Fellow (2018 -2021)

Mrugesh Parasa (2018 – present), Biomedical Engineering, Degree Objective: PhD, '21

Javier Muñoz (2020 – present), Agricultural & Biological Engineering, Degree Objective: PhD, '24

Completed

Michael Mechikoff, MS'19, Agricultural & Biological Engineering (US Air Force)

Casey Hooker, MS'18, Agricultural & Biological Engineering (continued PhD)

Logan Readnour, MS'18, Andrews Fellowship, Agricultural & Biological Engineering (Lanzatech)

Thesis Committees

Craig Sweet (CHEM PhD/ David Thompson) – est '20

Conrrad Nicholls (Struct. Biol/ Richard Kuhn) – est '21

Completed

Dr. Md. Shariar Karim (ABE/David Umulis) –12/16

Dr. Leyla Nesrin (ABE/Jenna Rickus) – 07/17

Jeremiah Vue, MS (ChE/John Morgan) – 07/17

Paul Lengemann, MS (ABE/Meng Deng) – 07/18

Undergraduate Researchers (Current)

Tyler Rankin (2019 – present), Biology '22, Purdue

Elizabeth Frazier (2019 – present), REU Fellow,
Biological Engineering '22, Purdue

Benjamin Howard (2019 – present), Biological
Engineering '21, Purdue

Benjamin Rubino (2019 – present), Biology '22, Purdue

Dr. Lee Stunkard (BCHEM/Jeremy Lohman) – 12/19

Aginiprakash Dhanabal, MS (ABE/Allen Garner) –
12/19

Michelle Ingle, MS (ABE/David Umulis) – 11/19

Dr. Emma Brace (ABE/Abby Engelberth) – 7/20

Dr. Sarah Daly (ABE /Jiqin Ni) – 7/20

Dr. Ikenna Okekeogbu (ABE/Kari Clase) – 7/20

Benjamin Burns (2020 – present), Biological
Engineering '22, Purdue

Rebecca Slaughter (2020 – present), Biological
Engineering '22, Purdue

Undergraduate Researchers and Visitors (Past) (†coauthors in peer-reviewed journals)

Kevin Fitzgerald (2017 – 2020), OUR Scholar, BS '20, Purdue – PhD Student (Northwestern), **NSF Graduate
Research Fellow '21**

Paula Pandolfi (2018 – 2020), BS '20, Purdue – PhD Student (UCLA)

Zach Hartley (2019 – 2020), BS '20, Purdue – PhD Student (UCR)

Abigail Venskus (Summer 2019), SROP Fellow/REU, BS '20, SUNY Fredonia

Makayla Schacht (2017 – 2019), Biology '20, Purdue – **coauthor of Biotechnol. Biofuels, 11:293 (2018).**

Adrian Ortiz-Velez† (2016 – 2019), MASI Fellow, BS'19, Purdue – MS Grad Student (San Diego State) – **coauthor
of Biotechnol. Biofuels, 11:293 (2018).**

Rohit Chatterjee (2016 – 2019), MASI/SURF Fellow, OUR Scholar, BS '19, Purdue – MD Student (IU)

Archana Kikla (2017 – 2019), BS '19, Purdue

Juya Jeon (2017 – 2019), SURF Fellow, BS '19, Purdue – PhD Student (WUSTL)

Trang Dieu (2018 – 2019), BS '19, Purdue – Repligen

Kathryn Myers (2019), Biological Engineering '21, Purdue

Ethan Gaskin (2018) Biological Engineering '20, Purdue

Alexander Murfee (2016 – 2018), Purdue

Frances Opferman (2018), Biological Engineering '21, Purdue

Evan Shank (2017 – 2018), BS '19, Purdue – NEXTFLY Web Design

Abigail Hunnicutt† (2017 – 2018), BS'18 – Applied Laboratories, Inc – **coauthor of Biotechnol. Biofuels, 11:293
(2018).**

Arren Liu (2016 -2018, MASI Fellow), BS '18, Purdue – PhD Student (ASU)

Suraj Mohan (2016 – 2018), BS '18 – MS Student (Purdue)

Yu Hong Wang (2016 – 2018, SURF Scholar/Martin Ag Research Scholar), BS '18 – PhD Student (CMU)

Eung Baek Kim (2017), Agricultural & Biological Engineering '20, Purdue

Bowman Clark (2017)

Emma Foster (2016), BS '18, Purdue – MS Student (TAMU)

Sharifah Binti Syed Omar (2016), Agricultural & Biological Engineering '18, Purdue – Farm Design, Inc
Charlotte Abrahamson (2014 – 2015 Amgen Scholar), BS '16, UCSB – PhD candidate (Northwestern)
Erich Brodbeck (2013 – 2014 SSB URAP Fellow), BS '15, MS '16 UCSB – Process Engineer (Apeel)
Megan Cotich (Summer 2013 Research Experience for Teachers Fellow) Life Sciences, La Colina Junior High School – **integrated research in Gr. 7 Life Sciences curriculum**
Elisa Ovadia[†] (2013) BS '13, UCSB, PhD '18 Delaware – **coauthor of Met. Eng. Comm. 3:68-75, (2016)**
Brian Owens (2012 – 2013), BS '14, UCSB – Assoc. Engineer (Energy Transfer)
Tarielle Sanders[†] (Summer 2011 Amgen Scholar), BS '12, Norfolk State University, PhD '18 UF – **coauthor of ME 14(6): 661-671, (2012); ACS SynBio, 2(3):126-135, (2013)**
Brian Ma[†] (Summer 2011 SURF Fellow), BS '12, California Institute of Technology, MSE '15, JHU – senior R&D Engineer (DynoSense). – **coauthor of ACS SynBio, 2(3):126-135, (2013)**
Zach Waxman (Fall 2010), BS '11, MIT, MD '16 SUNY Downstate – currently surgery resident (UChicago)
U'Kevia Bell (Summer 2010 MSRP Fellow), BS '12, Prairie View A & M University – Production Engineer (Dow). – **Biophysical Society Poster award at ABCAM 2012**
Matt Luchette (Summer 2009), Biological Engineering '11, MIT
Aziza Glass (Summer 2008 MSRP Fellow), BS '10, Prairie View A & M University; DVM '15, Cornell – private veterinarian