

# Camil A. C. Diaz

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## RESEARCH INTERESTS

To apply my skills in probing carbon and nitrogen metabolism towards synthetic microbial consortia using  $^{13}\text{C}$ -metabolic flux analysis ( $^{13}\text{C}$ -MFA)

## EDUCATION

Ph.D. Candidate, Chemical and Biomolecular Engineering 2014 – present  
University of Delaware

B.S. Chemical Engineering, Honors Program 2009 – 2013  
Stanford University

## AWARDS

NSF Graduate Research Fellowship Program, Honorable Mention	April 2015, 2016
Pigford Award, Dept. of Chemical and Biomolecular Engineering, Univ. of Delaware	Aug 2014
U.S. Fulbright Research Fellowship, Philippines	Nov 2013
Bio-X Post-Baccalaureate Research Fellowship, Stanford	June 2013
Honors Research Award in Chemical Engineering, Stanford	May 2013
American Inst. of Chemical Engineers Distinguished Service Award, Stanford	May 2013
BP America Engineering Scholarship	Sept 2012, 2011
Stanford Vice Provost for Undergraduate Education, Research Fellowship	June 2012, 2011

## RESEARCH EXPERIENCE

**Antoniewicz Lab in Systems Biology and Metabolic Engineering, Univ. of Delaware** Jan 2014 – present

- **Thesis:** Engineering carbon and nitrogen self-sufficient co-cultures by adaptive evolution
- Constructed a metabolic network model and performed  $^{13}\text{C}$ -MFA for the first time of the nitrogen-fixing microbe, *Azotobacter vinelandii*. Designed nitrogen self-sufficient co-cultures using *A. vinelandii*.

**Contact:** Maciek Antoniewicz, Associate Professor, Chemical & Biomolecular Engineering, Univ. of Delaware  
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**U.S. Fulbright Fellow, International Rice Research Institute** Nov 2013 – Aug 2014

- **Objective:** Development of iron-fortified, cisgenic indica rice with Genetic Transformation Lab (GTL)
- Streamlined high-throughput assay to quantify iron content in rice endosperm.
- Quantified effect of drought, salinity, and elevated  $\text{CO}_2$  on grain nutrition via ICP-OES to assess implications of climate change on biofortification.
- Developed public communications pieces on rice biofortification for IRRI's Healthier Rice campaign.

**Contact:** Dr. Inez Slamet-Loedin, Head of GTL, Plant Breeding, Genetics and Biotechnology, IRRI  
[I.Slamet-Loedin@irri.org](mailto:I.Slamet-Loedin@irri.org) • +63 (2) 580-5600 ext. 2657

**Sattely Group, Department of Chemical Engineering, Stanford University** Jun 2011 – Oct 2013

- **Thesis:** Metabolism of dietary, anticancer glucosinolates by the gut microbe, *Bacteroides thetaiotaomicron*, and implications for human health
- Designed and implemented high-throughput screen of a transposon mutant library. Identified microbial genes required to metabolize target plant anticancer compounds.

**Contact:** Prof. Elizabeth Sattely, Assistant Professor, Chemical Engineering, Stanford University  
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