

Dhara D. Shah, PhD

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Research Experience and Education

- August 2019 – Current** **Assistant Professor:** School of Mathematical and Natural Sciences, Arizona State University-West campus. Biodesign Center for Fundamental and Applied Microbiomics, Arizona State University-Tempe.
- May 2018 – August 2019** **Scientist:** Biochemistry Division (Metabolic Immuno-oncology). Agios Pharmaceuticals, Cambridge MA, 02139
- Jan. 2018 - April 2018** **Teaching Fellow:** Department of Molecular and Cellular Biology, Harvard University, Cambridge, MA, 02138
- July 2014 - Oct. 2017** **Postdoctoral Fellow, Chemical Biology:** Department of Chemistry, Brown University, Providence, RI, 02912. Advisor: David E. Cane
- Aug. 2009 - May. 2014** **PhD.** Chemical Biology: Department of Chemistry & Biochemistry, University of Wisconsin-Milwaukee, Milwaukee, WI, 53211. Advisor: Graham R. Moran: Currently Professor & Carl Moore Endowed Chair at the Department of Chemistry & Biochemistry at Loyola University, Chicago, IL, 60660
- July 2006 - May. 2008** **MSc:** Department of Biochemistry, The Maharaja Sayajirao University of Baroda, India. Thesis Project Focuses on antibiotic biosynthesis.
- July 2003 - May. 2006** **BSc:** Biochemistry, Gujarat University, India.

Publications

1. **Dhara D. Shah**, Young-OK You and David E. Cane (2017). Stereospecific Formation of *E*- and *Z*-Disubstituted Double Bonds by Dehydratase Domains from Modules 1 and 2 of the Fostriecin Polyketide Synthase. **Journal of American Chemical Society (JACS)** *139*,14322-14330.
2. **Book chapter: Dhara D. Shah** and Graham R. Moran (2015). 4-Hydroxyphenylpyruvate Dioxygenase and Hydroxymandelate Synthase: 2-Oxo Acid-Dependent Oxygenases of Importance to Agriculture and Medicine. 2-Oxoglutarate-Dependent Oxygenases, **RSC Metallobiology series vol 3**, Schofield C. J. and Hausinger R. P. Eds.438-457.
3. Brett A. Beaupre, Brenton R. Carmichael, Matthew R. Hoag, **Dhara D. Shah** and Graham R. Moran (2013) Renalase is an α -NAD(P)H Oxidase/Anomerase. **Journal of American Chemical Society (JACS)** *135*,13980-13987. *Article featured in JACS spotlights.*
4. **Dhara D. Shah**, John A. Conrad and Graham R. Moran (2013) Intermediate Partitioning Kinetic Isotope Effects for the NIH shift of 4-Hydroxyphenylpyruvate Dioxygenase and the Hydroxylation Reaction of Hydroxymandelate Synthase Reveal Mechanistic Complexity. **Biochemistry** *52*,6097-6107.

5. **Dhara D. Shah**, John A. Conrad, Brian Heinz, June M. Brownlee and Graham R. Moran (2011) Evidence for the Mechanism of Hydroxylation by 4-Hydroxyphenylpyruvate Dioxygenase and Hydroxymandelate Synthase from Intermediate Partitioning in Active Site Variants. **Biochemistry** 50,7694-7704.
6. **Dhara D. Shah**, Brenton R. Carmichael and Graham R. Moran. Characterization of Renalase Active Site Mutants. Manuscript in preparation.
7. Karen Crozier-Reabe, **Dhara D. Shah** and Graham R. Moran. Evidence for Proton Movements in the Catalytic Cycle of Kynurenine-3-monooxygenase from *Pseudomonas aeruginosa*. Manuscript in preparation.

Conference Presentations

1. **Dhara D. Shah**, Young-Ok You and David E. Cane. **Gordon Research Conference – Enzymes, Coenzymes and Metabolic Pathways**, Waterville valley, NH, July 2016.
2. **Dhara D. Shah**, Young-Ok You and David E. Cane. **Gordon Research Conference – Enzymes, Coenzymes and Metabolic Pathways**, Waterville valley, NH, July 2015.
3. **Dhara D. Shah**, John A. Conrad and Graham R. Moran. **Midwest Enzyme Conference**, Chicago, IL, Oct. 2013. (Selected as best poster)
4. **Dhara D. Shah**, Brett A. Beaupre, John A. Conrad and Graham R. Moran. **Midwest Enzyme Conference**, Chicago, IL, Oct. 2012.
5. **Dhara D. Shah**, John A. Conrad, Brian Heinz, June M. Brownlee and Graham R. Moran. **Gordon Research Conference: Isotopes in Biological & Chemical Sciences**, Galveston, TX. Feb. 2012.
6. **Dhara D. Shah**, John A. Conrad, Brian Heinz, June M. Brownlee and Graham R. Moran. **Zing Conference: Enzymes, Coenzymes, and Metabolic Pathways**. Cancun, Mexico. Dec 2011.
7. **Dhara D. Shah**, John A. Conrad, Brian Heinz, June M. Brownlee and Graham R. Moran. **Midwest Enzyme Conference**, Chicago, IL, Oct. 2011.
8. **Dhara D. Shah**, John A. Conrad, Brian Heinz, June M. Brownlee and Graham R. Moran. **Gordon Research Conference: Enzymes, Coenzymes, and Metabolic Pathways**, Waterville, NH. July 2011.
9. June M. Brownlee, **Dhara D. Shah** and Graham R. Moran. **Enzyme Mechanism Conference**, St. Petes Beach, FL, 2011.

Scientific awards/Grants

- Best Poster Award, Midwest Enzyme Chemistry Conference, Chicago, IL. 2013
- McFarland Graduate Research Award: Department of Chemistry and Biochemistry, University of Wisconsin-Milwaukee. 2013
- Keulks Graduate Research Award: Department of Chemistry and Biochemistry, University of Wisconsin-Milwaukee. 2011
- UW-Milwaukee Graduate School Travel award. 2011
- UW-Milwaukee Chancellors Graduate award. 2009-2013.
- Junior Research Fellowship and National Eligibility Test (JRF/NET) from Council for Scientific and Industrial Research (CSIR), India. 2009.

Teaching, Mentoring, and Leadership Experience

- Teaching Fellow, Department of Molecular and Cellular Biology, Harvard University. Taught for one semester on genetics, genomics and evolution (Life Sciences 1b) to Freshman and Sophomore students of Harvard College. Spring 2018.

- Certificate I: Sheridan Certificate Program – Reflective Teaching, Sheridan Center for Teaching and Learning, Brown University. Fall 2016.
- Graduate Teaching Assistant, University of Wisconsin-Milwaukee. Courses taught:
 1. CHEM 103 (Discussion and Lab): Survey of Biochemistry. Summer 2013.
 2. CHEM 603 (Lab): Introduction to Biochemistry Laboratory. Spring 2014, 2013, 2012, 2010. Fall 2012.
 3. CHEM 105 (Discussion and Lab): General Chemistry for Engineering. Fall 2010.
 4. CHEM 102 (Discussion and Lab): General Chemistry. Fall 2013, Fall 2009.
- Officer of Chemistry & Biochemistry Graduate Student Council. Fall 2011 to Spring 2012.
- Mentor for teaching assistants, Department of Chemistry & Biochemistry, UW-Milwaukee. Fall 2013, Spring 2014.
- Mentored 10 Undergraduate Researchers at Brown University and UW-Milwaukee.