

Ramaydalis Keddís

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Education

Department of Environmental Sciences, Rutgers University, New Brunswick, NJ, 08901

- Ph.D. in Environmental Microbiology (May 2013)
 - Advisor: Costantino Vetriani, PhD
 - Dissertation: "Alkane oxidation in pure cultures and natural microbial communities from geothermal deep-sea environments: linking diversity and function" (March 2013)

Department of Biology, University of Puerto Rico at Mayagüez, Mayagüez, PR, 00680

- B.S. Industrial Microbiology (May 2006)

Professional Experience

Rutgers University

- **Teaching Instructor (August 2016-Present)**
 - Main responsibility is teaching the General Microbiology Lab in addition to other courses such as Ethical Issues in Microbiology for both graduate and undergraduate courses.
 - Assists in assessment of laboratory portion as well as course.

Kean University

- **Lecturer (September 2013-August 2016)**
 - Taught Research and Technology, a general education course on the introduction and application of research practices for majors under the College of Natural, Applied and Health Sciences.
 - Assisted undergraduate students in the creation and development of a scientific proposal, research paper and oral presentations.
 - Advised around 50 undecided students to help them declare their majors.
 - Performed assessment for course as well as for the General Education department every semester.

Rutgers University

- **Graduate Student Researcher (August 2006-April 2013)**

- Dissertation title: Alkane oxidation in pure cultures and natural microbial communities from geothermal deep-sea environments: linking diversity and function
- Detection, isolation and characterization of aerobic alkane oxidizers that utilize medium chain alkanes
- Detection of alkane hydroxylases in isolates and environmental samples from hydrothermal vents was also performed
- **Teaching Fellow (June-July, 2011 and 2012)**
 - Summer Research Program in Science and Engineering (RISE)
 - Assisted undergraduate students in the creation and development of a scientific proposal, oral and poster presentations
- **Teaching Assistant (Fall 2007-Spring 2009)**
 - Department of Biochemistry and Microbiology, Rutgers University, New Brunswick, NJ
 - Instructed undergraduate biochemistry majors in an Experimental Biochemistry lab
 - Conveyed background information of concepts and objectives of each experiment and assisted in the completion of these
 - Evaluated students' performance on written reports

University of Puerto Rico - Mayagüez Campus

- **Undergraduate Researcher (May 2004-May 2006)**
 - Worked with halophilic archaea specifically with *Halogeometricum* sp. in trying to characterize glycosilic hydrolases from this organism. Isolated this organism from solar salterns in Cabo Rojo, PR and grew the following in different carbohydrates as sole energy source to determine which it used, ran enzyme assays to detect activity.
- **Summer Intern (June 2005-August 2005)**
 - University of Arizona.
 - Performed and characterized cloning libraries from mine tailing soils from Tucson, AZ PI: Dr. Raina Maier

Honors

- Eileen and Robert Robison Scholarship for Excellence in Graduate Studies-March 2010
 - The scholarship is awarded to a graduate student who has demonstrated tremendous competence and accomplishment in their academic and research program while at Rutgers University, has shown an active participation in or a leadership role in the activities of the department, college, university or community, and is motivated to help and improve the human condition at this time and upon graduation.
- Graduate Assistance in Areas of National Need (GAANN) Fellow August 2006 – August 2007

Publications

NOTE: Cruz-Matos, R. = Keddis, R.

- Rauschenbach, I., Davis, D. and **Keddis, R.** Poster Development and Presentation to Improve Scientific Inquiry and Broaden Effective Scientific Communication Skills. *In preparation*
- **Keddis, R.**, Wong, A., Giovanelli, D. and Vetriani, C. Detection and Diversity of alkane oxidizers in Deep Sea Hydrothermal Vents in the East Pacific Rise and Guaymas Basin. *In Preparation*
- Knezek, C., Morreale, P., **Keddis, R.**, and James, R. Ethics in Practice: Research and Technology. Council on Undergraduate Research Quarterly 2015, 36 (1), p4.
- Pérez-Rodríguez, I., Bohnert, K.A., Cuebas, M., **Keddis, R.**, Vetriani, C. Detection and phylogenetic analysis of the membrane-bound nitrate reductase (Nar) in pure cultures and microbial communities from deep-sea hydrothermal vents. FEMS Microbiology Ecology. 2013, 86(2):256-67. DOI: 10.1111/1574-6941.12158
- Bertrand, E.M., **Keddis, R.**, Groves, J.T., Vetriani, C., and Austin, R.N. (2013) Identity and mechanisms of alkane-oxidizing metalloenzymes from deep-sea hydrothermal vents. *Frontiers in microbiology* 4: 109.
- Giovannelli, D., Ricci, J., Perez-Rodriguez, I., Hugler, M.; O'Brien, C.; **Keddis, R.**; Grosche, A.; Goodwin, L.; Bruce, D.; Davenport, K.; Detter, C.; Han, J.; Han, S.; Ivanova, N.; Land, M.; Mikhailova, N.; Nolan, M.; Pitluck, S.; Tapia, R.; Woyke, T.; Vetriani, C. Complete genome sequence of *Thermovibrio ammonificans* HB-1T, a thermophilic, chemolithoautotrophic bacterium isolated from a deep-sea hydrothermal vent. *Standards in Genomic Sciences*, North America, 7, Oct. 2012.
- **Keddis, R.***; Rosario-Passapera, R.*; Wong, R.; Lutz, R.A.; Starovoytov, V.; Vetriani, C. *Parvibaculum hydrocarbonoclasticum* sp. nov., a mesophilic, alkane-oxidizing alphaproteobacterium isolated from a deep-sea hydrothermal vent on the East Pacific Rise. *Int J Syst Evol Microbiol* (2012), 62, **2921-2926**
- Crespo-Medina, M.; Chatziefthimiou, A.; **Cruz-Matos, R.**; Perez-Rodriguez, I.; Barkay, T.; Lutz, R.A.; Starovoytov, V.; Vetriani, C. *Salinisphaera hydrothermalis* sp. nov., a mesophilic, halotolerant, facultatively autotrophic, thiosulfate-oxidizing gammaproteobacterium from deep-sea hydrothermal vents, and emended description of the genus *Salinisphaera* *Int J Syst Evol Microbiol* ; 59: 1497 – 1503

Oral Presentations

- “**Extreme environments and the diversity within them**” January 2015
Rutgers Geology Museum Open House
- “**Working with GE Rubrics**” Kean Assessment Institute, Union, NJ January 2014
- “**Exploring the Critical Thinking Rubric**” Kean Assessment Institute, Union, NJ January 2014
- “**Diversity of alkane oxidizing bacteria and alkane hydroxylase genes in deep-sea hydrothermal vents**” Theobald Smith Society Meeting New Brunswick, NJ April 2009 and 2012

- **“ Characterization of extremely halophilic glycosil hydrolases from *Halogeometricum* sp. Isolated from the solar salterns in Cabo Rojo, PR” Jr.**
Technical Meeting Mayaguez, PR March 2005

Poster Presentations

- **“Diversity of alkane oxidizing bacteria and alkane hydroxylase genes in deep-sea hydrothermal vents”** American Society for Microbiology General Meeting San Francisco, CA June 2012
- **“Diversity of alkane oxidizing bacteria and alkane hydroxylase genes in deep-sea hydrothermal vents”** Microbiology at Rutgers University: Cultivating Traditions, Current Strength, and Future Frontiers, New Brunswick, NJ February 2008, 2009, 2010, 2011, 2012
- **“Diversity of alkane oxidizing bacteria and alkane hydroxylase genes in deep-sea hydrothermal vents”** American Society of Microbiology General Meeting Philadelphia, PA May 2009
- **“Diversity of alkane oxidizing bacteria and alkane hydroxylase genes in deep-sea hydrothermal vents”** Interridge Meeting Woods Hole, MA September 2007
- **“Of Enzymatic Digest and Cloning. Useful and Reliable?”** November 2005 - ABRMS Conference Atlanta, GA
- **“Of Enzymatic Digest and Cloning. Useful and Reliable?” August 2005 – Minority health Disparities Program Tucson, AZ**
- **“ Characterization of extremely halophilic glycosil hydrolases from *Halogeometricum* sp. Isolated from the solar salterns in Cabo Rojo, PR”** May 2005 – Beta Beta Beta Honor Society Convention Mayaguez, PR
- **“ Characterization of extremely halophilic glycosil hydrolases from *Halogeometricum* sp. Isolated from the solar salterns in Cabo Rojo, PR”** April 2005- Sigma Xi Poster Day Mayaguez, PR

Professional and Community Service

- ASM Biology Scholars Teaching Mentor January 2017-Present
- Judge for the North Jersey Regional Science Fair New Brunswick, NJ March 2011, 2012 and 2013
- Volunteer at the Geology Museum Rutgers University

Professional Affiliations

- Theobald Smith Society, NJ branch of the American Society of Microbiology
- American Society of Microbiology
- ASM Student Chapter Rutgers University (2007-2013)

Languages:

Fully Bilingual in both Spanish and English