
BIOGRAPHICAL SKETCH

NAME: Meredith Protas

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Pomona College, Claremont, CA	B.A.	05/1999	Biology
Harvard Medical School, Boston, MA	Ph.D.	8/2005	Genetics
UC Berkeley, Berkeley, CA	Postdoc	7/2011	Evolution and Development
UCSF, San Francisco, CA	Postdoc	6/2014	Genetics of eye disease

A. Personal Statement

I have a strong commitment and background in both teaching and research and have prioritized both aspects in my career. One of my main interests is in the genetic basis of eye disease and variation in diverse systems. I have studied the genetic basis of eye loss in cave dwelling fish and crustaceans and also the genetic basis of eye disease in humans. I am interested in the developmental and genetic variation causing disease and evolutionary change.

In my graduate work, I studied eye size variation in a species of cave fish, *Astyanax mexicanus*, investigating the genetics of this complex trait and creating genetic tools for this species that helped promote it to the rank of an emerging model organism. This species continues to be an excellent model for eye degeneration and disease. In my postdoctoral work, I developed a new model for studying natural variation in eye size, the crustacean *Asellus aquaticus*. This species has many of the same advantages of *Astyanax mexicanus*, in addition to many unique qualities such as extreme phenotypic variation in the degree of eye degeneration within a cave population, a likely monogenic mode of inheritance of eye loss, and the many practical considerations working with an invertebrate species. Then, additional postdoctoral experience in the genomic basis of eye disease in humans gave me medical perspective and knowledge, as well as the capacity to work with whole genome sequence and next-generation sequencing data.

In the fall of 2014, I started as a tenure-track assistant professor at the Dominican University of California. Currently, I am working with six undergraduates as part of a research-intensive class. In addition, I have one master's student who started in the fall of 2015.

B. Positions and Honors

Positions and Employment

2008 (spring) Adjunct Instructor, Mills College

2012 (summer) Adjunct Instructor, Cal State East Bay, Hayward

2014-present Assistant Professor, Dominican University of California

Other Experience and Professional Memberships

Member of NSS (National Speleological Society)

Member of the PanAm Evo Devo Society

Honors

1999 (Pomona College) Magna cum laude, Phi Beta Kappa, Sigma Xi, Biology Honors

2011 Best presentation: UC Berkeley Developmental Biology meeting

2011 Travel grant to Keystone meeting on Evolutionary and Developmental Biology

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1JOEfHD-qKRQc/bibliography/48160657/public/?sort=date&direction=ascending>

D. Research Support

Ongoing Research Support

National Speleological Society Grant, Old Timer's Reunion Cave Society Grant (9/2015-9/2017)

The goal of the two above grants is to generate a staging table for surface and cave embryonic development and to establish in situ hybridization as a technique in our lab.

Role: PI

Vehslage Grant (National Speleological Foundation) and Cave Conservancy Foundation (12/2015-12/2017)

The goal of the above grant is to examine the genetic basis of pigment differences in the cave and surface form of *Asellus aquaticus*

Role: PI

Completed Research Support

School of Health and Natural Sciences Summer Minigrant 5/2016-08/2016

The goal of our study is to investigate different techniques for transcriptome sequence.

Role: PI

School of Health and Natural Sciences Summer Minigrant 05/2015-08/2015

The goal of our study is to investigate the role of Heat shock protein inhibition on phenotypic characteristics in *Asellus aquaticus*.

Role: PI

NRSA fellowship F32 GM080112-01

03/2007 – 3/2010

The molecular basis of morphological change; antennal variation in crustaceans.