

Graduate Program in Biomedical Sciences

Program Faculty Spring Meeting
June 8, 2021



Agenda

Graduate Leadership Intros

Graduate Program External Review

New Faculty

Student Highlights

Funding Opportunities for PhD Students

Curriculum updates

MS Program

Engagement and Service

Important Dates

Open Forum

BSMC Graduate Leadership

Seema Tiwari-Woodruff, Ph.D.

Program Director

Seema.Tiwari-Woodruff@medsch.ucr.edu



Martin Garcia-Castro, Ph.D.

Graduate Advisor for Recruitment

Chair of Admissions Committee

martin.garcia-castro@ucr.edu



Sika Zheng, Ph.D.

Graduate Advisor for Enrolled Students

Sika.zheng@medsch.ucr.edu



Hermila Torres

Program Coordinator

hermila.torres@medsch.ucr.edu



BSMC Graduate Advisory Committee (GAC)

Djurdjica Coss, Ph.D.



Sean O'Leary, Ph.D.



Byron Ford, Ph.D.



Viji Santhakumar, Ph.D.



Ansel Hsiao, Ph.D.



Thank you for your services!!



Graduate Program External Review

External Committee Recommendations and Biomed Response

Tenure of grad program leadership (Director, grad advisors, staff)

- Formal 3-year commitment to allow for better continuity of leadership

Structured Mentorship

- BigSibs Program mentorship – upperclassmen (3rd year) and program faculty (*can't be PI or guidance committee member) will be assigned to incoming students. Help students stay grounded, not fall through the cracks.
 - *if student picks the program faculty as their PI or guidance committee member, the student will be assigned a new faculty friend.
 - Implementation will take effect, this upcoming year

Student evaluation of faculty and lab rotations

- Transparency of lab rotation identification. Create a mechanism to track which faculty are open to taking student and provide this information to the incoming students. More details later in the presentation.
 - Summer survey

Coursework beyond the first year

- To increase knowledge in the dissertation research topic, students can take additional courses or pursue a Designated Emphasis after the first -year curriculum.

Available funding for Ph.D.s

- Increased available SOM first year curriculum TAs from 6 to 12 TAs
- Recommendation to require 2nd year students apply to F31 and NSF grants after taking BMSC 260 series

New Program Faculty

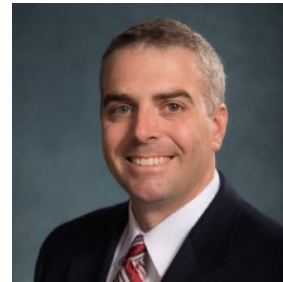
Samantha Ying, Ph.D.

Assistant Professor of Soil Biogeochemistry
Department of Environmental Sciences



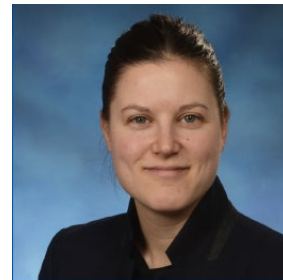
Scott Pegan, Ph.D.

Professor in Division of Biomedical Sciences
Joining UCR summer 2021



Natalie Zlebnik, Ph.D.

Assistant Professor in Division of Biomedical Sciences
Joining UCR summer 2021



Welcome to the graduate program!!



Student Highlights

- Success during a pandemic year
- 2020 and 2021 Graduations

* Fall 2020

Andrew Lapato, Ph.D. – Dr. Tiwari-Woodruff's lab
Poushali Bhattacharya, M.S. – Dr. Ford's lab

* Spring 2021

Dian Hoque, M.S. – Dr. Ford's lab
Chigozie Okeke, M.S. – Dr. Carson's lab
Parima Udompholkul, Ph.D. – Dr. Pellecchia's lab

* Summer 2021 – Ph.D.

Kelley Atkinson – Dr. Tiwari-Woodruff's lab
Jessica Noll – Dr. Ford's lab
Kelly Radecki – Dr. Walker's lab
Maham Rais – Dr. Ethell's lab
Mark Wiley – Dr. DiPatrizio's lab

* Summer 2021 – M.S.

Stacey Gomez – Dr. Wilson's lab
Makinna Posada – Dr. Coss' lab

Notable Awards and Recognitions

External Awards

- **Laura Dovek** has been awarded a 1-year American Epilepsy Society Predoctoral Fellowship and she has a competitive score for the NIH Individual Pre -doctoral Fellowship (F31). The results will be confirmed shortly after the council meeting.
- **Edward Vizcarra** has received a competitive score for the prestigious NIH Individual Pre -doctoral Fellowship (F31). The results will be confirmed shortly after the council meeting.

Grad Division 2021 -2022 Fellowships

- **Jeffrey Koury** received the Graduate Research Mentoring Program (GRMP) Fellowship.
- **Pedro Villa** received the competitive Graduate Research Mentoring Program (GRMP) Fellowship.
- **Erin Walch** received the Dissertation Year Program (DYP) Award.



Notable Awards and Recognitions

2021-22 Recipients of the Biomed Divisional Fellowships (Burden/Pease Awards)

- Bryant Avalos
- Rebecca Hernandez
- Samantha Sutley (Bruinsma)
- Kathy Pham
- Rebecca Ruggiero
- Laura Dovek
- Edward Vizcarra



Funding Opportunities for PhD Students

TA enhancement, specialized GSRs, and continued support

Teaching Assistantships for Med School courses

Effective 21-22 academic year, additional TA positions have been added to Blocks 1-5 instructional support.

Twelve 50% TAs are now available for all 1st year blocks (4 TAs for each session- Blocks 1 & 2, Block 3, and Blocks 4 & 5)

Clinical GSRs

Division of Biomedical Sciences will continue offering **two** 25% clinical-GSR positions. 1 year appointment from July – June.

Technical GSRs **(new)**

Division of Biomedical Sciences will offer **two** 25% technical-GSR positions. 1 year appointment from July – June.

First Year Funding

Biomed provides a fully funded first summer term which gives students a head start prior to classes to focus on their lab rotations. Additionally, Biomed provides 50% of financial support of first year (50% by grad division).

\$5K Travel grant

Each student receives a \$5000 grant to be used for presenting their work at conferences, attending training workshops, and other professional development opportunities. Funds will be available after students complete their 1st year curriculum and join a home lab.

F-31 NIH grant (NSF as well)

Current and Incoming Students

4 Ph.D. students started in Summer 2020

Daniel Diaz – finishing year 1 rotations
Nina Juan-Sing – joined Dr. Tiwari-Woodruff's lab
Karapet Mkrtchyan – finishing year 1 rotations
Emily Tabaie – joined Dr. Wilson's lab

5 Ph.D. students are starting Summer 2021

Elyza Do, UCLA
David Gonzalez, CSU San Marcos
Jennell Jennett, Arizona State University
Yi-Li Lam, UC Santa Barbara
Martin Olmos, Whittier College

4 M.S. students started in Fall 2020

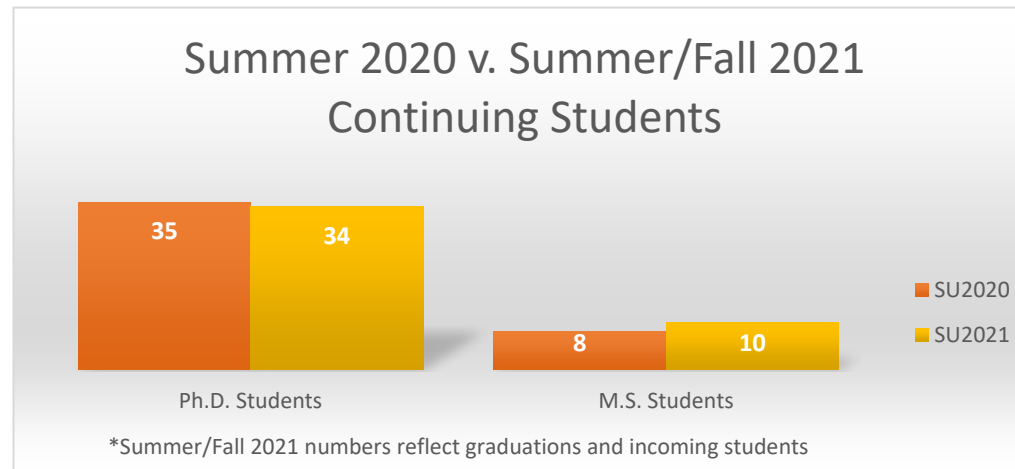
David Ghukasyan – joined Dr. Heinrich's lab
Stacey Gomez – joined Dr. Wilson's lab
Makinna Posada – joined Dr. Coss' lab
Brandon Tan – joined Dr. Garland's lab

1 M.S. student started in Spring 2021

Moyinoluwa Ajayi – joined Dr. Tiwari-Woodruff's lab

6 M.S. students are starting Fall 2021

*additional admissions offers will be made to pre-medical path students in July for Fall 2021.



Ph.D. Curriculum Reminders

Program Timeline

Arrive: July 6th BMSC Orientation and first lab rotation
August 2-6th Med School Orientation
August 9th start classes

1st Year: Lab rotations and 1st year medical classes
Confirm thesis lab April - June

2nd Year: Review and grant writing course in preparation for qualifying exam

3rd Year: Summer – Fall complete Qualifying Exams
December – submit F31 application to NIH

4th to 6th Year: Get data, publish and graduate



Ph.D. Curriculum Updates

Lab Rotations and evaluations

Student time commitment – first year curriculum and time in lab rotations

Lab Assessment rotation

- Faculty role
 - Mentor oversight
 - Involve students in journal clubs
 - 1:1 meetings
 - Assignment of specific project

Technical rotation

- Faculty Role- assign student to whoever will be teaching lab technique and keep them involved in journal club, if needed.

Evaluation Forms:

Since students receive course credit for lab rotations, there is a need to formally evaluate performance in the lab

1. PI evaluation of student performance
Ex. attendance, dedication/participation, problem solving, creativity, collaborative aptitude, identify growth areas, **professionalism**
2. Student evaluation of lab experience
Ex: Accessibility of mentor, learning outcome, lab environment, overall experience



Ph.D. Curriculum Updates

BMSC 260– stats lectures

Collaboration with Senior Associate Dean (SAD) research unit and Statistics dept to add additional lectures focus on statistics as part of BMSC 260 preparation. Students can bring their own lab data and figure out what is the best statistical methods to use to analyze their own research.



MS Program

Program Overview

The M.S. program has three primary objectives:

1. To enable students to enter multiple biomedically relevant fields after completing a terminal M.S. degree.
2. To serve as a discernment and preparation program for students deciding whether their next steps.
3. To allow medical students to augment their medical training with acquisition of specialized expertise in biomedical and health related research areas as part of a dual M.D.-M.S. degree.

Duration/timeline

- The program can be completed in 1-2 years (no more than 6 quarters).
- Requires completion of at least 36 units

MS students time commitment

- This is a self-funded program – many students will be working part -time in/outside the university
- Contact hours vs. units – for every registered unit, student completes 3 hours inside/outside the lab (example: 4 -units of BMSC299 = 12 hours of work/per week)

Minimum Requirements

- MS Program requires completion of at least 36 units
- Thesis Plan or Comprehensive Exam Plan– decided in consultation with the guidance committee.
 - **Thesis plan:** reports a creative investigation of a defined problem or a research report. No more than 12 units (BMSC 299) of research can apply to degree.
 - **Exam plan:** complete 36 units in course credit. Research units cannot apply towards 36 -unit requirement.



MS Program

Curriculum

- Students must take BMSC 252 and 254 every quarter student is registered
- BMSC 299 (minimum of 8 units Directed Research)
- At least two electives selected from:
 - BMSC 222 Special Topics and BMSC 223 Themes in Human Biology and Disease
 - Additional electives can be selected from Designated Emphasis list
- Division of Biomed Curriculum Committee will work towards increasing course offerings for MS students

MS Faculty Mentor

At the time of admissions students identify faculty or labs they would like to join/work with during their time in the program. With consultation of the Graduate Program Director and Advisors, students are placed in labs based on their preferred area of research, prior research experience and lab availability. Within the first 2 weeks of program, student should be integrated in the home lab.

MS Guidance Committee

The Guidance Committee is formed at the time of enrollment in consultation with the assigned faculty mentor.

The committee is charged with guiding the student's research, recommending courses, identifying areas of remediation, and participate in the thesis defense. By end of 2nd month, must have selected committee.



Growth of MS Program

Redefining Curricular Pathway Options

- Pathway to biomedical and health related careers (terminal degree)
- Pathway to the Ph.D.
- Pathway to the M.D.*
- Pathway to the dual M.D.-M.S.* (must be enrolled in UCR M.D. program)
- Undecided

Increase recruitment and admissions

- During relaunch of MS program in Fall 2019, we admitted 2 students. Since then, we have admitted 7 students.
- Effective Fall 2021, a more defined admissions process for research and pre-medical path students.
 - Fall 2021 transition Currently 6 incoming MS students.
- **Only primary priority admissions cycle** – Fall term (winter and spring terms only by exception – ex. M.D.-MS. Program admits)

New MS Graduate Faculty Advisor

As admissions numbers increase there will be a need for additional support. Recruitment of new graduate advisors is underway to oversee the master's students progress through the program are coordinate lab faculty mentor assignment.



Engagement and Service

Committees, mentorship and support

Graduate Advisory Committee (GAC)

- Oversee implementation of guidelines and regulations
- Consultation and approval on TAs
- Consultation and approval on fellowship nominations
- Participation in admissions recruitment activities
- The GAC will oversee the graduate guidance and advisory committee assignment for the Ph.D. and MS program

Admissions Committees

1. Ph.D. Committee serves from December-April
 - Review and rank applications, meet in Dec. to select top candidates to invite to Ph.D. Recruitment Day, select final candidates for offers
2. M.S. Committee serves from December-April
 - Review and rank applications, meet to select top candidates to invite for MMI Interviews, select final candidates for offers

Recruitment Service

Serve as a faculty interviewer to assist in evaluating candidates for fit in program

- Ph.D. Recruitment Day– January 22, 2022
- M.S. MMI Interviews– March-April 2022 (TBD)



Engagement and Service

Committees, mentorship and support

Priority for grad program faculty

- Teaching
- Collaboration
- Mentor of a graduate student
- Participate in various committees

Participation in service and committees is essential for the success of our program

Upcoming Important Dates



~~BMSC Awards Ceremony~~ Friday, June 18, 2021

~~BMSC New Student Orientation~~ – Tuesday, July 6, 2021

~~BMSC 252 Seminar Series~~ Mondays 4pm, starting September 27, 2021

~~Grad Program Fall Meeting~~ – Wednesday December 1, 2021

~~BMSC Recruitment Day~~– Friday, January 21, 2022



Open Forum