# **UPBM E-NEWSLETTER**

Undergraduate Program in Biology and Medicine



Sunday, May 17th, 2015 Photos by Eugenia Zeng '16, BCD



- ▶ UR Commencement 2015
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## Good Bye Class of 2015

Forever Part of the Hive...

This year we are saying goodbye to a class of approximately 223 seniors who have completed majors in Biology, Biochemistry, Cell and Developmental Biology, Ecology and Evolutionary Biology, Microbiology, Molecular Genetics, and Neuroscience. Although it is a pleasure to get to know our students it is equally as hard to see them go.

The student speaker for the class of 2015 Mehr Kashyap '15 BCD suggested that he and his colleagues represent a much larger collective or in his words "the Hive". This is a beautiful and appropriate parting thought for this year's graduates as they go forth and conquer the universe.

Congratulations, may your lives be filled with numerous triumphs, and we look forward to learning of your future accomplishments in the years to come.

BTW - The Senior Slide Show has been posted on line. More pictures have been added so please be sure to check it out.

Meliora!





## **UR Commencement 2015**

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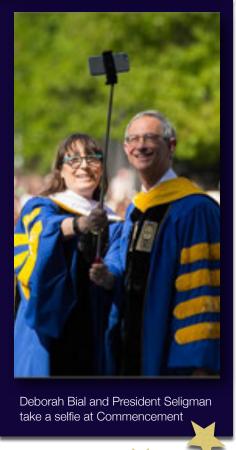
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## Class of 2015

### Senior List

### **Bachelor of Arts Biology (BA BIO)**

Alexa Ball
Branden Bartlett
Jacob Cauvel
Alice Chen
Yoo Jeoung Chelsea Choi

Roma Desai
Ashley Dockham
Amanda Forbes
Yohanna Gaim

Priyanka Garg Gregory Goldvug William Hubbard

Amy Ige Timothy Jeffirs

Phillip Kellogg Dongjun Lee

Seung Ho Lee Nicole Lifson

Chitavi Maulloo <sup>ФВК</sup>

Aissatou Ndiaye Rhett Partida

Alap Patel PBK

Priyanka Patel

Badal Pradhan Anna Saltman

Kaitlin Sappio Michael Saulle

Jesse Sharp

Tiffany Sinclair

Nicholas Sirotenko

Tatsunari Tomiyama

Deanna Vaneerde

Brian Voelz



Daniel Zucker

Katherine Wegman ФВК
Michelle Young



### Bachelor of Science Biochemistry (BS BBC)

Sarah Bond Smon Cheewapansri Max Cheng

Michael Dieringer Jennifer Goldreich

Eric Herman

Nicholas Hill ★★ ФВК

Cassandra Kappen

Ali Khan <sup>ФВК</sup> Amos Liou

Kathryn Loveless Brandon Mariotti

Nicholas Mastrosimone

Austin Mottola

John Muroski

Alexander Neary ФВК
Samantha Plummer

John Reichert

Robert Rietmeijer <sup>ФВК</sup> Mikel Ruterbusch

Akram Salam

Shannon Schmit <sup>ФВК</sup>
Lara Schoenebeck

Raven Shah

Christopher Tucker \*\*

Felix Yang

Han Zhang Ruijia Zhu



Phi Beta Kappa <sup>ФBK</sup>
Degree with Honors in Research \*\*

### Bachelor of Science Cell and Developmental Biology (BS BCD)

Rutul Amin

Lillye Anderson ★★ ФВК

Sara Benerofe \*\*

Samuel Benham

Elizabeth Brown \*\*

Isabelle Chu ФВК

Janelle Delos Reyes

Morgan Feder

Elizabeth Gagen

Corey Garyn ФВК

Nealansh Gupta

Balaji Jagdish ФВК So-Yon Jang

Mehr Kashyap ФВК ★★

Sean Kelly

Jesse Luna

Niklas Malmstrom

Jiyoon Park

Alison Patrick

Keith Provost

Alice Can Ran Qin \*\*

Tyler Raufeisen

Bridget Russo Nischal Sodemba Siqi Song Michael Sumner Kelvin Tam

Hannah Thomas Benjamin Wainblat

Harris Weber **ФВК** 



### Bachelor of Science Ecology and Evolutionary Biology (BS BEB)

Alyssa Arre

Rebecca Galasso

Alisa Johnson \*\*

Shannon Keating \*\*

Madeleine Keefe

Sarah Lazarus

Gouri Mahadwar ФВК Rachel Milner **ФВК** 

Alida Pollock

Benjamin Smith Erik Van Roey

### Bachelor of Science Microbiology (BS BMB)

Thomas Anderson

Alexandra Born

Michael Breen \*\*

Vanessa Cedarbaum ФВК

Sheel Clerk

Phillip Cohen \*\*

Cameron Cummings

Adrian Farsaii

Elliot Ha

Laura Keenahan

Connie Koons **ФВК** 

Hannah Kopin Harika Kunchala

Mark Lawlor

Eun Hee Lee

Zoe Netter

Leti Nunez \* ★ ФВК

Shiv Patel

Russell Pizzo

Peter Schade

Yongsoo Shin

Sydney Simpson

Alicia Spiegel Jamie Strampe \*\*

Jonathan Tam \*\*

Rachel Taylor **ФВК** 

Daniel Van Twisk

Kailee Zornow ФВК

### **Bachelor of Science Molecular Genetics (BS BMG)**



Kristin Abramo Mohan Adhikari

Sarah Allen

Parth Amin Max Beyman

Sophia Catalano

Lauren Cole

Marcia Des Jardin

Allison Eberhardt \*\*

Shari Gurusinghe **ΦBK** 

Claire Hart

Blythe Hospelhorn

Ihuoma Igbokwe

Sarah Jaffe

Ryan Kelly Joung Heon Kim <sup>ФВК</sup>

Michelle Landis Barra Madden

Morgan O'Brien

Anjali Patel

**Brittany Porter** 

**Daniel Sharfarz** Jordan Snajczuk

Danielle Sookiasian \*\*

Katelyn Steike ФВК Leah Twomey Rachel Vance Juan Vazquez

John Wilson **ФВК** 

Akira Neng Chun Wong Kathryn Woodworth

Phi Beta Kappa ФВК Degree with Honors in Research \*\*

Continued on Next Page

### **Bachelor of Science Neuroscience (BS BNS)**

Rachael Abraham Zachariah Adham \*\* Akinniyi Akinpelu Naba Ali ФВК

Rebecca Bergman Brian Bernstein **ФВК** 

Andrew Bui Nancy Bui Albert Chen Cody Civiletto Jessica Cohen Kyle Critelli Patrick Davis

Robert Dowd \*\* Anna Gershteyn \*\* Anima Ghimire

Gregory Golembeski

Meghan Gray

John Douglas Haswell

Jaeim Jeong Lily Kamalyan David Keener Megan Keil Soibhan Kelley ФВК Morgan Kennedy

Sarah Kitts Henry Klos Zoe Kory

Benjamin Landwersiek <sup>ФВК</sup>

Celia Lenarz-Geisen

Xiaoyi Li Xavier Lopez

Ma. Lira Camille Manhit Benjamin Meath **ФВК** 

Morgan Mehring Nadia Mercado Annah Moore Michael Morreale Matthew Mullen \*\*

Alyssa Murillo Christopher Nishimura \*\*

Yan Nuzbrokh Mary O'Hehir Shane O'Neil Teresa Oh Kareem Panton Krina Patel

Halima Rafi \*\* William Retz **ФВК** Erik Roisland

Sally Patel

Madelyn Rubenstein Brandon Salzman Srawasti Sarker

Jordana Schmierer \*\* Venkatesh Abhishek

Sharma Humma Sheikh Matthew Shinseki Maxwell Sims Christina Smiros Greta Smith Viola Spahiu

Melissa Thomas Maria Tran

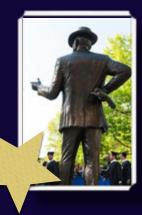
Kwanza Warren \*\*

Ryan Wier Jeong Yeon Yoo

Phi Beta Kappa ФВК Degree with Honors in Research \*\*

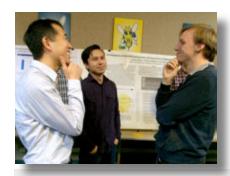








# Honors in Research Twenty-Five Seniors Successfully Wrote and Defended a Thesis



The Undergraduate Program in Biology and Medicine (UPBM) provides majors in the B.S. or B.A. tracks the opportunity to graduate with honors in research. Students must achieve a minimum GPA of 2.7 and defend their written thesis at a meeting of their advisory committee.

Most students seeking a degree with honors in research have worked on a research project for a year or more and have achieved significant results. They then immerse themselves in the timeconsuming process of writing the thesis.

Those who successfully complete their research and then push on to write the required paper are rewarded with the phrase "Honors in Research" added to their transcripts. This year's recipients are:

### **Zachariah Adham BNS**

Dissertation: "The Notch and Aryl Hydrocarbon Receptor Pathways in the Proliferation of Human Medulloblastoma Cells"

Faculty Mentor: Dr. Lisa Opanashuk

Environmental Medicine

### Lillye Anderson BCD

Dissertation: "A Screen of Glucocorticoids Reveals Mifepristone as a Prion Clearing Compound" Faculty Mentor: Dr. Sina Ghaemmaghami Biology

### Sara Benerofe BCD

Dissertation: "Chemokine Ligand 18 Expression and Localization in Infants with Bronchopulmonary Dysplasia"

Faculty Mentor: Dr. Gloria Pryhuber

Pediatrics Neonatology

### Michael Breen BMB

Dissertation: "Replication Competent Influenza A and B Viruses Expressing a Fluorescent "Timer" Protein" Faculty Mentor: Dr. Luis Martinez-Sobrido

Microbiology

### Elizabeth Brown BCD

Dissertation: "Characterizing Nanoparticle Dosimetry In Vitro" Faculty Mentor: Dr. Alsion Elder Environmental Medicine

### Phillip Cohen BMB

Dissertation: "Immunological Consequences of Nanoparticle-Based Vaccination Against Human Immunodeficiency Virus -

Type 1"

Faculty Mentor: Dr. Stephen Dewhurst

Microbiology

#### **Robert Dowd BNS**

Dissertation: "A Computational Model of the Mammalian Midbrain: Simulating Neural Responses to Amplitude

Modulation"

Faculty Mentor: Dr. Laurel Carney

Biomedical Engineering

### Allison Eberhardt BMG

Dissertation: "Establishing Models of RUNX1-Mutated Acute

Mveloid Leukemia"

Faculty Mentor: Dr. Jason Mendler

Hematology/Oncology

### **Anna Gershteyn BNS**

Dissertation: "Adrenegic Regulation of Low Frequency Brain

Artery Vasomotor Oscillations"

Faculty Mentor: Dr. Maiken Nedergaard

Neurosurgery Center for Translational Neuromedicine

### **Nicholas Hill BBC**

Dissertation: "Generation of Head-to-Tail Macrocyclic

Peptides"

Faculty Mentor: Dr. Rudi Fasan

Chemistry

### Alisa Johnson BEB

Dissertation: "An Investigation of the Role of Abnormal

Laminin-332 Expression in ARPKD"

Faculty Mentor: Dr. Soundarapandian Vijayakumar

Pediatric Nephrology

### Mehr Kashyap BCD

Dissertation: "Regulation of LINE1 Retrotransposons in the Aging Organism: Suppression through the Longevity-

Promoting Protein SIRT6"

Faculty Mentor: Dr. Vera Gorbunova

Biology

### **Shannon Keating BEB**

Dissertation: "Effect of Geographical Barriers on the Evolution

of Hispaniolian Green Anoles"

Faculty Mentor: Dr. Richard Glor, Dr. Robert Minckley

Biology

### **Matthew Mullen BNS**

Dissertation: "Differences in Neural Activation Between Undergraduates and STEM Field PhD Students on Magnitude

Judgement"

Faculty Mentor: Dr. Jessica Cantlon Brain and Cognitive Sciences

Continued on Next Page

### **Christopher Nishimura BNS**

Dissertation: "Chronic Exposure to the HIV Virotoxin Tat Causes Rarefaction of Cortical Capillaries in a Mouse Model

of HIV Neuroinflammation"

Faculty Mentor: Dr. Stephen Dewhurst

Microbiology

### Leti Nunez BMB

Dissertation: "Interaction of Human Acute Lymphoblastic

Leukemia with the Microenvironment" Faculty Mentor: Dr. Craig Mullen Pediactrics Hematology/Oncology

### Alice Can Ran Qin BCD

Dissertation: "Comparison of Oncogenic Transformation

Across Rodent Species"

Faculty Mentor: Dr. Vera Gorbunova

Biology

### Halima Rafi BNS

Dissertation: "Perceptual Neurophysiology in Aging and

Alzheimer's Disease: It's Better to be Young"

Faculty Mentor: Dr. Charles Duffy

Neurology Memory Care

### **Jordana Schmierer BNS**

Dissertation: "Mutation at Residue 237 of the PA segment of the Influenza A Virus Permits Escape from the Mx-Mediated

Mammalian Interferon Response" Faculty Mentor: Dr. Stephen Dewhurst

Microbiology

#### **Danielle Sookiasian BMG**

Dissertation: "Early Deletion of Sox2 Impairs Neurogenesis in

the Mammalian Inner Ear"
Faculty Mentor: Dr. Amy Kiernan

Ophthalmology

### Jamie Strampe BMB

Dissertation: "The Density and Orientation of HIV-1 ENG on a Nanoparticle Vehicle Influences the Magnitude and Quality of th Env-Specific Response Elicited Following Immunization in

Mice"

Faculty Mentor: Dr. Stephen Dewhurst

Microbiology

#### Jonathan Tam BMB

Dissertation: "p53: The Guardian Mechanism Against Genome

Instability in Long-Lived Rodent Species" Faculty Mentor: Dr. Vera Gorbunova

Biology

### **Christopher Tucker BBC**

Dissertation: "Expression Changes in Caspofungin Resistant Candida albicans Mutants: A Genome Wide Study"

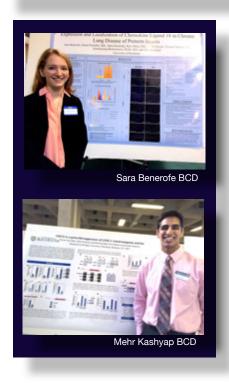
Faculty Mentor: Dr. Elena Rustchenko / Bulgac

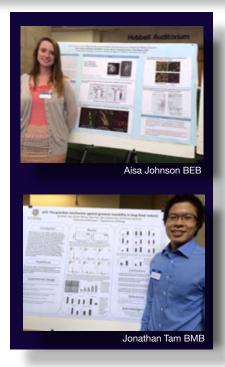
Biochemistry

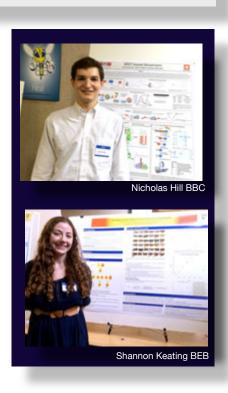
#### **Kwanza Warren BNS**

Dissertation: "Mitochondrial Stress in Inner Hair Cells During

Noise Damage and Recovery"
Faculty Mentor: Dr. Patricia White
Neurobiology and Anatomy



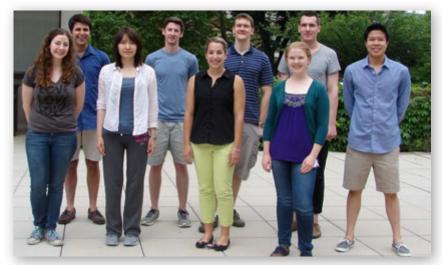




Pictures from The UPBM Poster Session held Meliora Weekend 2014 Visit the 2014 UPBM Poster Slide Show on-line to Relive the Magic!

## deKiewiet Fellowship

### UPBM Graduates Receive deKiewiet Fellowships for Summer 2014



The Undergraduate Program in Biology and Medicine (UPBM) has been awarding de Kiewiet Summer Research Fellowships since 1983 to UR students majoring in UPBM tracks.

The fellowship is designed to give University of Rochester students an opportunity to obtain substantial research experience in the laboratories of program faculty. Students in their junior year are invited to submit competitive applications.

This year's graduates who were selected for the deKiewiet Fellowship in Summer 2014 are:

1st Row: Shannon Keating '15, BEB; Ruijia Zhu '15, BBC / MTH; Kristin Abramo '15, BMG / BSB; Jamie Strampe '15, BMB 2nd Row: Ali Khan '15, BBC / ENG; Maxwell Sims '15, BNS / BSB; Robert Rietmeijer '15, BBC; Mikel Ruterbusch '15, BBC; Jonathan Tam '15, BMB (Not Pictured: Jiyoon (Junne) Park '15, BCD / HLP)



Kristin Abramo '15, BMG, BSB Research Title: "Analysis of CD28 Ligand Binding and Co-Stimulation" Mentor: Dr. James Miller



**Shannon Keating '15, BEB**Research Title: "Genetic Basic of Anole Dewlap Diversity"
Mentor: Dr. Robert Minckley



Ali Khan '15, BBC, ENG Research Title: "Regulation of DNA Damage Response of Yeast by the Fun30 Chromatin Remodeler" Mentor: Dr. XIn Bi



Jiyoon (Junne) Park '15, BCD, HLP
Research Title: "Characterization the
Functions of MDS1 and EVI1 complex locus
(MECOM) Through Selective Knockouts in
Mice"
Mentor: Dr. Archibald Perkins



Robert Rietmeijer '15, BBC Research Title: "smFRET Measurement of RNA 5' to 3' Ends: Dynamic Distances" Mentor: Dr. Dmitri Ermolenko



Mikel Ruterbusch '15, BBC Research Title: "Translational Regulation of GATA-3 in the Context of Th2 Differentiation" Mentor: Dr. James Miller



Jamie Strampe '15, BMB
Research Title: "Determining the B
Cell Response to a NanoparticleBased HIV Vaccine Delivery
System."
Mentor: Dr. Stephen Dewhurst



Jonathan Tam '15, BMB
Research Title: "p53 is the Gaurdian
Mechanism Against Genomic Instability
in Aging Rodent Species"
Mentor: Dr. Andre Seluanov



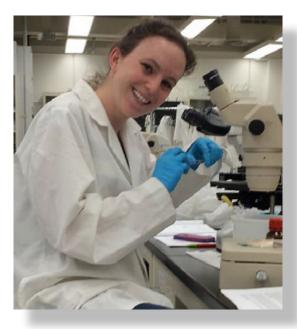
Ruijia Zhu '15, BBC,MTH Research Title: "Multidirectional Peptides Self-Assembly" Mentor: Dr. Bradley Nilsson



Max Sims '15, BNS, BSB
Research Title: "Regulation of Hypoxia
Inducible Factor-1α (HIF-1α) Activity
via Endoproteolytic Cleavage."
Mentor: Dr. Mark Halterman

## Pushing the Bounds of Knowledge

### Approximately Half of this year's Graduating Class take Research Courses



The Undergraduate Program in Biology and Medicine (UPBM) combines the College of Arts and Sciences and the School of Medicine and Dentistry to provide undergraduate courses, seminars, and research experiences. The Program is made possible by the close proximity of the Medical Center and the River Campus and by the enthusiasm of the faculty for cooperative teaching aimed at providing the most up-to-date education in biomedical science.

One of the more popular aspects of the program is Independent Research. Independent Research courses allow students to gain scientific experience while gaining academic credit for their work in the laboratories of program faculty located on UR's River Campus or Medical Center.

Typically a student and faculty member agree to register a research project as a course. Although research courses are not typical lecture hall experiences they are still considered a course that requires defined objectives, learning outcomes, contact hours, and criteria for evaluation that is normally associated with regular credit-bearing courses.

Approximately half of this year's graduating UPBM majors have taken taken advantage of this opportunity.

The following UPBM majors registered one or more Independent Research course during their academic career and have contributed to furthering the boundaries of science:

### Naba Ali BNS (2)

Faculty Mentor: Dr. Suzanne Haber Pharmacology & Physiology

### **Rutul Amin BCD (3)**

Faculty Mentors: Dr. Michael Welte (1), Dr. David Yule (2) Biology, Pharmacology & Physiology

### Lillye Anderson BCD (2)

Faculty Mentor: Dr. Sina Ghaemmaghami Biology

### **Thomas Anderson BMB**

Faculty Mentor: Dr. Steven Gill Microbiology & Immunology

### Sara Benerofe BCD (3)

Faculty Mentor: Dr. Gloria Pryhuber Pediatrics / Neonatology

### Max Beyman BMG (2)

Faculty Mentor: Dr. Dragony Fu Biology

### Sarah Bond BBC

Faculty Mentor: Dr. Alan Smrcka Pharmacology & Physiology

### Alexandra Born BMB/CHM

Faculty Mentor: Dr. Dunman Paul Microbiology & Immunology

### Michael Breen BMB (2)

Faculty Mentor: Dr. Luis Martinez-Sobrido

Microbiology & Immunology

### Elizabeth Brown BCD (2)

Faculty Mentor: Dr. Alison Elder Environmental Medicine

### Andrew Bui BNS (7)

Faculty Mentor: Dr. Lin Gan Ophthalmology

### Sophia Catalano BMG (3)

Faculty Mentors: Dr. Mark Noble (1), Dr. Andrei Seluanov (2) Biomedical Genetics, Biology

### Vanessa Cedarbaum BMB

Faculty Mentor: Dr. Archibald Perkins Pathology & Lab Medicine

### **Smon Cheewapansri BBC**

Faculty Mentor: Dr. John Werren Biology

### Max Cheng BBC/MUS (4)

Faculty Mentor: Dr. Chawnshang

Chang Pathology

### Isabelle Chu BCD (2)

Faculty Mentor: Dr. David Goldfarb Biology

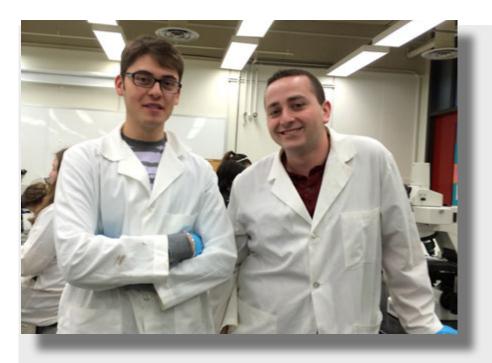
Diology

### **Cody Civiletto BNS**

Faculty Mentor: Dr. Majewska Ania Neurobiology & Anatomy



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### **Sheel Clerk BMB**

Faculty Mentor: Dr. Jacques Robert Microbiology & Immunology

### Phillip Cohen BMB (2)

Faculty Mentor: Dr. Stephen Dewhurst, Dr. Harris Gelbard Microbiology & Immunology, Neurology

### Lauren Cole BMG (2)

Faculty Mentor: Dr. Margot Mayer-

Proschel

**Biomedical Genetics** 

Marcia Des Jardin BMG (3) Faculty Mentors: Dr. Michael Bulger (2), Dr. Joseph Miano Pediatrics, Cardiovascular Research

Institute

### Michael Dieringer BBC (3)

Faculty Mentors: Dr. Jian Zhu (2), Dr. Hongyu Miao (1) Microbiology & Immunology, Biostatistics Computational Biology

### Robert Dowd BNS (2)

Faculty Mentor: Dr. Charles Duffy Neurology

### Allison Eberhardt BMG/PSY (3)

Faculty Mentors: Dr. Helene McMurray (1), Dr. Jason Mendler (2) Biomedical Genetics, Hematology & Oncology

### Adrian Farsaii BMB

Faculty Mentor: Dr. Minsoo Kim Microbiology & Immunology

### Priyanka Garg BIO

Faculty Mentor: Dr. Roman Eliseev Orthopedics

### Corey Garyn BCD/PHL (3)

Faculty Mentors: Dr. David Lambert (1), Dr. Xin Bi (2) Biology

### Anna Gershteyn BNS/SP (3)

Faculty Mentors: Dr. Maiken Needergaard (1), Dr. Edward Vates (2) Neurosugery

### **Audra Gold BNS**

Faculty Mentor: Dr. Stephen Dewhurst Microbiology & Immunology

### Gregory Golembeski BNS (3)

Faculty Mentors: Dr. Nina Schor (2), Dr. Julie Fudge (1) Pediatrics, Neurobiology & Anatomy

### **Nealansh Gupta BCD**

Faculty Mentor: Dr. Abdellatif Benraiss Neurology

### Shari Gurusinghe BMG

Faculty Mentor: Dr. Laurie Steiner Pediatrics & Neonatology

### Nicholas Hill BBC/CHM (5)

Faculty Mentor: Dr. Rudi Fasan Chemistry

### Balaji Jagdish BCD (3)

Faculty Mentors: Dr. Emily Barrett (2), Dr. Sanjay Maggirwar (1) Obstetrics & Gynecology, Microbiology & Immunology

### So-yon Jang BBC

Faculty Mentor: Dr. Elizabeth

Grayhack

Biochemistry & Biophysics

### Alisa Johnson BEB (2)

Faculty Mentor: Dr. Soundarapandian Vijayakumar Pediatric Nephrology

### Mehr Kashyap BCD (4)

Faculty Mentors: Dr. Vera Gorbunova (2), Dr. Andrei Seluanov (2) Biology

### Shannon Keating BEB (3)

Faculty Mentors: Dr. Richard Glor (2), Dr. Robert Minckley (1) Biology

### Laura Keenahan BMB (2)

Faculty Mentor: Dr. Stephen Dewhurst

Microbiology & Immunology

### Phillip Kellogg BIO

Faculty Mentor: Dr. Mark Dumont Biochemistry & Biophysics

### Sean Kelly BCD (4)

Faculty Mentors: Dr. Vera Gorbunova (2), Dr. Andrei Seluanov (2) Biology

### Ali Khan BBC/ENG (3)

Faculty Mentor: Dr. Xin Bi Biology

### Joung Heon Kim BMG (2)

Faculty Mentor: Dr. Andrew Samuelson

**Biomedical Genetics** 

### Connie Koons BMB

Faculty Mentor: Dr. Paul Dunman Microbiology & Immunology

### Hannah Kopin BMB (2)

Faculty Mentor: Dr. Jacques Robert Microbiology & Immunology

### **Alexander Kozlov BBC**

Faculty Mentor: Dr. Andrei Seluanov Biology

### Harika Kunchala BMB (2)

Faculty Mentor: Dr. Harold Smith Biochemistry & Biophysics

### Michelle Landis BMB

Faculty Mentor: Dr. Craig Jordan Cancer Center

### Eun hee Lee BMB

Faculty Mentor: Dr. Stephen Dewhurst

Microbiology & Immunology

### Seung Ho Lee BIO

Faculty Mentor: Dr. Minsoo Kim Microbiology & Immunology

### Xiaoyi Li BNS

Faculty Mentor: Dr. Michael Welte Biology

### Gouri Mahadwar BEB (2)

Faculty Mentor: Dr. John Jaenike Biology

### **Niklas Malmstrom BCD/HIS**

Faculty Mentor: Dr. Robert Quivey Microbiology & Immunology

### **Brandon Mariotti BBC**

Faculty Mentor: Dr. Alan Smrcka Pharmacology & Physiology

### Chitavi Maulloo BIO/CHM

Faculty Mentor: Dr. Soo Ok Lee Pathology

### Benjamin Meath BNS (2)

Faculty Mentor: Dr. Bradley Nilsson Chemistry

### Nadia Mercado BNS

Faculty Mentor: Dr. Greg DeAngelis Brain & Cognitive Sciences

### Annah Moore BNS/CHM (4)

Faculty Mentors: Dr. Gail Johnson-Voll (1), Dr. Bradley Nilsson (3), Anesthesiology, Chemistry

### **Michael Morreale BNS**

Faculty Mentor: Dr. Chawnshang Chang Pathology

### Austin Mottola BBC (3)

Faculty Mentor: Dr. Eric Phizicky Biochemistry & Biophysics

### Matthew Mullen BNS (3)

Faculty Mentors: Dr. Jessica Cantlon (2), Dr. Brad Mahon (1)
Brain and Cognitive Sciences

### John Muroski BBC (2)

Faculty Mentor: Dr. Gloria Culver Biology

### Aissatou Ndiaye BIO/FR (2) Faculty Mentors: Dr. Flena Bu

Faculty Mentors: Dr. Elena Bulgac / Dr. Jeff Hayes

Biochemistry & Biophysics

### Alexander Neary BBC/PSY (2)

Faculty Mentors: Dr. Vera Gorbunova, Dr. Andrei Seluanov

Biology

### **Zoe Netter BMB**

Faculty Mentor: Dr. Joshua Munger Biochemistry & Biophysics

### **Christopher Nishimura BNS (4)**

Faculty Mentors: Dr. Stephen Dewhurst (3), Dr. Brian Ward (1) Microbiology & Immunology

### Leti Nunez BMB/CHM (2)

Faculty Mentor: Dr. Craig Mullen Pediatrics Hematology & Oncology

#### Yan Nuzbrokh BNS

Faculty Mentors: Dr. Nehrke Keith (2), Dr. Gail Johnson-Voll (2) Nephrology, Anesthesiology

### Morgan O'Brien BMG

Faculty Mentor: Dr. Andrew Samuelson Biomedical Genetics

### Teresa Oh BNS (2)

Faculty Mentor: Dr. Gail Johnson Anesthesiology

### Jiyoon Park BCD/HLP (4)

Faculty Mentor: Dr. Archibald Perkins Pathology

### **Alap Patel BIO/HBS**

Faculty Mentor: Dr. Brian Ward Microbiology & Immunology

### Krina Patel BNS (2)

Faculty Mentor: Dr. Ben Hayden Brain & Cognitive Sciences

### Priyanka Patel BIO

Faculty Mentors: Dr. Lata Balakrishnan / Dr. Robert Bambara Microbiology & Immunology

### **Shiv Patel BMB**

Faculty Mentor: Dr. Stephen Dewhurst Microbiology & Immunology



### Alison Patrick BCD (4)

Faculty Mentors: Dr. Vera Gorbunova (2), Dr. Andrei Seluanov (2) Biology

### Samantha Plummer BBC (2)

Faculty Mentors: Dr. Eric Phizicky, Dr. Lei Xu Biochemistry & Biophysics, Biomedical Genetics

### **Brittany Porter BMG (2)**

Faculty Mentors: Dr. David Dean, Dr. Paul Dunman Pediatrics, Microbiology & Immunology

### **Amelia Poulin BBC**

Faculty Mentor: Dr. Mahin Maines Biochemistry & Biophysics

### Alice Can Ran Qin BCD (5)

Faculty Mentors: Dr. Chawnshang Chang (1), Dr. Vera Gorbunova (2), Dr. Andrei Seluanov (2) Pathology & Lab Medicine, Biology

### John Reichert BBC

Faculty Mentor: Dr. Benjamin Miller Dermatology

### Robert Rietmeijer BBC (2)

Faculty Mentor: Dr. Dmitri Ermolenko Biochemistry & Biophysics

### Bridget Russo BCD (2)

Faculty Mentors: Dr. Benoit Biteau, Dr. Jane Sottile Biomedical Genetics, Cardiovascular Research Institute

#### Akram Salam BBC (2)

Faculty Mentor: Dr. Benjamin Miller Biochemistry

### Anna Saltman BIO/SA (2)

Faculty Mentor: Dr. Elaine Sia Biology

### Srawasti Sarker BNS

Faculty Mentor: Dr. Mark Noble Biomedical Genetics

### Jordana Schmierer BNS/IRL (3)

Faculty Mentors: Dr. Stephen Dewhurst (1), Dr. Maiken Nedergaard (1), Dr. Edward Vates (1) Microbiology & Immunology, Neurosurgery

### Shannon Schmit BBC (2)

Faculty Mentor: Dr. Beth Grayhack Biochemistry & Biophysics

### Lara Schoenebeck BBC (2)

Faculty Mentor: Dr. Chris Proschel Biomedical Genetics

### **Raven Shah BBC**

Faculty Mentor: Dr. Jack Werren Biology

### Jesse Sharp BIO

Faculty Mentor: Dr. Seth Perry Biomedical Engineering

#### **Matthew Shinseki BNS**

Faculty Mentor: Dr. Maiken Nedergaard Center for Translational Neuromedicine

### Sydney Simpson BMB (2)

Faculty Mentor: Dr. Jian Zhu Microbiology & Immunology

### **Benjamin Smith BEB**

Faculty Mentor: Dr. Tirumalai Rangasamy Pulmonary/Critical Care Unit

### Jordan Snajczuk BMG

Faculty Mentor: Dr. Laurie Steiner Pediatrics & Neonatology

### Nischal Sodemba BCD (2)

Faculty Mentor: Dr. Mark Noble Biomedical Genetics

### Danielle Sookiasian BMG (3)

Faculty Mentor: Dr. Amy Kiernan Ophthalmology

### Alicia Spiegel BMB

Faculty Mentors: Dr. Paul Dunman (2) Dr. Sanjay Maggirwar (1) Microbiology & Immunology

### Jamie Strampe BMB (3)

Faculty Mentor: Dr. Stephen Dewhurst Microbiology & Immunology

### **Michael Sumner BCD**

Faculty Mentor: Dr. Dave Cohen Endocrinology & Metabolism

### Jonathan Tam BMB (4)

Faculty Mentors: Dr. Vera Gorbunova (2), Dr. Andrei Seluanov (2) Biology

#### **Melissa Thomas BNS**

Faculty Mentor: Dr. Anna Majewska Neurobiology & Anatomy

### **Christopher Tucker BBC (2)**

Faculty Mentors: Dr. Jeffrey Hayes, Dr. Julie Fudge Biochemistry & Biophysics, Neurobiology & Anatomy

### Daniel Van Twisk BMB/CSC

Faculty Mentor: Dr. Jian Zhu Microbiology & Immunology

### Rachel Vance BMG (3)

Faculty Mentor: Dr. Thomas Mariani Pediatrics

### Juan Vazquez BMG (2)

Faculty Mentor: Dr. Andrei Seluanov Biology

### Harris Weber BCD/BSB (2)

Faculty Mentors: Dr. Maiken Nedergaard / Dr. Jeffrey Lliff Translational Neuromedicine

### **Akira Neng Chun Wong BMG**

Faculty Mentor: Dr. Benoit Biteau Biomedical Genetics

### Felix Yang BBC

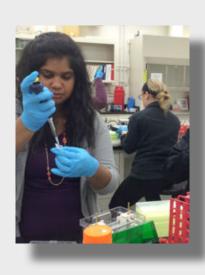
Faculty Mentor: Dr. David Goldfarb Biology

### Han Zhang BBC

Faculty Mentor: Dr. Robert Bambara Microbiology & Immunology

### Ruijia Zhu BBC/MTH (2)

Faculty Mentor: Dr. Bradley Nilsson Chemistry



## Biotechnology Certificates

### Completed by Thirteen 2015 Graduates



The Certificate Program in Biotechnology is designed to give students the background needed for entry into biotechnology and for advanced study, and it gives recognition for specialization in the field.

The graduates who have met the requirements for the Biotechnology Certificate for 2015 are:

Sheel Clerk BMB
Connie Koons BMB
Harika Kunchala BMB
Eun Hee Lee BMB
Xavier Lopez BNS

Leti Nunez BMB Shiv Patel BMB Sydney Simpson BMB Jamie Strampe BMB Jonathan Tam BMB Daniel Van Twisk BMB Deanna Vaneerde BIO Akira Wong BMG

## Honors Societies Awards & Accomplishments

### UPBM Majors / Biology Graduate Students Recognized

### **All-American Honors**

The <u>UAA</u> Presidents Council established a program of All-Academic Recognition in 1998. Qualifying student-athletes are recognized at the completion of the fall, winter, and spring seasons each year. The honor is intended to recognize the high level of academic achievement demonstrated by student-athletes who effectively balance their significant commitment of time, effort, and energy in athletic endeavor with their highly challenging academic responsibilities... More info available on <u>UAA</u> website.

★ Tomotaka Endo '18, BMG (Squash)

### **Amgen Scholars**

"Made possible through a 12-year, \$50 million commitment from the Amgen Foundation, Amgen Scholars allows undergraduates from across the globe to participate in cutting-edge research opportunities at world-class institutions. 17 leading institutions across the U.S., Europe and Japan currently host the summer program.

Undergraduate participants benefit from undertaking a research project under top faculty, being part of a cohort-based experience of seminars and networking events, and taking part in a symposium in their respective region (U.S., Europe or Japan) where they meet their peers, learn about biotechnology, and hear from leading scientists." For more information on the Amgen Scholars Program visit <a href="http://www.amgenscholars.com/">http://www.amgenscholars.com/</a>

★ Peggy Chien '17, BCD - Tokyo (Summer 2015)

### **Ayman Amin-Salem Memorial Award**

The Ayman Amin-Salem Memorial is a college-wide award which is to be presented each year at Commencement to that member of the senior class who best evidences the quality of good character and good citizenship, such as decency, reliability, responsibility, and congeniality. Preference may be given to students who also have an interest in biology or the biological sciences, music, art, writing, or athletics.

- ★ Michael Breen '15, BMB
- ★ Phillip Cohen '14/15, BMB
- ★ Mark Lawlor '15, BMB

### **Catherine Block Memorial Fund Prize**

Annual prize awarded by the University to a woman in the junior class in recognition of her outstanding ability and achievement in the field of science. Selection is based on recommendations by the respective departments, which are evaluated by a committee appointed by the Dean of the College.

- ★ Chitavi Maulloo '15, BMG/CHM (2014)
- ★ Anna Parker '16, BEB (2015)
- ★ Christine Ziegler '16, BMG/CHM (2015)

### **Davis Projects for Peace Fellowship**

The Projects for Peace program was launched by author, philanthropist, and scholar Kathryn Wasserman Davis in 2007 to commemorate her 100th birthday. Since its founding,

Projects for Peace has funded more than 700 projects in over 100 countries. Davis passed away on April 23, 2013, at the age of 106.

- ★ Fatima Bawany '15, BIO
- ★ Katherine Wegman '15, BIO/ANT

### **Wendy Jill Fread Prize**

The Wendy Jill Fread Prize is a College-Wide award that was established in memory of Wendy Jill Fread (Class of 1975) and is presented to the member of the senior class (preferably a woman) who, during four years as a student, has given the greatest service and shown the greatest concern for fellow students;

★ Lillye Anderson '15, BCD

### **Fulbright U.S. Student Program**

The Fulbright Scholarship competition is sponsored by the U.S. Department of State designed to promote mutual understanding and peace between the United States and other nations through educational and cultural exchange. It offers opportunities for career-launching study, teaching, and research abroad. Scholars pursuing study or research design their own programs and arrange institutional affiliations in the host countries.

★ Benjamin E. Landwersiek '15, BNS

## German Academic Exchange Service Research Internships in Science & Engineering

RISE is a summer internship program for undergraduate students from the United States, Canada and the UK in the fields of biology, chemistry, physics, earth sciences and engineering. It offers unique opportunities for undergraduate students to work with research groups at universities and top research institutions across Germany for a period of 2 to 3 months during the summer.

- ★ Kristin Abramo '15, BMG
- ★ Corey Garyn '15, BCD/PHL
- ★ Alexandra Born '15, BMB/CHM
- ★ Austin Mottola '15, BBC
- ★ Robert Rietmeijer '15, BBC
- ★ Jamie Strampe '15, BMB

### Benjamin A. Gilman International Scholarship

The scholarship, which provides financial assistance to students who are enrolled in study abroad programs worldwide, is sponsored by the U.S. Department of State, Bureau of Educational and Cultural Affairs, and the Institute of International Education. "Rochester students have studied in 26 different countries through the scholarship," said Jacqueline Levine, director of Rochester's Center for Study Abroad and Interdepartmental Programs.

★ Nathalia Botero '16, BMG

- ★ Eric Chen '16, BMG
- ★ Anjali Patel '15, BMG

## Golden Key International Honour Society

- ★ Sarah Allen '15, BMG
- ★ Brian Bernstein '15, BNS/PSY
- ★ Michael Breen '15, BMB
- ★ Gregory Golembeski '15, BNS
- ★ Balaji Jagdish '15, BCD
- ★ Michelle Landis '15, BMG
- ★ Benjamin Meath '15, BNS
- ★ Leti Nunez '15, BMB/CHM
- ★ Sally Patel '15, BNS/PSY
- ★ William Retz '15, BNS
- ★ John Wilson '15, BMG/PSY
- ★ Kailee Zornow '15, BMB

### **Janet Howell Clark Prize**

Is awarded annually to a, "senior woman" who has shown the greatest promise in creative work in one of the following fields—Physics, Chemistry, Biology, Astronomy—and has shown outstanding versatility in the mastery of allied fields."

★ Chitavi Maulloo '15, BIO/CHM (2015)

### **Kauffman Entrepreneurial Year (KEY) Program**

The University of Rochester defines entrepreneurship as "transforming an idea into an enterprise that generates value," implying that the enterprise outlives the creator and that it positively affects others. Qualified students may propose to devote as much as an entire academic year to internships, special projects, relevant coursework, business plan development, research into various facets of entrepreneurship, or analysis of how culture and public policy influence entrepreneurial activity.

- ★ Brian Bernstein '15/16, BNS/PSY
- ★ Andrew Bui '15/16, BNS
- ★ Cody Civiletto '15/16, BNS
- ★ Alisa Johnson '14/15, BEB
- ★ Halima Rafi '14/15, BNS
- ★ Brandon Salzman '14/15, BNS
- ★ Venkatesh Abhishek '14/15, BNS/MUS/PSY
- ★ Benjamin Wainblat '14/15, BCD/PSY
- ★ Akira Neng Chun Wong '14/15, BMG

### **Kearns Scholar**

The Kearns Scholars program currently supports over 110 undergraduate students, first-year through seniors. Students who are in the program are retained in STEM at substantially higher rates than nonparticipants, and three-quarters enroll in graduate study. Kearns Scholars also earn higher grades in their first and second year science courses, and withdraw from those courses less frequently, than is historically true of similar students. For more information on the program visit: (http://

### www.rochester.edu/college/kearnscenter/CollegePrograms/KearnsScholars.html)

- ★ Andrew Bui '15, BNS
- ★ Nadia Mercado '15, BNS

### McNair Scholar

The goal of the McNair Program is to increase the numbers of low-income, first-generation, and underrepresented minority students who pursue the doctoral degree, with the long-term goal of helping to diversify the nation's college and university faculty and researchers. The program provides intensive advising and academic support, as well as a mentored research opportunity, the opportunity to travel to research conferences, and a myriad of other supports that help students achieve their academic potential. McNair scholars also participate in a seminar, three credit bearing lecture classes, and a two month research program. For more information about the program visit: http://www.rochester.edu/college/kearnscenter/CollegePrograms/McNair.html

★ Andrew Bui '15, BNS

### **Grace McCormack Fund for Biology Prize**

This award is given annually to worthy students, who, in the judgment of the Department, have great potential and have demonstrated excellence in academics, teaching, service to the department, or scientific research.

- ★ Sarah Allen '15, BMG
- ★ Lillye Anderson '15, BCD
- ★ Max Beyman '15, BMG
- ★ Corey Garyn '15, BCD/PHL
- ★ Mehr Kashvap '15, BCD
- ★ Sarah Lazarus '15, BEB
- ★ Gouri Mahadwar '15, BEB
- ★ Jiyoon Park '15, BCD/HLP
- ★ Alison Patrick '15, BCD
- ★ Benjamin Wainblat '15, BCD/PSY
- ★ Harris Weber '15, BCD/BSB
- ★ Katherine Wegman '15, BIO/ANT

### **National Society of Collegiate Scholars**

- ★ Naba Ali '15, BNS
- ★ Rutul Amin '15, BNS
- ★ Marcia DesJardin '15/16 BMG
- ★ Priyanka Garg '15, BIO
- ★ Claire Hart '15, BMG
- ★ Balaji Jagdish '15, BCD
- ★ Amos Liou '15, BBC
- ★ Chitavi Maulloo '15, BIO/CHM
- ★ Benjamin Meath '15, BNS
- ★ Christopher Nishimura '15, BNS
- ★ William Retz '15, BNS
- ★ Shannon Schmit '15, BBC
- ★ Nicholas Sirotenko '15, BIO

## Edward Peck Curtis Award for Excellence in Teaching by a Graduate Student

Awarded for teaching excellence in schools with undergraduate programs, the E.P. Curtis Award recognizes a record of distinguished teaching, typically developed over at least eight years.

★ Matthew Johnson, Doctoral Student, Biology

### **Student Life Awards**

The annual University Student Life Awards recognize those undergraduate students who—through service to others, investment of talent and time, and pursuit of excellence—have significantly and positively impacted the University of Rochester and/or surrounding community.

- ★ Freshman Leadership: Katherine Wegman '15, BMG/ANT
- ★ Outstanding Fraternity and Sorority Leadership: Alap Patel '15, BIO/HBS
- ★ Presidential Award for Community Service: Rutul Amin '15, BCD

## Susan B. Anthony Center / Women's Leadership Awards

There are six University Women's Leadership Awards which are presented annually to women of the University community who have distinguished themselves through their achievements, service and contributions to the common good. This year three UPBM majors took home the following:

- ★ Fannie Bigelow Prize-Fatima Bawany '16, BIO/RLS (2014)
- ★ Fannie Bigelow Prize-Allison Eberhardt '15, BMG (2015)
- ★ Susan B. Anthony Scholarship-Oluwatobi Abubakare '16, BNS (2015)
- ★ Susan B. Anthony Scholarship-Katherine Wegman '15, BIO/ ANT (2015)

### **Take Five Scholars Program**

A unique program to the University of Rochester, provides an additional semester or year, tuition-free. It offers the chance to pursue a demanding major and still enjoy the once-in-a-lifetime opportunity for the broad-based, intellectual enrichment of a liberal arts education. Since its inception in 1986, over 1,100 students have become Take Five Scholars. The number of students enrolled in the program varies each year, with new Scholars accepted each semester.

- ★ Zachariah Adham '14/15, BNS
- ★ Alice Chen '15/16, BIO/ANT
- ★ Smon Cheewapansri '14/15, BBC
- ★ Phillip Cohen '14/15, BMB
- ★ Marcia Des Jardin '15/16, BMG
- ★ Rebecca Galasso '14/15, BEB/CSC
- ★ Ihuoma Igbokwe '15/16, BMG
- ★ Amy Ige 14/15, BIO/HBS
- ★ Ali Khan '15/16, BBC/ENG
- ★ Michelle Landis '15/16, BMG
- ★ Morgan Mehring '15/16, BNS/DMS

- ★ Nadia Mercado '14/15, BNS
- ★ Annah Moore '14/15, BNS/CHM
- ★ Matthew Mullen '14/15, BNS
- ★ Alyssa Murillo '14/15, BNS
- ★ Christopher Nishimura '14/15, BNS
- ★ Yan Nuzbrokh '14/15, BNS
- ★ Mary O'Hehir '14/15, BNS
- ★ Shane O'Neil '15/16, BNS/CHM
- ★ Teresa Oh '14/15, BNS
- ★ Kareem Panton '14/15, BNS
- ★ Krina Patel '14/15, BNS
- ★ Sally Patel '14/15, BNS/PSY
- ★ William Retz '14/15, BNS
- ★ Erik Roisland '14/15, BNS
- ★ Daniel Sharfarz '15/16, BMG
- ★ Alicia Spiegel '15/16, BMB

- ★ Kelvin Tam '14/15, BCD
- ★ Felix Yang '15/16, BBC

### **UR Undergraduate Writing Colloquium Contest**

The College Writing Program holds an annual undergraduate writing contest to recognize and celebrate outstanding student writing and to share that writing with the University of Rochester community. Each spring the College Writing Program accepts submissions from students in four categories: Humanities, Social sciences. Natural and applied sciences. Prizes are awarded for the best paper in each of the four categories.

★ Zachary Adham '14/15, BNS (Natural Sci. Division)

## National Conference of UG Research

NCUR is an annual conference (the only one if its kind, with a national scope) for primary research and artistic performance by undergraduate students, encompassing the natural and social sciences, the humanities, the arts, and engineering. Since its beginnings the conference has enjoyed the active support of major American colleges and universities. The UR Office of Undergraduate Research began sending students to NCUR in 1991. Student investigators may present their work at NCUR as an oral presentation or in a poster format. NCUR participants are also eligible to submit texts of their presentations to be considered for publication in the annual NCUR Proceedings, a juried publication.

### April 2013, La Crosse, Wisconsin

★ Harris Weber '15, BCD

### April 2014, Lexington, Kentucky

- ★ Zachary Adham '14/15, BNS
- ★ Max Cheng '15, BBC/MUS
- ★ Joshua Cho '16, BMG

- ★ Chelsea Choi '15, BIO/PSY
- ★ Paige Haas '16, BMB
- ★ John Wilson '15, BMG/PSY

### April 2015, Cheney, Washington

- ★ Morgan Albert '16, BCD
- ★ Michael Breen '15, BMB
- ★ Elizabeth Brown '15, BCD

- ★ Anna Gershteyn '15, BNS/SP
- ★ Nicholas Hill '15, BBC/CHM
- ★ Morgan Kath '16, BBC
- ★ Ali Khan '16, BBC/ENG
- ★ Chitavi Maulloo, BIO/CHM
- ★ Maxwell (Max) Sims '15, BNS/BSB
- ★ Natalie Tjota '16, BMG
- ★ John Wilson '15, BMG/PSY

## UR Undergraduate Research Exposition

The Undergraduate Research Exposition is a College-wide event in which UR students at all levels and in all areas of study are invited to present their investigative and creative work. The Expo reflects the passion for learning that enlivens the University, professors and students alike, and that finds expression in varied forms, in every area of study.

### 2013 UPBM Participants

- ★ Alisa Johnson BIO, '15, BEB
- ★ Annah Moore '15, BNS/CHM
- ★ Junne Park '15, BCD/HLP
- ★ Harris Weber '15, BCD/BSB

### 2014 UPBM Participants

- ★ Naba Ali '15, BBC
- ★ Max Cheng '15, BBC/MUS
- ★ Paige Haas '16, BMB
- ★ Raven Shah '15, BNS
- ★ John Wilson '15, BMG/PSY Professor's Choice Award Winner for Social Sciences Division

## Senior Class Speaker for 2015

### Mehr Kashyap '15, BCD, Speech from Sunday, May 17th, 2015

"Thank you for that introduction, Dr. Gorbunova. And thank you to both you and Dr. Seluanov for mentoring me for these past four years.

Just a warning -- I haven't prepared anything special for this ceremony. I was told that I could just use the same speech from earlier today.

I'm not kidding! Dr. Lambert actually suggested that at my senior thesis defense a few weeks ago. And I really want to get an A on this speech, so I should probably listen to him.

I want to begin by thanking everyone that's helped us make it to this diploma ceremony. So, thank you to all of our professors for going way beyond just teaching us Biology, and advising us both academically and personally.

And thank you for curving 50% to a B average. We would not be here today if it weren't for that.

Thank you to our amazing course coordinator, Jenn Baylark! Especially for dealing with some of our highly questionable regrade requests. We promise you, our

entire future -- whether we made it here today or not -- really did hinge on getting that one point back.

And thank you to Marianne Arcoraci! For making sure that we completed our majors, had information about research and scholarship opportunities, and much more.

We're sorry for turning more than a few of our forms in a little late. And by 'we're sorry,' I mean I'm sorry.

And thank you to all other UPBM administrators who've had a hand in helping us receive our degrees today.

To our families -- we owe you so much for supporting us throughout these four years -- academically, financially, and emotionally. It couldn't have been easy to deal with us as we were

stressed out studying for our classes. We might not always tell you, but you really are our pillars of support.

And finally, thank you to all of the graduates here today. There is no one I would rather study all night with, or go to workshop with, or skip lecture with -- [turn to faculty] I mean, attend lecture with -- than with you. There is no one that I would rather graduate with, than with you.



So, if there is one thing that I'll miss the most after we leave today, it's all of you.

For a lot of us, the next chapter of our lives is filled with uncertainty. And so, we're bound to face obstacles from time to time. But, honestly, we are so ready.

Remember this. We're here today, because all of us made it through orgo. Right? We can face anything.

Sure, the degrees we're about to get in a few minutes symbolize all of the biology we've spent mastering over the last four years. But what we've gained is so much more than that.

Over these past four years, we've become more confident, analytical thinkers. We've transitioned from simply learning to actively contributing

and creating knowledge.

We've also become more patient over the years. If you've done research in a lab at all in the past four years, you're probably just one more experiment away from publishing! You thought. Two years ago.

But perhaps most importantly, we've been humbled by the vastness of knowledge both around us now, and yet to be discovered. And that's cultivated this very curious nature that's evident through our interest in biology, but also in other facets of our lives.

We instinctively seek to question, make hypotheses, and evaluate results. And when our results don't match our expectations, we just

Continued on Next Page

go back, change the hypothesis and then we're always proven right!

Whether the next phase of your life is med school, or grad school, a job, or you're still unsure, just know that these past four years have prepared you for whatever comes next.

Our task from here on out is to continue growing, to stay confident and curious, and then go change the world.

So, 2015. Let's walk this stage, let's get our degrees, and then it's time to face whatever lies ahead.

I have no doubt that we'll be among the future movers, shakers and healers of the world.

Good luck and congratulations! "

- Mehr Kashyap '15, BCD

## Picture Pages

2015 Bio Department Diploma Ceremony

















# Keep in Touch Check in with the Hive from Time to Time

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## **Undergraduate Program** in Biology and Medicine

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