

WELCOME!

**FAQs and Need-to-Knows
about Navigating Research
at Rochester**

(I'm Ann. Hi!)

What questions about undergraduate research do YOU want answered?

I'll try to answer some frequently asked questions that come up in more detail in the slides that follow. When appropriate, resources / sites are linked.

What is “research”?



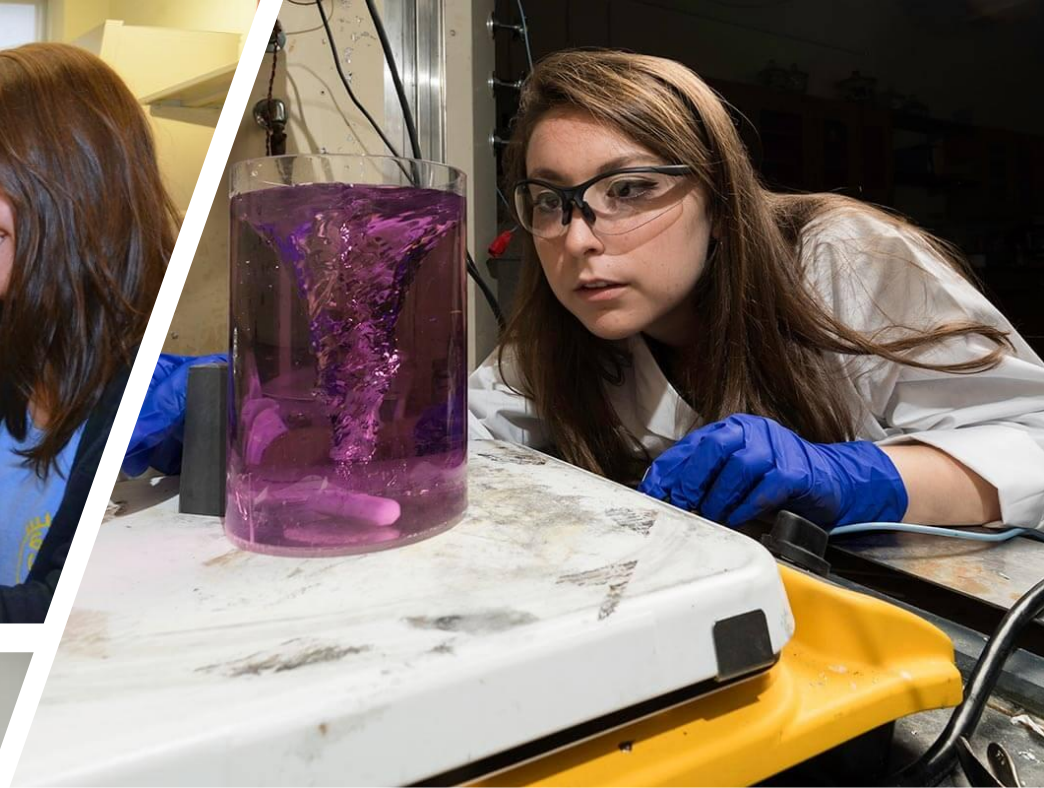
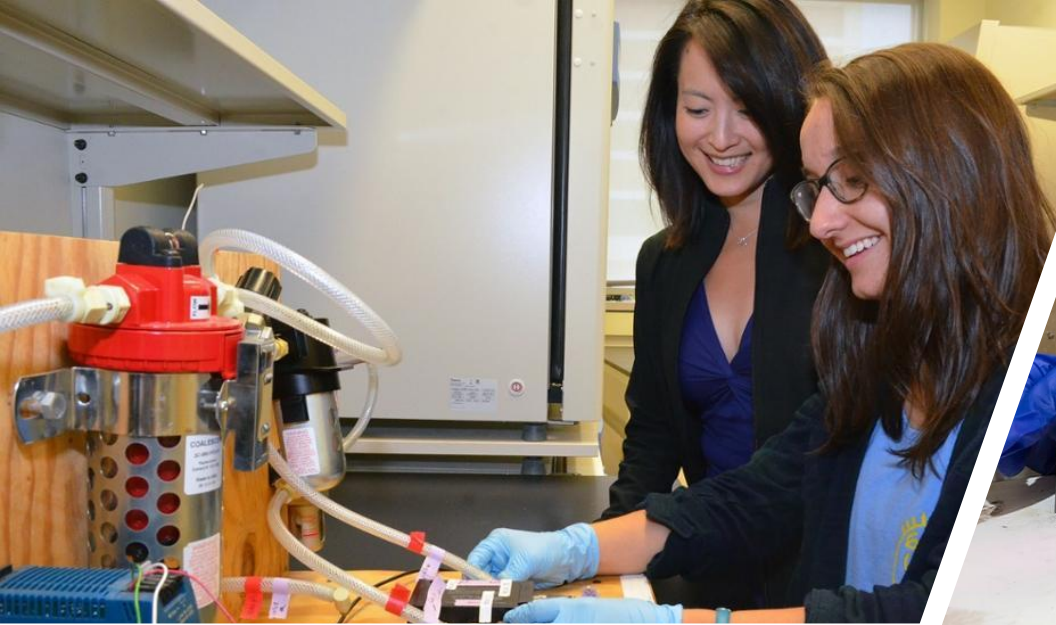
What makes a good researcher?

These traits matter because they exemplify what a mentor is really looking for in an undergraduate. Consider how you can embody these traits in your words (written and conversational), actions, and habits.

- Curiosity / inquisitiveness
- Willingness to learn
- Creativity
- Patience / persistence
- Dedication
- Drive / motivation
- Thoroughness / attention to detail
- Positive attitude
- Cooperation
- Passion
- Critical thinking
- Professionalism / work ethic

When should you start?

**When YOU are ready, not
when others tell you.**



Is there a
centralized
place to look at
what research
is out there?

Can I tell who's
actually
looking for
undergrads?

Filter Projects

Class Years

- Any -

Research Area

- Any -

Compensation

- Any -

✓ Apply

Pathophysiological remodeling of inner retinal neurons

Engineering/ Math/ Computer Science, Natural and Biomedical Sciences

Our lab is focused on understanding the molecular and physiological mechanisms that underlie pathological remodeling of the inner retina during and after degenerative blindness. Our goal is to improve vision in retinitis pigmentosa and age-related macular degeneration patients, by blocking or...

Compensation: Paid, Credit/ Independent Study, Unpaid Research Intern

Class Year: First year, Sophomore, Junior, Senior

Field of Study: Biological Sciences: Neuroscience

Application Due 10/28/2022 - Start Date 02/14/2022

Virtually "Open" Jamestown Settlement and Elmina Castle in Virtual Reality

Engineering/ Math/ Computer Science, Humanities/ Performance

This project is about creating Virtual Reality applications to visualize the 3D reconstructions of Jamestown Settlement, a living history museum in Virginia, and Elmina Castle, a UNESCO World Heritage Site in Ghana. This is a collaborative project between Prof. Yuhao Zhu of Computer Science and...

Compensation: Paid, Credit/ Independent Study

Class Year: First year, Sophomore, Junior, Senior

Field of Study: Computer Science

Application Due 04/29/2022 - Start Date 05/16/2022

Couples in Sync

Social Sciences

Dear undergraduates,

Research Assistant Position

Natural and Biomedical Sciences

Research Assistant I - We are searching for a research assistant to help with basic lab maintenance, which includes washing dishes, pouring agar plates and basic C. elegans husbandry.

Compensation: Paid

Class Year: First year, Sophomore

Field of Study:

Application Due 02/03/2022 - Start Date 02/25/2022

Server and website design for cultural heritage imaging

Engineering/ Math/ Computer Science, Humanities/ Performance

This is a collaborative project between Prof. Yuhao Zhu in Computer Science and Prof. Greg Heyworth in English. We are building an open, community-driven system for revealing hidden texts on historic manuscripts of significant importance (e.g., archimedes palimpsest and herculaneum papyri).

...

Compensation: Paid, Credit/ Independent Study, Other

Class Year: First year, Sophomore, Junior, Senior

Field of Study: Computer Science

Application Due 04/29/2022 - Start Date 05/16/2022

Pelizaeus-Merzbacher Disease: molecular mechanisms of myelination and perspectives for cell-based therapy

Natural and Biomedical Sciences

Lab Websites

Bidlack Lab

Is it interesting? Why? What do you want to learn? Read more about the projects with any info provided!

Structure and Function of Opioid Receptors

This laboratory is interested in studying the structure and function of opioid receptors, expressed in the brain and on cells from the immune system. We are characterizing novel opioids that may have the potential for becoming a medication to cocaine and heroin abuse. All drugs of abuse act on the dopamine reward pathway, the same pathway that is activated by any pleasurable experience. The activation of this pathway leads to the reinforcing effects of pleasurable effects, such as eating. Drugs that are addicting increase the release of dopamine in the nucleus accumbens, a discrete brain region. Because these drugs increase dopamine levels to a much greater extent than normal physiological events that produce a pleasurable effect, drugs, such as cocaine and heroin, produce a strong reinforcing effect. In collaboration with chemists and behaviorists at [Rensselaer Polytechnic Institute](#), [Harvard Medical School](#), and [Torrey Pines Institute for Biomedical Sciences](#), we are trying to develop medications that will decrease the dopamine release that is induced by drugs of abuse. By decreasing the dopamine levels, the reinforcing effects of drugs of abuse will be reduced.

Another project in the lab is to characterize the structure and function of the multiple opioid receptors. The opioid receptor family is a member of the G-protein coupled receptor family. Recently, we have shown that the kappa opioid receptor is present as an oligomer in the natural state. Previously, it had been thought that receptors existed as monomers. We have shown that the oligomeric form of the receptor is the active form, which can transduce opioid



[Jean M. Bidlack, Ph.D.](#)

Principal Investigator

Screenshot

Lab Websites

LAB MEMBERS

PUBLICATIONS

NEWS

Publications

Who else is
involved?

Bidlack JM, Knapp BI, Deaver DR, Plotnikava M, Arnelle D, Wonsey AM, Toh MF, Pin SS, Namchuk MN [In Vitro Pharmacological Characterization of Buprenorphine, Samidorphan, and Combinations Being Developed as an Adjunctive Treatment for Major Depressive Disorder](#). [?]; The Journal of pharmacology and experimental therapeutics. 2018 Aug 14.

Callaghan CK, Rouine J, Dean RL, Knapp BI, Bidlack JM, Deaver DR, O'Mara SM [Antidepressant-like effects of 3-carboxamido seco-nalmefene \(3CS-nalmefene\), a novel opioid receptor modulator, in a rat IFN- \$\alpha\$ -induced depression model](#). [?]; Brain, behavior, and immunity. 2017 Aug 24.

Lefever M, Li Y, Anglin B, Muthu D, Giuvelis D, Lowery JJ, Knapp BI, Bidlack JM, Bilsky EJ, Polt R [Structural Requirements for CNS Active Opioid Glycopeptides](#). [?]; Journal of medicinal chemistry; Vol 58(15). 2015 Aug 13.

Li Y, St Louis L, Knapp BI, Muthu D, Anglin B, Giuvelis D, Bidlack JM, Bilsky EJ, Polt R [Can amphipathic helices influence the CNS antinociceptive activity of glycopeptides related to \$\beta\$ -endorphin?](#) [?]; Journal of medicinal chemistry; Vol 57(6). 2014 Mar 27.

VIEW ALL PUBLICATIONS


Screenshot

Abstract(s) should
be enough for now

Lab Websites

Affiliations

- [Neurology](#)
- [Neuroscience](#)
- [Center for Neurotherapeutics Discovery](#)
- [Center for RNA Biology: From Genome to Therapeutics](#)
- [NIH T32 Training Grant in Cellular, Biochemical & Molecular Sciences](#)
- [Genetics, Development, and Stem Cells Ph.D. Program](#)
- [NBA Track](#)
- [NSC Track](#)



Are there other related departments you can explore?

News

May 1, 2019

[Dr. Jean Bidlack Receives Herman Friedman Founder's Award](#)

November 28, 2018

[Jean Bidlack Featured on WXXI's Second Opinion](#)

February 23, 2018

[This is how a brain gets hooked on opioids like it craves a candy bar](#)

February 13, 2018

[Bidlack Receives NIH Grant For Opioid Addiction Research](#)

VIEW ALL NEWS



Easy-to-read press releases...nice!

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Center for Global Health

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Calendar of Events

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Undergrad
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Research

Educational
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Faculty & Staff

 Begin typing

A

[Adler, David](#)

Emergency Medicine

Research Interests: Comparison of HPV Infection and Cervical Disease Between HIV-infected and HIV-uninfected Adolescent Females in Cape Town, South Africa

Teaching: Chair, International Medicine Faculty Advisory Committee, University of Rochester School of Medicine

Countries: Latin America

Associations: Desmond Tutu HIV Foundation

Contact Info:  David_Adler@urmc.rochester.edu

Faculty Profiles



CONTACT INFORMATION

BIOGRAPHY

CREDENTIALS

AWARDS

PUBLICATIONS

Additional Links

[The Global Network](#)

[Translational Biomedical Science PhD Program](#)

[MundoComm: Maternal Health and Technology in Latin America](#)

[NYS AIDS Institute Clinical Education Initiative](#)

Faculty Appointments

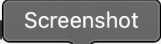
Professor - [Department of Obstetrics and Gynecology](#) (SMD)

Associate Chair, Research - [Department of Obstetrics and Gynecology](#) (SMD)

Professor - [Department of Public Health Sciences](#) (SMD) - Joint

Professor - [Department of Pediatrics](#) (SMD) - Joint

Biography

Professor Timothy Dye is a medical anthropologist and social epidemiologist who specializes in applied public health, particularly within marginalized, isolated, and global populations, and with a content focus on social and cultural determinants of health. Dr. Dye's research program focuses upon developing and understanding community-driven solutions to public health problems, and has included funded projects around such topics as micronutrition among women and children in Tibet (CDC), informatics and public health decision making in Costa Rica (NIH), and injury and  arctica (NSF). In recent years, Dr. Dye has led teams around the world,

Find email
addresses [in
the directory!](#)



Sample Outreach Emails

While combining professionalism, context, specific content, and brevity, it is important that an outreach email to a prospective research mentor sound authentic. Please use the following examples as just that—examples—rather than rigid templates. A mentor will value you using YOUR voice to articulate your interests.

SUBJECT: Interested Undergraduate Researcher - Jane Doe

Dear Dr. Sample,

I am a third-year undergraduate student here at Example University majoring in Environmental Health. Your research in reverse osmosis and point-of-use water treatment caught my attention as I was considering how I might get involved in meaningful on-campus research.

I am incredibly interested in the intersection of chemistry and civil engineering, with future hopes of attending graduate school. Access to clean drinking water—and what constitutes “clean” water—has long been a problem on my mind, sparked by courses I've taken in analytical chemistry and toxicology. Your work on copper and lead removal from water and the fouling of nanofiltration membranes seemed like incredible ways to unite my environmental health and chemistry majors. I am curious about what sort of methods and setups you use for water quality analysis, metal detection, and membrane testing.

I would love to be able to talk with you about your ongoing projects and what you might be looking for in a prospective undergraduate researcher. Let me know if you have any time in the upcoming weeks that I could come by your office for a meeting. Monday and Thursday afternoons or Friday mornings are typically open for me to talk. I have attached my resume to this email.

Thank you for your time. Best wishes,

Jane Doe

Environmental Health; Chemistry

Class of 2030

IN PICTURES: Summer is research season

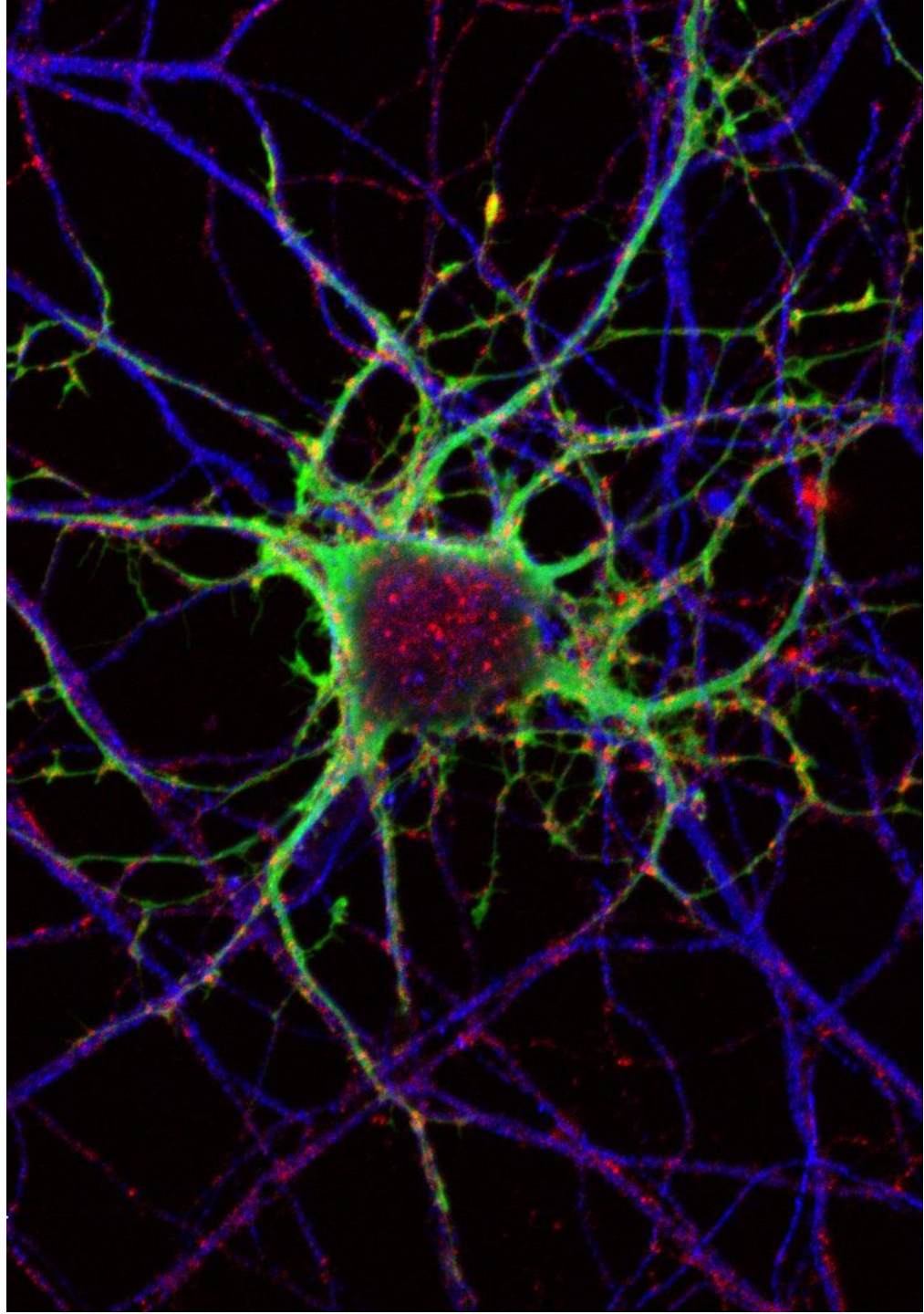
(University of Rochester photos / J. Adam Fenster)

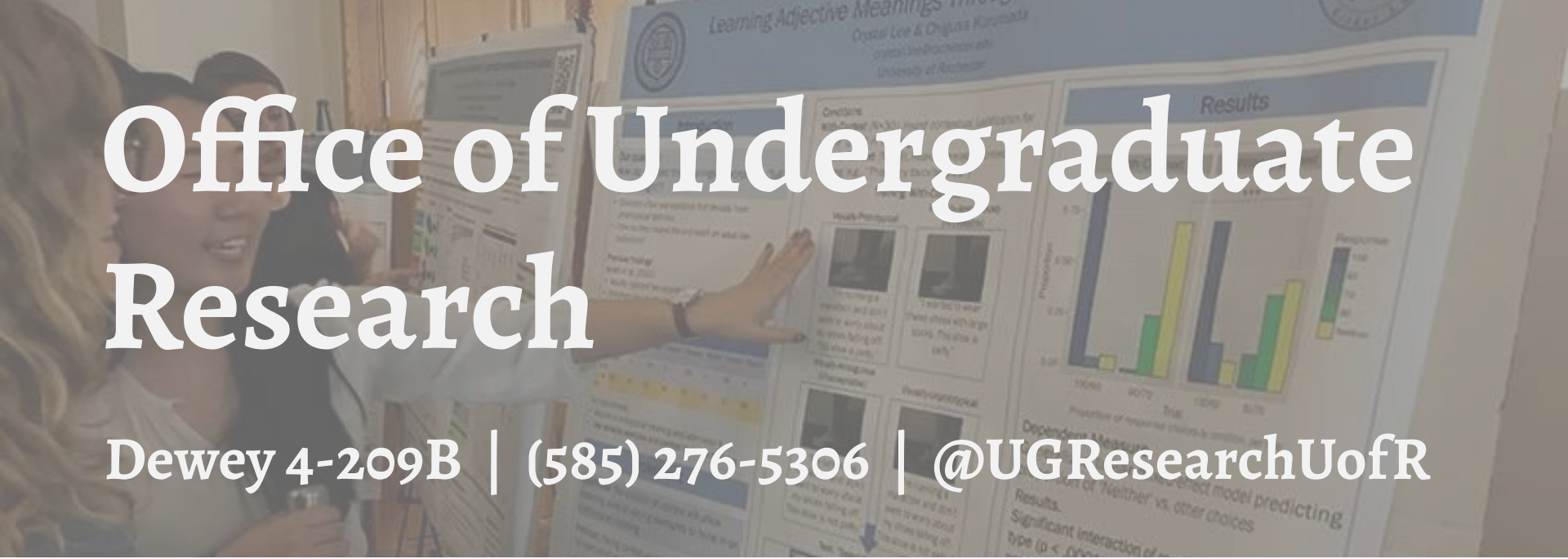


Victoria Dey '21 is an international relations major from Fairport, New York. This summer, the McNair Scholar is working with political science professor Lynda Powell researching how quickly political parties come to an agreement on an issue, and what factors affect that process. Dey is analyzing years in which deep

OTHER STUFF :-)

- [AURA](#) (Access to Undergraduate Research Activities)
- [Discover Grant](#) for summer research
- Our [Department/Program guide](#)
- [Getting Started Guide](#)
- Our social media pages!
 - FB, TW, Insta: [@UGResearchUofR](#)
- [Clinical Research Readiness Program](#)
 - Search for “Clinical Research Readiness” in Blackboard Courses tab to enroll
 - Get practical certificates and knowledge about clinical studies to help with preparedness for human subjects research
 - Free, 0 credits, not on transcript
- Other Useful UR Offices & Programs:
 - [Greene Center for Career Education and Connections](#)
 - [Center for Community Engagement](#)
 - [Fellowships Office](#)
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 - [Center for Education Abroad](#)
 - [Student Employment](#)
 - [Take 5 Scholars Program](#)
 - [e5 Program](#)
 - [Hajim School Industry Practicum Co-op Program](#)



The background image shows a group of students in a laboratory or research setting. They are gathered around a large poster titled "Learning Adaptive Meanings" by Crystal Lee & Chigusa Kurokawa, from the University of Rochester. One student is pointing at a section of the poster, while others look on. The poster includes a bar chart under the heading "Results" and various text sections. The text "Office of Undergraduate Research" is overlaid in large white font on the left side of the image.

Office of Undergraduate Research

Dewey 4-209B | (585) 276-5306 | @UGResearchUofR

Ann Robinson, Maureen Gabalski, and Dr. Sina Ghaemmaghamsi

Walk-in Hours (or by appointment)

Tuesday: 10:00 a.m. – Noon

Thursday: 1:00 – 4:00 p.m.

<https://tinyurl.com/UGRatRochester>