

Alexandra C. Rich

Curriculum Vitae

360 Yale Ave | New Haven, CT 06515 | (309)-824-6806 | a.rich@yale.edu

EDUCATION

2021-Present

Ph.D. Neuroscience

Yale University, New Haven, CT

Research Advisor: Ifat Levy, Ph.D.

Thesis Committee: Ifat Levy, Ph.D., Elizabeth Goldfarb, Ph.D., Dustin

Scheinost, Ph.D., Janet Lydecker, Ph.D.

2017-2021

B.S. Neuroscience, Minors in Behavioral Biology and Health Psychology

University of Minnesota - Twin Cities, Minneapolis, MN

Cumulative GPA: 3.962

RESEARCH EXPERIENCE

Yale University

June 2022 –

Present

Graduate Student Researcher

PI: Ifat Levy, Ph.D.

Thesis: *Food Value Updating in Obesity with Binge Eating*

- Designed novel value-based choice paradigm incorporating individual food preferences using Python
- Collecting pilot behavioral and neuroimaging data in Summer 2023

Fall 2021 –

Spring 2022

Lab Rotation Student

PI: Hilary Blumberg, MD

Project: *A graph theory neuroimaging approach to distinguish the depression of bipolar disorder from major depressive disorder in adolescents and young adults*

- Performed whole-brain connectivity clinical correlations
- Co-authored published manuscript

PI: Ifat Levy, Ph.D.

Project: *Qualitative Decision-Making Under Uncertainty*

- Performed task-based neuroimaging and behavioral analyses
- Accepted for poster presentation

University of Minnesota – Twin Cities

August 2020 –

June 2021

Clinical Research Project Coordinator

Supervised by Ann Haynos, Ph.D.

Project: *Decision-Making in Bulimic Spectrum Disorders*

- Administered surveys and the WebSurf translational decision-making task to participants with bulimic spectrum disorders
- Consented participants and managed project regulatory documentation

December 2018 –

August 2020

Research Assistant, Minnesota Center for Eating Disorders Research

PIs: Carol Peterson, Ph.D., Ann Haynos, Ph.D., Scott Crow, MD

- Recruited and screened adult patients with anorexia nervosa, bulimia nervosa, and binge eating disorder for studies regarding the biological basis of eating disorders and novel psychological treatment options
- Trained in clinical assessments, including the Structured Clinical Interview for DSM-5 and Eating Disorder Examination
- Trained in second-chairing fMRI scans

May 2020 –

August 2020

Literature Search and Review

Supervised by Katherine Elwell, M.P.H.

Project: *Trauma-Informed Campus Policies: How can the University of Minnesota prepare to help students succeed in a post-COVID world?*

- Performed literature search on trauma-informed public health policies to inform 2020 planning of the University of Minnesota's Boynton Health Clinic in serving student mental health in response to COVID-19
 - Presented findings to and collaborated with the Provost's Council on Student Mental Health to create a Canvas course for campus Mental Health Advocates on taking a trauma-informed approach to student mental health support
- March 2020 –
October 2020 **Secondary Data Analysis Project**
Supervised by Ann Haynos, Ph.D.
Project: *Decreased Resting State Functional Connectivity of Amygdala and Associated State Anxiety in Anorexia Nervosa*
- Analyzed resting state fMRI data and performed bivariate correlational analyses with State-Trait Anxiety Inventory responses
 - Accepted for poster presentation
- June 2019 –
December 2019 **Secondary Data Analysis Project**
Supervised by Ann Haynos, Ph.D. & Lisa Anderson, Ph.D.
Project: *The Role of Rumination and Positive Beliefs About Rumination in Eating Pathology*
- Performed hierarchical multiple regression and moderation analyses using SPSS and ridge regression analysis using R
 - Completed published manuscript and accepted for poster presentations
- November 2017 –
September 2019 **Research Assistant, Hayden Lab**
PI: Ben Hayden, Ph.D.
- Performed behavioral training and care of rhesus macaque monkeys
 - Assisted in single-unit physiology analyses
 - Constructed large-cage environment and ran naturalistic behavioral trials of Restaurant Row decision-making task (May 2019-September 2019)

MANUSCRIPTS

- Goldman, D. A., Sankar, A., **Rich, A.**, Kim, J. A., Pittman, B., Constable, R. T., ... & Blumberg, H. P. (2022). A graph theory neuroimaging approach to distinguish the depression of bipolar disorder from major depressive disorder in adolescents and young adults. *Journal of affective disorders*, 319, 15-26.
- Rich, A. C.**, Haynos, A. F., Anderson, D. A., Ehrlich, L. E., & Anderson, L. M. (2022). The role of rumination and positive beliefs about rumination in eating pathology. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, 27(3), 979-988.
- Elwell, K., **Rich, A.C.**, (2020). A Review of Trauma-Informed Campus Policies: How can the University of Minnesota prepare to help students succeed in a post-COVID world? Unpublished manuscript, Boynton Health, University of Minnesota, Minneapolis, USA.

POSTER PRESENTATIONS

- Henry, R., **Rich, A.C.**, Levy, I. (2023, August 3). *Binge Eating and Cognitive Flexibility: A Prospective Study on Food Valuation Deficits in Obesity*. Biomedical Summer Undergraduate Research Fellowship Symposium, Yale University, New Haven, CT.
- Rich, A.C.**, Jia, R., Fried, T., Levy, I. (2022, November). *Qualitative Decision-Making Under Uncertainty*. Poster accepted for presentation at the Society for Neuroscience Meeting, San Diego, CA.
- Rich, A.C.**, Haynos, A.F., Camchong, J., Jappe Hall, L.M., Peterson, C.B., Crow, S.J., Klimes-Dougan, B., Cullen, K.R., Lim, K.O. (2020, October). *Amygdala Resting State Connectivity Predicts Anxiety Symptoms in Anorexia Nervosa*. Poster accepted for presentation at the Annual Meeting of the Eating Disorder Research Society, Sitges, Spain.

Rich, A.C., Haynos, A.F., Anderson, D.A., Ehrlich, L.E., Anderson, L.M. (2020, June). *Taking a Disorder-Specific Perspective: The Role of Rumination and Positive Beliefs About Rumination in Eating Pathology*. Poster accepted for presentation at the International Conference on Eating Disorders, Sydney, Australia.

***Rich, A.C.,** Haynos, A.F., Anderson, D.A., Ehrlich, L.E., Anderson, L.M. (2020, March). *The Role of Rumination and Positive Beliefs About Rumination in Eating Pathology*. Poster accepted for presentation at the National Conference on Undergraduate Research, Bozeman, MT.

*This accepted presentation was canceled due to COVID-19 prevention measures.

ORAL PRESENTATIONS

Rich, A.C., (2023, June 7th). *Subjective Food Value Updating in Obesity with Binge Eating: A Prospective Study*. Yale Center for Molecular and Systems Metabolism Retreat, Yale University, New Haven, CT.

Rich, A.C., (2023, April 16). *Subjective Food Value Updating in Obesity with Binge Eating: A Prospective Study*. Interdepartmental Neuroscience Program Student Research Talks, Yale University, New Haven, CT.

Rich, A.C., (2022, June 28). *Qualitative Decision-Making Under Uncertainty*. Interdepartmental Neuroscience Program Student Research Talks, Yale University, New Haven, CT.

Rich, A.C., (2019, November). *On Stress Management and Practicing Self-Care in College*. College of Biological Sciences Dean's Scholars Program Fall Seminar, University of Minnesota, Minneapolis, MN.

Rich, A.C., (2019, September). *On Stress Management and Practicing Self-Care in College*. The University of Minnesota President's and Emerging Scholars Conference, Minneapolis, MN.

Rich, A.C., (2019, April). *Peer Education in Stress Management*. Annual Midwest Regional Peer Educator Conference, Macalester College, St. Paul, MN.

TEACHING AND MENTORSHIP EXPERIENCE

Yale University

Summer 2023

Mentor, Amgen Scholars Program

Spring 2023, 2024

Teaching Fellow, Bioethics in Neuroscience

Supervisor: Charles Greer, Ph.D.

University of Minnesota – Twin Cities

Fall 2019

Teaching Assistant, Human Neuroanatomy

Supervisors: Maureen Riedl, Ph.D., Martin Wessendorf, Ph.D.

Fall 2018

Teaching Assistant, Calculus & Dynamic Systems in Biology

Supervisors: Duane Nykamp, Ph.D., Brittany Baker, Ph.D.

AWARDS, GRANTS, AND HONORS

2023-2024

American Institute of Biological Sciences Emerging Public Policy Leadership Award

Recognizes graduate students in the biological sciences demonstrating an interest and aptitude for working at the intersection of science or science education and policy. Awardees are provided with policy and communications training and a trip to Washington, D.C. to meet with congressional policymakers to discuss the importance of federal investment in the biological sciences.

Yale University

2023-2024

Department of Neuroscience NIH-NINDS T32 'Neurobiology of Cortical Systems' Training Grant (\$47,000)

2021-2023

Gruber Science Fellowship (\$9,500)

Awarded to the most highly ranked applicants to Yale Ph.D. programs in the life sciences, cosmology, and astrophysics in recognition of outstanding accomplishments and exceptional promise

University of Minnesota – Twin Cities

- 2021 **Tom Burnett Advanced Leadership Program Award (\$1,000)**
Annual University-wide, faculty/staff-nominated enrichment program in honor of alumnus Tom Burnett who passed on 9/11/2001 aboard United Flight 93: Nominations are based on risk-taking, ability to work across cultures, and ability to manage and create change in leadership roles
- 2020-2021 **Kenneth Bachofer and Linda Marie Scholarship (\$2,500)**
Annual College of Biological Sciences Scholarship to support a student that demonstrates academic excellence, leadership, preferably involvement in research, and a passion for the college
- 2020 **President's Student Leadership & Service Award**
Annual University-wide, faculty/staff-nominated award recognizing leadership and service to the University and surrounding community
- 2019 **Undergraduate Research Opportunities Program Award, *The Role of Rumination and Positive Beliefs About Rumination in Eating Pathology* (\$1,500)**
Faculty Sponsor: Ann Haynos, Ph.D.
- 2017-2021 **College of Biological Sciences Dean's List**
- 2017-2021 **University of Minnesota National Scholarship (\$40,000)**

LEADERSHIP AND ADVOCACY

- April 2024 **Congressional Visits Day**
American Institute of Biological Sciences
Washington, D.C.
- Met with lawmakers to advocate for federal investment in the biological sciences, with a primary focus on the National Science Foundation
 - Completed policy and communications training, including information on the legislative process, trends in federal science funding, and how to engage with policymakers and the news media
 - Received 2024 Emerging Public Policy Leadership Award to fund attendance and training
- March 2023 – **Secretary of the Board**
Present **GRAD Coalition (of U.S. House of Representatives GRAD Caucus)**
Washington, D.C.
- Support efforts and initiatives of the House Graduate Research and Development Caucus, helping to develop legislative priorities
 - Working with student governments across 200 U.S. institutions to promote graduate student needs to GRAD Caucus members
 - Organize biannual congressional briefings on graduate student issues in Washington, D.C., including recruitment of professional society speakers
 - Arrange and document Executive Board meetings, run elections, and manage Coalition correspondences
- September 2021 – **Chair of Advocacy Committee**
Present **Graduate & Professional Student Senate**
Yale University, New Haven, CT
- Liaise between Yale graduate and professional programs and University administration to foster community and advocate for policy change

	<ul style="list-style-type: none"> • Manage planning and execution of various initiatives (e.g., campus-wide distribution of menstrual hygiene products) • Served as a representative on Yale University Sustainability Advisory Council (Fall 2021-Fall 2022)
October 2022 – October 2023	Executive Committee Student Representative Interdepartmental Neuroscience Program Yale University, New Haven, CT Supervised by Charlie Greer, Ph.D. <ul style="list-style-type: none"> • Reconcile faculty and student interests to support programmatic change • Host Town Halls semi-annually and distribute qualitative data summaries
September 2021 – May 2022	Planning Committee Member Yale Women’s Mental Health Conference 2022 Yale University, New Haven, CT <ul style="list-style-type: none"> • Worked with other trainees to plan and execute the first academic and trainee-led conference on Women’s Mental Health in the nation • Collaboratively reviewed and accepted abstracts for presentation
June 2020 – June 2021	The Prevention, Wellness, and Training Committee of the Provost’s Council on Student Mental Health University of Minnesota – Twin Cities, Minneapolis, MN <ul style="list-style-type: none"> • Worked with a university faculty and staff workgroup to develop, implement, and support population-level initiatives addressing student well-being on system campuses • Coordinated efforts of 200 campus faculty/staff volunteers interfacing with student mental health concerns
April 2019 – June 2021	Health Promotions Student Assistant Boymton Health Services, Minneapolis, MN Supervised by Katherine Elwell, M.P.H. <ul style="list-style-type: none"> • Coordinated the University of Minnesota Mental Health Advocates initiative by creating Canvas courses, facilitating faculty training, and writing a newsletter on-campus mental health service updates • Promoted campus mental wellness through community outreach and coordination of a peer advising service • Performed program evaluation for the University of Minnesota Sexual Health Awareness and Disease Education (SHADE) and De-stress • Conducted literature search on trauma-informed approaches to support student wellness and participated in subsequent campus policy reform in response to COVID-19 (Summer 2020)
January 2020 – June 2021	Research Task Force Undergraduate Representative, College of Biological Sciences University of Minnesota – Twin Cities, Minneapolis, MN Committee Head: Dean Valery Forbes, Ph.D. <ul style="list-style-type: none"> • Worked with College leadership to assess the state of undergraduate research and opportunities for involvement • Surveyed college-wide research involvement (Spring 2020) to inform initiatives in service of undergraduate research assistants
January 2019 – June 2021	Chair of Initiative and Advocacy Committee, College of Biological Sciences Student Board University of Minnesota – Twin Cities, Minneapolis, MN

January 2019 –
June 2021

- Collected and analyzed data on student experiences and needs, designed and executed initiatives based on student feedback, and communicated data to university leadership
- Wrote and presented a proposal to establish a Mental Health Counselor specific to the college (Fall 2019, Spring 2020)
- Managed planning and execution of initiatives, including a STEM Day collaborative event with local middle school students

**Consultative Committee Undergraduate Representative,
College of Biological Sciences**

University of Minnesota – Twin Cities, Minneapolis, MN

Committee Head: Dean Valery Forbes, Ph.D.

- Worked with College leadership to address undergraduate concerns and advise about long-term plans and goals
- Established Undergraduate Skills Task Force and Research Task Force
- Voted on changes to the College of Biological Sciences constitution to include undergraduate representatives on college leadership committees

TECHNICAL SKILLS

- Regression, moderation, and mean comparison analysis in SPSS and R
- Resting-state and task-based fMRI analysis using AFNI, SPM, and FSL
- Task design (PsychoPy) and data visualization using Python
- Program evaluation through quantitative and qualitative data analysis and reporting