

Amelia Douglass, Ph.D.

Postdoctoral research fellow at Beth Israel Deaconess Medical Center, Harvard Medical School
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Current Position

Beth Israel Deaconess Medical Center, Harvard Medical School
POSTDOCTORAL RESEARCH FELLOW

- Advisor: Bradford Lowell, MD, Ph.D.

Boston, USA
Dec. 2017 – Present

Research Experience

The Max Planck Institute of Neurobiology
Ph.D STUDENT

- Advisor: Rüdiger Klein, Ph.D.

Martinsried, Germany
Oct. 2012 - Nov. 2017

The Queensland Brain Institute
RESEARCH ASSISTANT

- Advisor: Linda Richards, AO, FAA, FAHMS, Ph.D.

Brisbane, Australia
Nov. 2011 - Sept. 2012

The Queensland Brain Institute
HONOURS RESEARCH STUDENT

- Advisor: Linda Richards, AO, FAA, FAHMS, Ph.D.

Brisbane, Australia
Feb. 2008 - Nov. 2011

Education

The Ludwig Maximilian University of Munich
Graduate School of Systemic Neurosciences
DOCTOR OF PHILOSOPHY

- Advisor: Rüdiger Klein, Ph.D.
- Thesis title: Neural circuit mechanisms underlying modulation of food consumption and reward by the central amygdala.

Martinsried, Germany
Oct. 2012 - Nov. 2017

The University of Queensland
BACHELOR OF BIOMEDICAL SCIENCE WITH HONOURS CLASS I
• Advisor: Linda Richards, AO, FAA, FAHMS, Ph.D.

Brisbane, Australia
Feb. 2008 - Nov. 2011

Peer-reviewed Publications

Douglass AM^{*,#}, Kucukdereli H^{*}, Madara JC, Wang D, Wu C, Lowenstein ED, Tao K and Lowell BB[#]. Acute and circadian regulation of AgRP hunger neurons. *Cell Metabolism* (2024) (Online). <http://doi.org/10.1016/j.cmet.2024.11.009>.

^{*}Co-authorship, [#]Co-corresponding

Douglass AM^{*}, Resch JM^{*}, Madara JC^{*}, Kucukdereli H, Yizhar O, Grama A, Yamagata M, Yang Z and Lowell BB. Neural basis for fasting activation of the hypothalamic-pituitary-adrenal axis. *Nature* **620**, 154-162 (2023). <http://doi.org/10.1038/s41586-023-06358-0>. ^{*}Co-authorship, ^{**}Featured as a Preview in *Cell Metabolism*.

Morcom L, Gobius I, Marsh A, Suárez R, Lim JW, Bridges C, Ye Y, Fenlon LR, Zagar Y, **Douglass AM**, Donahoo ALS, Fothergill T, Shaikh S, Kozulin P, Edwards TJ, Cooper HM, IRC5 Consortium, Sherr EH, Chédotal A, Leventer RJ, Lockhart PJ and Richards LF. DCC regulates astroglial development essential for telencephalic morphogenesis and corpus callosum formation. *eLife* **10**, e6176 (2021). <https://doi.org/10.7554/eLife.61769>.

Perry RJ*, Resch JM*, **Douglass AM***, Madara JC, Rabin-Court A, Kucukdereli H, Wu C, Song J, Lowell BB** and Shulman GI**. Leptin's hunger-suppressing effects are mediated by the Hypothalamic-Pituitary-Adrenocortical axis in rodents. *PNAS* **116**, 13670-13679 (2019). <https://doi.org/10.1073/pnas.1901795116>. *Co-authorship, **Co-corresponding.

Douglass AM*, Kucukdereli H*, Ponserre M*, Markovic M, Gründemann J, Strobel C, Alcala Morales PL, Conzelmann K, Lüthi A and Klein R. Central amygdala circuits modulate food consumption through a positive valence mechanism. *Nature Neuroscience* **20**, 1384-1394 (2017). <https://doi.org/10.1038/nn.4623>. *Co-authorship, **Featured as a Research Highlight in *Nature Reviews Neuroscience*, a News and Views in *Nature Neuroscience* and an editorial commentary in *Science Translational Medicine*.

Fothergill T*, Donahoo AL*, **Douglass AM**, Zalucki O, Yuan J, Shu T, Goodhill GJ and Richards LJ. Netrin-DCC signaling regulates corpus callosum formation through attraction of pioneering axons and by modulating Slit2-mediated repulsion. *Cerebral Cortex* **24**, 1138-1151 (2014). <https://doi.org/10.1093/cercor/bhs395>. *Co-authorship.

Other Publications

Douglass AM* and Resch JM*. Research briefing: A neural circuit to support survival in the face of starvation. *Nature*. <https://doi.org/10.1038/d41586-023-02114-6> (2023). *Co-authorship.

Presentations

Society for Neuroscience

INVITED TALK

The circadian, feed-forward regulation of hunger

Chicago, IL, USA

October 2024

BonnBrain³ Meeting

INVITED TALK

The circadian, feed-forward regulation of hunger

Bonn, Germany

August 2024

15th The Ludwig Maximilian University of Munich-Harvard

Young Scientists' Forum

SELECTED TALK

Circadian control of feeding.

Martinsried, Germany

July 2023

13th International NPY-PYY-PP Research Conference

INVITED TALK

The neural basis for fasting activation of the hypothalamic-pituitary-adrenal axis.

Pittsburgh, PA, USA

July 2023

The Mechanisms of Allostasis Conference

Jointly hosted by FASEB and the Endocrine Society

INVITED TALK

The neural basis for fasting activation of the HPA axis.

New Orleans, LA, USA

September 2022

The University of Iowa, Neuroscience and Pharmacology

Postdoctoral Seminar Series

INVITED TALK

The neural basis for fasting-induced activation of the HPA axis.

Iowa City, IA, USA (Virtual)

November 2021

85th Cold Spring Harbor Laboratory Symposium on Quantitative Biology: Biological Time Keeping

POSTER

Circadian control of hunger.

Cold Spring Harbor, NY, USA

USA (Virtual)

June 2021

Systems and Computational Neuroscience Down Under

SELECTED TALK

Circadian control of food intake.

Brisbane, Australia

January 2020

Society for Neuroscience Annual Meeting

POSTER

Central amygdala circuits modulate reward and consummatory behavior.

San Diego, CA, USA

November 2016

GRC: Optogenetic Approaches to Understanding Neural Circuits & Behavior

POSTER

Central amygdala circuits controlling feeding and reward.

Newry, ME, USA

July 2016

EMBO Workshop: Neural control of metabolism and eating behavior

SELECTED TALK

Central amygdala Htr2a-expressing neurons control feeding and appetitive behaviors.

Cascais, Portugal

May 2016

Grants & Awards

Oral Presentation Award

13th INTERNATIONAL NPY-PYY-PP RESEARCH CONFERENCE

July 2023

Charles A. King Trust Postdoctoral Research Fellowship

CHARLES A. KING TRUST

2021-2023

American Diabetes Association Postdoctoral Fellowship

AMERICAN DIABETES ASSOCIATION

- Funding suspended due to the Covid-19 pandemic.

2020-2023

Naomi Berrie Postdoctoral Fellowship

NAOMI BERRIE DIABETES CENTER, COLUMBIA UNIVERSITY

2017-2019

Best Poster Prize

GORDON RESEARCH CONFERENCE: OPTOGENETIC APPROACHES TO UNDERSTANDING NEURAL CIRCUITS & BEHAVIOR

July 2016