

# Elvisha Dhamala

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## ACADEMIC APPOINTMENTS

2021-           **Postdoctoral Associate, Yale University**  
Advisor: Avram Holmes

## EDUCATION

2021           **Ph.D. (Neuroscience), Weill Cornell Medicine, New York, USA**  
*Multimodal Connectome Mapping of Sex Differences and Cognitive Abilities: A Machine Learning Approach*  
Advisor: Amy Kuceyeski, Computational Connectomics (CoCo) Lab

2017           **B.Sc. (Neuroscience), McGill University, Montréal, Canada**

## FELLOWSHIPS AND AWARDS

2021-2023   **Kavli Postdoctoral Fellowship for Academic Diversity, Yale University**  
Amount awarded: \$130,000 USD

2020           **Graduate Student Award, Cognitive Neuroscience Society**  
Amount awarded: \$100 USD

## PRE-DOCTORAL TRAINING

2017           **Douglas Mental Health University Institute, Montréal, Canada**  
Research Assistant (Advisor: Jamie Near)

2016-2017   **McGill University Faculty of Medicine, Montréal, Canada**  
Research Assistant (Advisor: Marie-Hélène Boudrias)

2015-2016   **McGill University Faculty of Science, Montréal, Canada**  
Research Assistant (Advisor: Maria Pompeiano)

2014-2015   **McGill University Faculty of Science, Montréal, Canada**  
Laboratory Assistant (Advisor: Rudiger Krahe)

## PEER-REVIEWED PUBLICATIONS

1.   **Dhamala, E.**, Jamison, K.W., Jaywant, A., Dennis, S. and Kuceyeski, A., 2021. Distinct functional and structural connections predict crystallised and fluid cognition in

healthy adults. Human brain mapping. Human brain mapping.

PMID: 33830577 | DOI: 10.1002/hbm.25420

2. Cha, J., Speaker, S., Hu, B., Altinay, M., Koirala, P., Karne, H., Spielberg, J., Kuceyeski, A., **Dhamala, E.** and Anand, A., 2021. Neuroimaging correlates of emotional response-inhibition discriminate between young depressed adults with and without sub-threshold bipolar symptoms (Emotional Response-inhibition in Young Depressed Adults). *Journal of affective disorders*, 281, pp.303-311.  
PMID: 33341013 | DOI: 10.1016/j.jad.2020.12.037
3. **Dhamala, E.**, Jamison, K.W., Sabuncu, M.R. and Kuceyeski, A., 2020. Sex classification using long-range temporal dependence of resting-state functional MRI time series. *Human brain mapping*, 41(13), pp.3567-3579.  
PMID: 32627300 | DOI: 10.1002/hbm.25030
4. **Dhamala, E.**, Abdelkefi, I., Nguyen, M., Hennessy, T.J., Nadeau, H. and Near, J., 2019. Validation of in vivo MRS measures of metabolite concentrations in the human brain. *NMR in Biomedicine*, 32(3), p.e4058.  
PMID: 30663818 | DOI: 10.1002/nbm.4058

*Top 10% most downloaded papers in NMR in Biomedicine 2018 - 2019.*

## PRE-PRINTS

1. **Dhamala E.**, Jamison, K.W., Jaywant, A. and Kuceyeski, A., 2021. Shared functional connections within and between cortical networks predict individual cognitive abilities in males and females. bioRxiv.

## TEXTBOOK CHAPTERS

1. Thompson, J.W., Kosofsky, B., **Dhamala, E.** and Duggan, R., 2020. Electrophysiology monitoring. *Biomarkers for Traumatic Brain Injury*, pp.113-142.  
ISBN: 9780128163467

## PEER-REVIEWED CONFERENCE PRESENTATIONS: POSTERS, TALKS, SYMPOSIA

1. **Dhamala E.**, Jamison K.W., Jaywant, A., Kuceyeski A. (Accepted). Shared functional connectivity features predict individual cognitive abilities in males and females. Poster. *Organization for Human Brain Mapping*; June 2021; Virtual. **Featured in the Modelling and Analysis - Multivariate Approaches playlist.**
2. Wu, E., **Dhamala E.**, Pritschet, L., Santander, T., Jacobs, E., Kuceyeski A. (Accepted). Increased sex hormones are associated with increased segregation of functional connectivity networks. Poster. *Organization for Human Brain Mapping*; June 2021; Virtual. **Featured in the Social Neuroscience, Emotion, and Motivation playlist.**

3. Cai, C., **Dhamala E.**, Pritschet, L., Santander, T., Jacobs, E., Kuceyeski A. (Accepted). Fluctuations in estradiol and progesterone are not related to high amplitude co-fluctuations in fMRI. Poster. *Organization for Human Brain Mapping*; June 2021; Virtual.
4. **Dhamala E.**, Jamison K.W., Jaywant, A., Kuceyeski A. (Accepted). Shared functional connectivity features underlie cognitive abilities in males and females. Oral Presentation. *Weill Cornell Medicine, Vincent du Vigneaud Research Symposium*; April 2021; Virtual.
5. **Dhamala E.**, Jamison K.W., Dennis S.M., Patel R., Chakravarty M.M., Kuceyeski A. Hybrid structure-function connectome predicts individual cognitive abilities. Oral power pitch. *International Society of Magnetic Resonance in Medicine*; August 2020; Virtual.
6. **Dhamala E.** and Khosla M. Machine Learning in Neuroimaging. Breakout session leaders at Women in Machine Learning Un-Workshop. *International Conference on Machine Learning*. July 2020; Virtual.
7. **Dhamala E.**, Jamison K.W., Dennis S.M., Patel R., Chakravarty M.M., Kuceyeski A.. Integration of structural and functional connectomes to predict individual cognitive abilities. Poster. *Organization for Human Brain Mapping*; June 2020; Virtual.
8. Simon A., Jamison K.W., Tozlu C., **Dhamala E.**, Gauthier S., Kuceyeski A. Temporal memory of resting-state fMRI time series activations are able to classify multiple sclerosis. Poster. *Organization for Human Brain Mapping*; June 2020; Virtual.
9. **Dhamala E.**, Jamison K.W., Kuceyeski A. (Accepted) Hybrid structure-function connectome predicts sex. Poster. *Organization for the Study of Sex Differences*; Conference cancelled due to COVID-19.
10. **Dhamala E.**, Jamison K.W., Dennis S.M., Patel R., Chakravarty M.M., Kuceyeski A. Hybrid-structure-function connectome predicts crystallised and fluid cognition. Poster. *Cognitive Neuroscience Society*; May 2020; Virtual.
11. **Dhamala E.**, Jamison K.W., Dennis S.M., Kuceyeski A. Prediction of individual cognitive ability using resting-state functional connectivity. Poster. *Society for Neuroscience*; October 2019; Chicago, USA.
12. **Dhamala E.**, Jamison K.W., Kuceyeski A. Sex differences in long-term temporal dependence of resting state fMRI time series. Poster. *Organization for Human Brain Mapping*; June 2019; Rome, Italy.
13. Duggan R.C., **Dhamala E.**, Kosofsky B.E.. Heart rate variability during exercise is a biomarker distinguishing between subjects with post-concussive syndrome following mild traumatic brain injury and healthy volunteers. Poster. *Society for Neuroscience*; November 2018; San Diego, USA.

14. Kassinosopoulos M., Ghosh A., **Dhamala E.**, Boudrias M.H., Mitsis G. Cardiac noise removal from BOLD fMRI based on a dynamic linear model. Poster. *Organization for Human Brain Mapping*; June 2017; Vancouver, Canada.

## **INVITED TALKS**

- 2021      **Brain Health Imaging Institute Seminar Series**  
Weill Cornell Medicine, New York, USA
- 2020      **Centre d'Imagerie Cérébrale Lecture Series**  
Douglas Mental Health University Institute, Montréal, Canada
- 2020      **Cognitive Neuroscience Seminar - Holmes Lab**  
Yale University, New Haven, USA
- 2020      **Rajah Lab**  
Douglas Mental Health University Institute, Montréal, Canada
- 2020      **Building Allyship Series**  
Cornell University, Ithaca, USA
- 2020      **Jacobs Lab**  
University of California Santa Barbara, Santa Barbara, USA
- 2020      **Early Career BIPOC Scholars Neuropsychology Lecture Series**  
Ohio State University, Columbus, USA
- 2020      **Frontiers in Neuropsychiatry Seminar**  
Weill Cornell Medicine, New York, USA
- 2020      **Progress in Neuroscience Seminar**  
Weill Cornell Medicine, New York, USA
- 2019      **Matteson Lab**  
Cornell University, Ithaca, USA
- 2019      **Psychiatric and Developmental Imaging Lab**  
University of Pennsylvania, Philadelphia, USA

## **TEACHING**

- 2020-2021    **Instructor, HD 2200 Human Brain and Mind** (Enrolment: ~15 per semester)  
Spring 2020: Auburn Correctional Facility  
Fall 2021: Cayuga Correctional Facility  
Spring 2021: Five Points Correctional Facility  
Cornell University - Cornell Prison Education Program

## **MENTORING**

- 2020-2021    **Cornell University**

Catherine Cai (2020-2021, undergraduate research mentor)  
Elaine Wu (2020-2021, undergraduate research mentor)  
Saanvi Somani (2020-2021, high school capstone project mentor)  
Jason Chen (2020, undergraduate research mentor)

2015-2017 **McGill University**

Afuad Hossain (2017, undergraduate research mentor)  
Bennet Desormeau (2016-2017, undergraduate research mentor)  
Sharif Ahmed (2017, undergraduate research mentor)  
Natalie Sun (2017, undergraduate research mentor)

## **AD HOC REVIEWER**

IEEE Access (2020)  
Neuroimage (2020-2021)  
Organisation for Human Brain Mapping Annual Conference (2021)  
PLOS ONE (2021)  
Translational Psychiatry (2020-2021)

## **SERVICE**

2020-2021 **Machine Learning in Medicine Seminar and Symposium (Organiser)**  
Weill Cornell Medicine

2020- **Technology Task Force (Ad Hoc Member)**  
Organization for Human Brain Mapping

2020- **Sustainability and Environmental Action Group (Social Coordinator)**  
Organization for Human Brain Mapping

2020-2021 **Graduate and Professional Students Diversity Council (Member)**  
Cornell University

2020-2021 **Graduate and Professional Students International (Co-President)**  
Cornell University

2020 **CoCo Lab Professional Development Series (Organiser, Facilitator)**  
Weill Cornell Medicine

2020 **Brainhack NY (Organiser)**  
Weill Cornell Medicine

2019-2020 **Multicultural Academic Council (Mentor)**  
Cornell University

2019-2021 **Student and Postdoc Group (Social Coordinator)**  
Organization for Human Brain Mapping  
Program Committee - Student and Postdoc Liaison

Distance Based Education Taskforce - Student and Postdoc Liaison

- 2018-2021 **Skype A Scientist (Mentor)**  
Skype A Scientist
- 2018-2019 **Neuroscience Boot Camp (Organiser, Lecturer)**  
Weill Cornell Medicine
- 2017-2018 **Vincent du Vigneaud Research Symposium (Outreach Coordinator)**  
Weill Cornell Medicine
- 2015-2017 **Neuroscience Undergraduates of McGill (Vice President Internal)**  
McGill University
- 2015-2016 **Kinesiology Games (Head of Sponsorship)**  
McGill University

## **PROFESSIONAL DEVELOPMENT AND TRAININGS**

- 2021 **Colman Inclusive Leadership Program**  
Cornell University
- 2020-2021 **NextGen Professor's Program**  
Cornell University
- 2020 **Integrating Sex and Gender to Improve Human Health**  
National Institutes of Health: Office of Research on Women's Health
- 2020 **Writing in the Sciences**  
Coursera
- 2020 **Teaching and Learning in the Diverse Classroom**  
Cornell University
- 2019 **Art of Scientific Writing**  
Weill Cornell Medicine