

Monami Nishio M.D.

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EDUCATION

University of Pennsylvania, Department of Psychology

Philadelphia, US

Ph.D. in Psychology, Expected Graduation: Aug. 2028

Sep.2023-present

Advisor: Professor Allyson Mackey, Michael Arcaro

The University of Tokyo, Faculty of Medicine

Tokyo, Japan

Doctor of Medicine (M.D.)

April. 2017 - Mar.2023

JOURNAL ARTICLES (* equal contributions)

Nishio M., Ellwood-Lowe M.E., Woodburn M., McDermott C.L., Park A.T., Tooley U.A., Boroshok A.L., Grandjean J., and Mackey A.P. The development of neural inhibition across species: insights from the Hurst exponent. *Journal of Neuroscience (In press)*.

<https://www.biorxiv.org/content/10.1101/2024.09.29.615675v1>

Nishio M., Liu X., Mackey A.P., and Arcaro M.J. Myelination across cortical hierarchies and depths in humans and macaques. *Plos Biology (In press)*.

<https://www.biorxiv.org/content/10.1101/2025.02.06.636851v1>

Nishio M., Koyanagi A., Hanawa T., Yakura H. and Shi S.. Language-specific development of noun bias beyond infancy. (2025). *Frontiers in Language Sciences*.

Nishio M.*, Takeda N.*, Miyata R.*, Shi S., Ito Y., Isayama T., and Wada Y. Video-based auto-assessment of neonatal state. (2025). *JAMA Network Open*.

Nishio M., Koyanagi A., Takamori A., Hasuike K., Shimoura Y., Yakura H., Shi S. Automatic assessment of language developmental disorders in non-English contexts (2024). *IEEE International Conference on E-health Networking, Application & Services (Healthcom)*.

Nishio M.*, Kondo M.*, Yoshida E., Matsuzaki M. Medial prefrontal cortex suppresses reward-seeking behavior with risk of positive punishment by reducing sensitivity to reward. (2024). *Frontiers in Neuroscience*.

Nishio M., Nonaka N., Fujihira F., Murakami H., Tajima T., Yamada M., Maeda A., Seita J. Objective detection of high-risk tackle in rugby by combination of pose estimation and machine learning. (2022). *JSAI-isAI in the Springer LNAI series*.

Nonaka N., Fujihira F., **Nishio M.**, Murakami H., Tajima T., Yamada M., Maeda A., Seita J. End-to-End High-Risk Tackle Detection System for Rugby. (2022). *International Workshop on Computer Vision in Sports (CVsports)*.

PREPRINTS (* equal contributions)

Nishio M., Wang X., Cornblath E.J., Lee S.H., Shih Y.I., Palomero-Gallagher N., Arcaro M.J., Lydon-Staley D.M., Mackey A.P. Alcohol impacts an fMRI marker of neural inhibition in humans and rodents. *Under review. Cell Reports*.

<https://www.biorxiv.org/content/10.1101/2025.05.07.652668v1>

Ziv M.S., Ellwood-Lowe M.E., Botdorf M., **Nishio M.**, Bonawitz E., Mackey A.P. Neural responses to state curiosity in young children. *Under Review. Developmental Cognitive Neuroscience*.

Koepp A., **Nishio M.**, Mackey A.P. Linking temporal dynamics of children's natural behavior to brain development. *Under Review. Developmental Cognitive Neuroscience*.

Ellwood-Lowe M.E., Ziv M.S., **Nishio M.**, Tisdall M.D., Alexander-Bloch A.F., Zhou Y., Zuniga C., and Mackey A.P. A causal test of environmental effects on the pace of brain development: A Stage 1 Registered Report.

PATENTS

Nishio M., Shi S., Ajima M., Personalized Recommendation System for Pediatric Care
Patent Number: P-21015 | Application Number: 2024-090974 | Status: Pending

Nishio M., Wada Y., Yakura H., Shi S., Ajima M., *Video-Based Neonatal Monitoring System*
Patent Number: P-23035 | Application Number: 2024-019623 | Status: Pending

Nishio M., Yakura H., Shi S., Ajima M., *Video-Based Developmental Assessment System*
Patent Number: P-23036 | Application Number: 2024-019624 | Status: Pending

GRANTS & AWARDS

JST-Mirai Program, Japan Science and Technology Agency, Japan <i>Co-Investigator. \$5,000,000</i>	<i>Apr.2025-Mar.2030</i>
Healthcare Social Implementation Infrastructure Project, Japan Agency for Medical Research and Development, Japan <i>Principal-Investigator. \$85,000</i>	<i>Aug.2024-Mar.2025</i>
The ANRI fellowship, Japan <i>Fellow. \$5,000</i>	<i>April.2024</i>
QUAD Fellowship, Institute of International Education, US <i>Fellow. \$50,000</i>	<i>Nov.2022</i>
Overseas Scholarship, The Nakajima Foundation, Japan <i>Fellow. Full tuition and medical insurance, living costs (\$2,000/month) for two years.</i>	<i>Nov.2022-May.2028</i>
JST-Mirai Program, Japan Science and Technology Agency, Japan <i>Principal-Investigator. \$350,000</i>	<i>Oct.2022-Mar.2025</i>
MITOU program, Information-technology Promotion Agency, Japan <i>Principal-Investigator. \$100,000</i>	<i>Jul.2021-Mar.2023</i>

INVITED TALKS

2025. Cambodia International Educators Conference. Symposium Organiser & Speaker.

2024. The 24th Congress of the Japanese Society of Baby Science. Symposium Organiser & Speaker.

2024. Moonshot research & development program, Division 9. Spring Young Researchers' Meeting. Guest Speaker.

CONFERENCE PRESENTATIONS

2025. Fetal, Infant, & Toddler Neuroimaging Group (FIT'NG) Annual Meeting 2025.

2025. The Society for Developmental Cognitive Neuroscience (Flux Society) Annual Meeting 2025.

2024. The Society for Developmental Cognitive Neuroscience (Flux Society) Annual Meeting 2024.

2024. Pediatric Academic Societies (PAS) Meeting 2024.

2022. The 36th Annual Conference of the Japanese Society for Artificial Intelligence.

2021. The 5th Annual Conference Brain information dynamics underlying multi-area interconnectivity.

2020. The 32th Annual Conference of the Japanese Neural Network Society.

RESEARCH EXPERIENCE

Massachusetts Institute of Technology, The Picower Institute for Learning and Memory Boston, MA
Visiting Student *Apr.2022 - Jun.2022*
Advisor: Gloria Choi, Ph.D.