The Interneuron - 7/2/24 [EXTERNAL]

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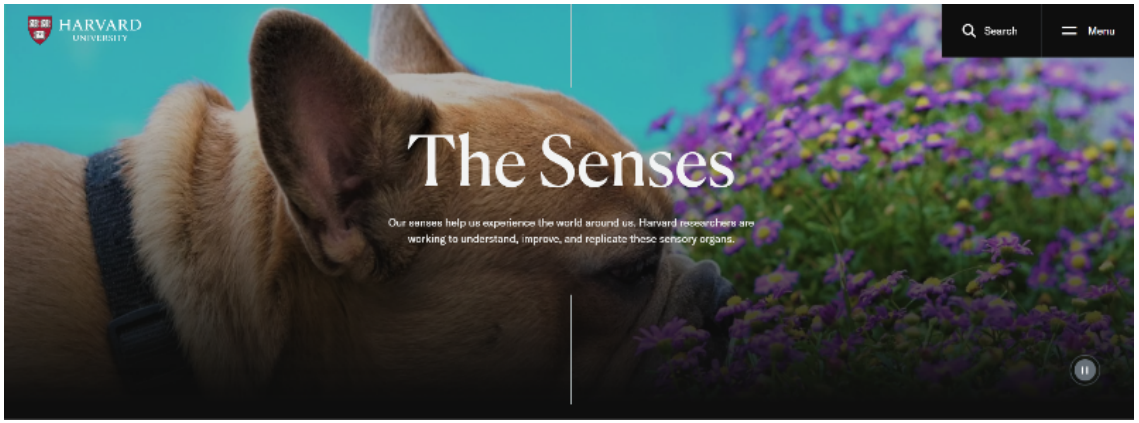
THE INTERNEURON

Dynamic Models of Human Development and Concepts of the Individual

Advances in organoids and embryonic models of human development have the potential to prompt social and existential questions—e.g., what defines human individuality? Bioethicist Insoo Hyun of Harvard Medical School and the Museum of Science in Boston says that these models have the potential to strengthen rather than weaken the concept of human individuality when considered within the philosophical frameworks of "personhood" and sentience.

In a commentary published on June 20 in the journal *Cell's* 50th Anniversary Focus Issue on Developmental Biology, Hyun argues that despite huge advances, we are a long way off from developing technologies that

would enable embryo models or organoids to achieve personhood.



Harvard's homepage is currently spotlighting the senses and features the work of many HBI community members. Click here to check it out!

In the News

Making Sense of Interoception

Harvard Medicine News article on ongoing research on the subject of interoception (the perception of internal signals from the body). Wen Chen, Stephen Liberles, and Mark Andermann discuss how we perceive what's happening inside our bodies, and what that means for our health.

Read more in the June 2024 issue of Harvard Medicine News.

Exploring Our Sense of Touch from Every Angle

Until relatively recently, research on touch has lagged behind other senses like hearing and vision. However, new research tools and greater scientific

appreciation has led to a "touch renaissance". David Ginty, April Levin, and Lauren Orefice discuss current research on touch, it's role in development, and potential therapies to help those suffering from touch dysfunction.

Read more at HMS News.

AI Agents Help Worms Find Food by Integrating with Their Nervous Systems

Reinforcement learning (RL) is a class of artificial intelligence that works by taking actions in an environment and then learning from the outcome. In a new study, researchers asked whether an artificial agent could improve behavior in an animal, by learning to control a living nervous system. Using optogenetics to allow the RL agent to control C. elegans worm neurons, they were able to help the worms find food better. The team also gained clues as to how different parts of the C. elegans nervous system were involved in generating directed movement.

From Sharad Ramanathan, Gabriel Kreiman, and first author Chenguang Li. Read more at the MCB Dept. News page.

Want to Make Robots More Agile? Take a Lesson From a Rat

Scientists create realistic virtual rodent with digital neural network to study how the brain controls complex, coordinated movement.

From Bence Ölveczky and colleagues, first author Diego Aldarondo. Read more in the Harvard Gazette.

Stroke Risk Higher for Chronically Lonely

Chronic loneliness was associated with higher stroke risk independent of

depressive symptoms or social isolation. Addressing loneliness may have an important role in stroke prevention, and repeated assessments of loneliness over time may help identify those particularly at risk.

From Henning Tiemeier and colleagues, first author Yenee Soh. Read more in the Harvard Gazette.

Alzheimer's Disease Indicators Track With Biological Changes In Brain
Using imaging reports to back up their findings, researchers have concluded that reports from patients and their partners about cognitive decline can be an early indicator of an accumulation of tau tangles, a hallmark of Alzheimer's disease.

From Rebecca E. Amariglio and colleagues, first author Michalina F. Jadick. Read more in the Harvard Gazette.

AWARDS AND HONORS

Steven M. Greenberg, HMS professor of neurology at Massachusetts General Hospital, and Hadine Joffe, Professor of Psychiatry in the Field of Women's Health at Brigham and Women's Hospital, awarded the William Silen Lifetime Achievement in Mentoring Award.

Ana-Maria Vranceanu, associate professor of psychology at Mass. General Hospital, awarded the A. Clifford Barger Excellence in Mentoring Award.

Louisa Sylvia, associate professor of psychology at Mass. General Hospital, awarded the Shirley Driscoll Dean's Leadership Award for the Enhancement of Women's Careers.

Upcoming Events

Journeys in Neuro

All events go from 12:00-2:00pm and lunch will be provided.

Journeys in Neuro is a summer series exploring career and training trajectories at different stages in academia. Each event features lightning talks from a graduate student, postdoc, professor and staff member sharing how they got to their current position and what it looks like on a day to day basis—followed by an extended Q&A session.

The series is open to all in the Harvard community but geared in particular towards high school or undergraduate researchers, post-bac scholars and early stage research assistants.

Click here to register.

Thurs. July 18th

Armenise Amphitheater, 210 Longwood Ave, Boston

Tony Cunningham

Director of the Center for Sleep and Cognition and Member of the Faculty, Beth Israel Deaconess Medical Center/HMS

From Recreation Director to Lab Director

Fernanda Medeiros Contini

Research Assistant & Postbac Scholar, Wilson Lab, Harvard Medical School

Navigating Life: From Medicine to Brain Circuits

Ana Rita Agra de Almeida Quadros

Postdoctoral Fellow, Lagier-Tourenne Lab, Mass General Hospital/HMS

Brain, It's a Kind of Magic

Ricardo Lopez

Graduate Student, Kaeser Lab, Harvard Medical School

The Molecular Machinery Underlying Neuromodulatory Secretion

Weds. July 24th (Cambridge)

More information, including room locations and speaker lineups, coming soon!

Thurs. August 1st (Longwood)

More information, including room locations and speaker lineups, coming soon!

HARVARD *Brain Science Initiative*