



The world's largest brain research prize awarded for groundbreaking discoveries on how we sense touch and pain

Descrizione

COMUNICATO STAMPA - CONTENUTO PROMOZIONALE

The Brain Prize 2026 is awarded to Professors David Ginty (US) and Patrik Ernfors (Sweden) for their pioneering discoveries on how the nervous system detects and processes touch and pain. Their work has rewritten textbooks and opened new avenues for the development of targeted treatments for conditions such as chronic pain and hypersensitivity to touch.

COPENHAGEN, Denmark, March 5, 2026 /PRNewswire/ - The somatosensory system provides us with the sense of our own body and its physical interactions with the world. Our sense of touch enables us to perceive a passing breeze, feel the shape and texture of objects in our hands or the physical contact of others. It provides crucial sensory feedback that controls how we move our body and respond to the outside world. The somatosensory system also encompasses our ability to feel pain. Pain can be caused by mechanical stimuli, heat and noxious chemicals. While unpleasant, it is essential for our survival, acting as a warning system that protects us from what is harmful. Disruptions in our normal ability to sense touch and pain can lead to severe and debilitating conditions, including hypersensitivity to touch - observed in many developmental disorders - and chronic pain which affects millions of people worldwide.

Although touch and pain have been studied for more than 150 years, Patrik Ernfors (Karolinska Institutet, Sweden) and David Ginty (Harvard Medical School, US) have revolutionised the field by identifying how nerve cells in the skin transform painful, thermal and mechanical stimulation, such as stroking, vibration, or indentation, into neural signals. They have further mapped how these signals are transmitted to and processed within the spinal cord and then sent to the brain where the perception of - and the emotional and behavioral reactions to - our interactions with the physical world are created.

Together, their discoveries have rewritten textbook principles of somatosensation and provided the foundation for a new generation of targeted interventions for pain and somatosensory dysfunction based on specific cell types and neural pathways.

Professor Andreas Meyer-Lindenberg is Chair of The Brain Prize Selection Committee and explains the reasoning for awarding Professors David Ginty and Patrik Ernfors the Brain Prize 2026:

“Somatosensation defines the integrity of the body and the boundary between the body and the world and is thus crucial for our sense of physical self and our interactions with the world around us. The ability to detect and interpret touch, pain, itch, and temperature depends on an extraordinary diversity of peripheral sensory neurons, supporting cells, and precisely organised spinal cord and brainstem circuits. By discovering and categorising distinct sensory neuron types, linking them to specific end organs and pathways, and providing novel widely used genetic and molecular tools, their work has created a blueprint for understanding normal touch and for pinpointing where things go wrong in disorders such as chronic pain, and hyper- and hyposensitivity that may be associated with diseases of the nervous system.”

On behalf of the Lundbeck Foundation, CEO Lene Skole extends her warmest congratulations to the two prize recipients:

“Our ability to feel touch and pain is perhaps the most underappreciated of our senses. It gives us our sense of self and of our interactions with the world. Without it we would feel disembodied. This is hard to imagine and to really appreciate how profound it is, we need only look at what happens when the sense of touch and pain goes wrong. The fundamental new insights into the neuroscience of touch and pain provided by Patrik Ernfors and David Ginty are truly remarkable and carry hope for patients living with disorders such as chronic pain. It is a true pleasure to award these outstanding scientists with The Brain Prize 2026.”

MORE INFO brainprize.org

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Categoria

1. Comunicati

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1. ImmediaPress

Data di creazione

Marzo 5, 2026

Autore

redazione

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