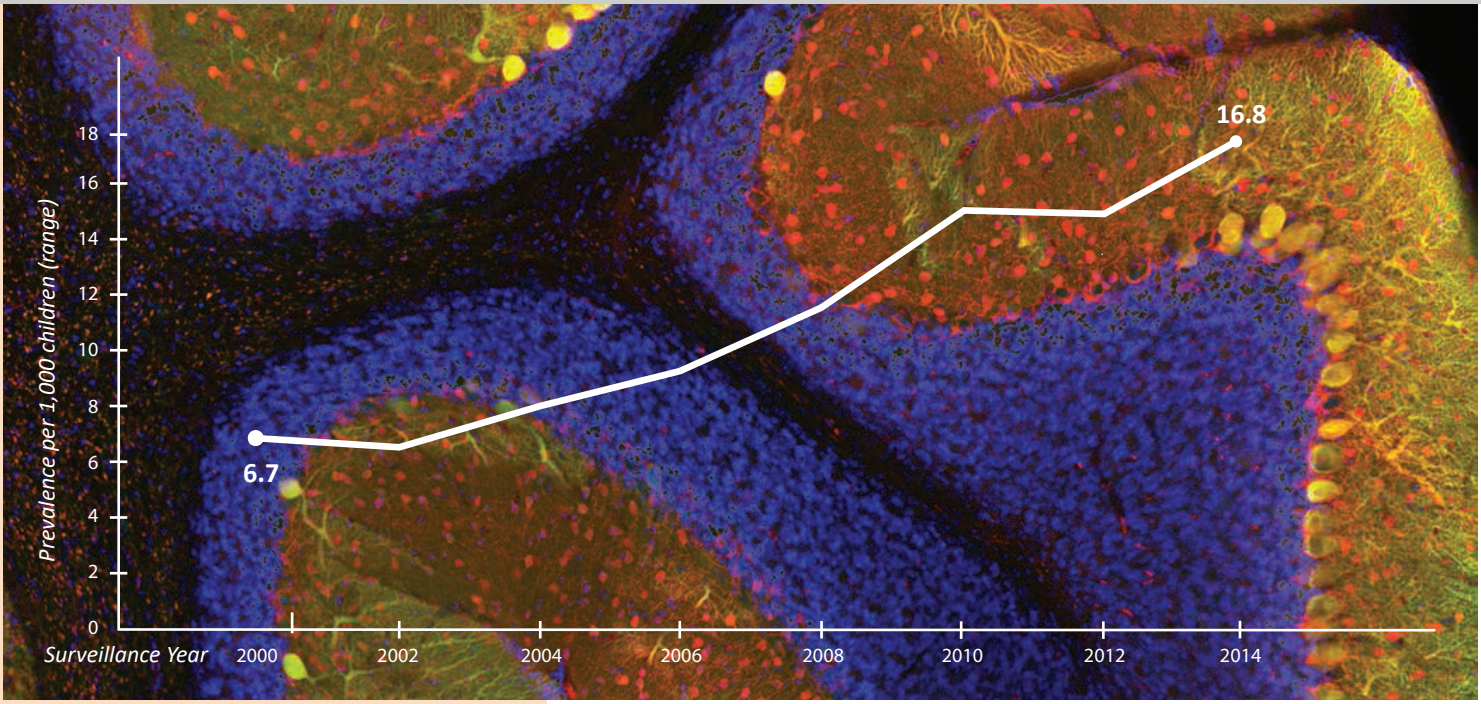
Autism Spectrum Disorders in the US



Neurons in the mouse cerebellum expressing the synaptic protein SAPAP-4.

THE NEED

- **Support** basic research on ASD
- **Translate** ASD research results into better diagnostic techniques and treatments
- **Encourage** multidisciplinary research collaborations among scientists, engineers, and clinicians to jump-start technology transfer from bench to bedside

INSIDE THE SIMONS CENTER FOR THE SOCIAL BRAIN

TOWARD UNDERSTANDING - AND TREATING - AUTISM

The mission of the Simons Center for the Social Brain is to understand the neural mechanisms underlying social cognition and behavior, and to translate this knowledge into better diagnosis and treatment of autism spectrum disorders (ASD).

The Simons Center studies the underlying mechanisms of ASD in both humans and relevant model organisms and systems, as neural correlates of social cognition and behavior exist in diverse species. Our approaches take advantage of MIT's strengths in genetics and genomics, molecular and cell biology, analyses of neural circuits and systems, cognitive science, computation and engineering.

SIMONS CENTER FOR THE SOCIAL BRAIN

For more Information please visit:
http://scsb.mit.edu/

SPARKING INNOVATION

A researcher scans a subject at the Martinos Imaging Center at MIT.

"The goal of the Simons Center is to advance new ways to understand and treat autism spectrum disorders, by fostering novel and unusual collaborations across MIT and Boston-area institutions."

Professor Mriganka Sur

The Simons Center supports its programs through:

> SIMONS POSTDOCTORAL FELLOWSHIPS:

These two-year fellowships consist of a stipend and expenses for autism-related research bridging at least two labs.

> TARGETED PROJECTS:

The Simons Center supports collaborative, focused projects undertaken by multiple laboratories studying a single question, to explore in depth specific aspects or mechanisms of autism. Some of our targeted projects are:

- Marmosets:
  Dissecting neural circuit mechanisms of ASD-relevant behaviors in marmosets.
- Thalamic Reticular Nucleus (TRN):
  Role of the Thalamic Reticular Nucleus in thalamocortical coordination, cognitive processing, and sleep in ASD
- Language Pragmatics:
  The nature of the pragmatic impairment in autism spectrum disorders
- Shank3:
  Multi-level analysis of the Shank3 mutation in autism: translating genetic studies into pathophysiological mechanisms and therapeutic targets
- 16p11.2:
  Role of the 16p11.2 CNV in autism: genetic, cognitive and synaptic/circuit analyses

BUILDING THE COMMUNITY

> COLLOQUIUM SERIES:

The Simons Center, in collaboration with other Universities and Hospitals in Boston, runs a regular Colloquium Series which brings major autism researchers to MIT. This is the longest running seminar series on brain disorders in the Boston area.

> LUNCH SERIES:

The Simons Center runs a lunch-time seminar series in which researchers share their last findings.

For More Information or Giving Opportunities

Gifts to be used for supporting collaborative research on Autism and Neurodevelopmental disorders at MIT.

SIMONS CENTER FOR THE SOCIAL BRAIN – AUTISM RESEARCH FUND **3836050**

- Please visit *https://giving.mit.edu/* to make a gift.