

Awards cap off two-day National Pediatric Innovation Summit

BOSTON, Sept. 27, 2013 /PRNewswire-USNewswire/ -- Recognizing transformative advances in pediatric patient care, [Boston Children's Hospital](#) today announced three \$50,000 Taking on Tomorrow innovation awards. The awards were presented at 1 p.m. today by outgoing [Boston Children's Chief Executive Officer James Mandell, MD,](#) at the Seaport World Trade Center during the National Innovation Pediatric Summit hosted this week by the hospital.

Three independent judging panels representing research and health care leaders inside and outside Boston Children's chose the awards (*see appendix*). The awards fell in three categories, judged for the maturity of the technology, the commercial potential, intellectual property considerations and the strength of the development team:

- **Research/Scientific Breakthrough in Autism** (13 applicants)—awarded to Daniel Geschwind, MD, Ph.D., University of California, Los Angeles
- **Clinical Innovation** (31 applicants)—awarded to Charles Dumoulin, Ph.D., Cincinnati

Children's Hospital Medical Center

- **Community/Patient Empowerment** (24 applicants)—awarded to Christopher P. Landrigan, MD, MPH, and Alisa Khan, MD, of Boston Children's Hospital, Brigham and Women's Hospital and Harvard Medical School

"We were delighted to have an exceptionally strong pool of applicants for all three categories from across health care, industry and academic medicine," says Mandell. "I can say with confidence that the innovations and discoveries chosen by our judges will all create new standards in areas of pediatric care that are important to us."

The awards and projects:

Research/Scientific Breakthrough in Autism

[Daniel Geschwind, MD, Ph.D.](#), chairman of Human Genetics and director of UCLA's Center for Autism Research and Treatment, is creator and leader of the [Autism Genetic Resource Exchange \(AGRE\)](#), a large-scale, cross-institution database used by more than 150 institutions to date.

Using AGRE, Geschwind's group identified two consistent sets of molecular changes in the brain, providing strong confirmation that autism's multiple different genetic or environmental causes converge on a common "molecular pathology" in the brain. The changes, found in more than two-thirds of subjects with autism, affect two molecular processes: the function of neurons and the activity of microglial cells, part of the brain's native immune system. The observed differences, validated in multiple independent samples, could be used to direct and inform studies to identify biomarkers of autism that could aid in diagnosis and therapeutic development.

Clinical Innovation

[Charles Dumoulin, Ph.D.](#), director of the Imaging Research Center in the Department of Radiology at Cincinnati Children's Hospital Medical Center, led a team of scientists and engineers to develop a [new type of magnetic resonance imaging \(MRI\) system for infants](#).

Revisiting almost everything known about MRI, the system matches the imaging power of conventional scanners, but is small enough to image fragile newborns, including preemies as small as a pound or less, and has a footprint of only a few square feet, allowing it to be housed directly in the neonatal intensive care unit (NICU). The system includes two methods for moving small infants into the scanner, including those in incubators, with minimal disturbance and risk, and exposes infants to a minimum of noise (equivalent to a quiet office setting). It has been used in more than 150 newborns at Cincinnati Children's and has already spawned new research projects.

Community/Patient Empowerment

This award, for an interactive nightly "sign out form" for families of hospitalized children, went to [Christopher P. Landrigan, MD, MPH](#)

, research director of Boston Children's Hospital Inpatient Pediatrics Service and director of the Sleep and Patient Safety Program at Brigham and Women's Hospital, and

Alisa Khan

, MD

, a fellow with the

Harvard

-wide Pediatric Health Services Research Fellowship Program and the Academic Pediatric Hospitalist Fellowship at Boston Children's Hospital.

The family sign out tool mirrors Boston Children's [I-PASS](#) system for physician-to-physician patient "handoff," successfully piloted in 10 hospitals. It uses the same

I-PASS

mnemonic to ensure all clinical details are communicated:

I

Illness Severity,

P

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A

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(the care plan)

S
ituational Awareness
(what to watch for)
and

S
ynthesis
(for families to write questions to providers)

The sign out is designed to empower families to play a more active, informed role in managing their children's health while in the hospital. With the award, the current paper form will become a scalable app that integrates with patients' electronic medical records.

[Boston Children's Hospital](#) is the world's largest research enterprise at a pediatric medical center, where its discoveries have benefited both children and adults since 1869. More than 1,100 scientists, including seven members of the National Academy of Sciences, 13 members of the Institute of Medicine and 14 members of the Howard Hughes Medical Institute comprise Boston Children's research community. Boston Children's is a 395-bed comprehensive center for pediatric and adolescent health care grounded in the values of excellence in patient care and sensitivity to the complex, diverse needs of children and families. Boston Children's is also the primary pediatric teaching affiliate of Harvard Medical School. For more information about research and clinical innovation at Boston Children's, visit: <http://vectorblog.org>

Appendix:

Judging panels for the Taking on Tomorrow innovation awards

Research/Scientific Breakthrough in Autism:

- [Erik Halvorsen, Ph.D.](#), Executive Director of TIDO, Managing Partner, Technology Development Fund, Boston Children's Hospital
- [Beth Stevens, Ph.D.](#), Research Associate in Neurology, Boston Children's Hospital
- [Robert Ring, Ph.D.](#), Chief Science Officer, Autism Speaks
- [Michela Fagiolini, Ph.D.](#), Associate in Neurology, Boston Children's Hospital

Clinical Innovation:

- [Naomi Fried , Ph.D.](#), Chief Innovation Officer, Boston Children's Hospital
- [Lee A. Fleisher, MD](#) , Robert Dunning Dripps Professor of Anesthesiology and Critical Care, University of Pennsylvania Health System
- [Nathaniel M. Sims, MD](#) , Assistant Professor, Harvard Medical School Department of Anesthesia, Critical Care and Pain; Physician Advisor, Biomedical Engineering, Massachusetts General Hospital

Community/Patient Empowerment:

- [Joseph C. Kvedar, MD](#) , Founder and Director of the Center for Connected Health, and Associate Professor of Dermatology, Harvard Medical School
- [T. Berry Brazelton, MD](#) , pediatrician, author, professor of pediatrics, emeritus, Harvard Medical School
, founder, Brazelton Touchpoints Center, Boston Children's Hospital
- [Joshua D. Sparrow, MD](#) , Director of Strategy, Planning & Program Development, Brazelton Touchpoints Center, Boston Children's Hospital; Director, Brazelton Touchpoints Foundation; Associate Clinical Professor of Psychiatry, Harvard Medical School

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