

UK higher-education institutes. In the same month, a group of Italian research organizations announced that it would implement ORCID nationwide, aiming for 80% of Italian researchers to have an ID by 2016.

The system is still developing. To recognize scientists' peer-review activities — time-consuming work that tends to remain invisible — ORCID is discussing with publishers ways to enable scientists to add reviews to their profiles. "We don't get acknowledged" for such work, says Veerapen. "It would be really good if funders and employers were able to check what service I'm doing for science in that respect, too."

There are downsides to using ORCID. The web interface is not perfect, and it is still inconvenient to search, says McEntyre. Others note that ORCID's connectivity with research-tracking systems and databases could be improved. And still missing, Kim says, is a format for registering the software products that often emerge from data-generating research such as his. Haak says that such technical issues will be tackled in consultation with ORCID's 350 or so member organizations, most of which are in Europe, Asia and North America.

But ORCID's strengths — author-name disambiguation and the opportunity to specify unpublished contributions to science — appeal all the same to scientists and research agencies in other parts of the world.

"ORCID is ideal for developing science markets," says Matthew Buys, ORCID's regional director for Africa and the Middle East. "It sits really well with the community in Africa — not just because there are many shared names there, but because funders, publishers and institutions understand that they need to connect to bring high-quality research to Africa."

With 4,500 assigned IDs, South Africa is the best-represented country on its continent. But excitement about ORCID's value is growing in Africa and in the Middle East, Buys says. ORCID's outreach workshops in developing countries — such as one held in July in Nairobi — are well attended.

Ayodele Alonge, a PhD student at the University of Nairobi's School of Journalism and an emerging-technology librarian at the University of Ibadan in Nigeria, signed up for ORCID immediately after learning about it in May. "ORCID enhances my visibility as an upcoming researcher," he says. "And I hope it'll help me get recognized for what I'm doing." ■

Quirin Schiermeier is Nature's Germany correspondent.

TURNING POINT

René Anand

After Hurricane Katrina destroyed his lab at Louisiana State University in 2005, René Anand embraced high-risk research — projects that might win big or fail completely. Anand tells Nature how that decision led him to create what he considers the most-advanced brain model developed so far.

You began a career doing molecular biology.

What sparked your interest in neuroscience?

When I got my PhD at Ohio State University in 1989, I was investigating how genes recombine. I moved on to a postdoc at the Salk Institute for Biological Studies in La Jolla, California, where my informal training in neuroscience started. It was the obvious next frontier in science.

How did Hurricane Katrina affect your lab?

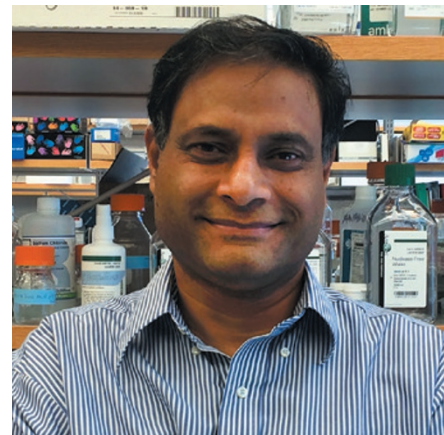
Katrina destroyed the lab itself. The building was flooded with water for a month — the whole system closed down. I lived on the outskirts of town, relying on food from aid organizations and writing grants. A lot of people, mostly clinicians, lost their jobs. Those dark days lasted a year. We chose to move mostly for family reasons — schools were disruptive — not because we didn't foresee recovery. But it was scary to think that something like this could derail us again. Science is already demanding enough. I went back to Ohio State in 2007 — I wanted something familiar and to be part of an interdisciplinary campus.

In 2010, you got a US National Institutes of Health grant. Was that a game-changer?

Yes — I was rewarded for being a risk-taker. The EUREKA (Exceptional, Unconventional Research Enabling Knowledge Acceleration) grant was designed to help investigators to pursue innovative ideas. I wanted to understand at the genomic level how an electric eel's membrane proteins work, so that we could study human diseases involving similar proteins. Getting that grant played a big part in my attempt to turn stem cells into a brain organoid.

How did you decide to create a brain model?

It grew out of my fundraising work with Autism Speaks, a US charity that supports basic research. Year after year, I sat with families and listened to them talk about how much it mattered to them what scientists do. I developed a very personal connection that drove me to take risks. At the time, I was doing research in rodents that failed miserably. I had to find another way, so that I could work in a species that could give us more insight. Using stem cells as the basis for an organoid offered that bridge.



We were fortunate to find two risk-taking funders that gave us roughly US\$140,000. We spent four years producing a stem-cell-based brain organoid using adult human skin cells.

What was the reaction to this 'brain in a dish'?

I should be clear that this 'brain' models early-developmental tissue and is roughly 2–3 millimetres long. It expresses more than 98% of the genes present in a human brain at 5 weeks of development. We are not capable of addressing higher-order function, such as memory, learning or cognition. But we can see structures of the brain, and perhaps use the model to see how it responds to drugs. The organoid might be useful for high-throughput screening for therapeutic-drug discovery or toxicity testing. We are working through legal issues, such as intellectual-property rights. I have the paper ready to submit as soon as we get the business concerns addressed. I didn't realize that the world of commercialization is as challenging to navigate as the science.

How did word about the model get out if the paper is not yet published?

We finished the project in April 2014. As we grew more confident in our results, I shared them at conferences, including an invited talk at the Wellcome Trust in London last July. But it didn't receive press attention until I gave a talk at the Military Health System Research Symposium in Fort Lauderdale, Florida, in August, and my university put out a press release. There are caveats. Although my group has replicated the research, it has not been through peer review. The truth will become the truth once it has been replicated in another lab. ■

INTERVIEW BY VIRGINIA GEWIN

This interview has been edited for length and clarity.