

SPOTTED

Embryo editing; race debate; microbial makeover

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Embryo editing

A British government agency has granted a scientist permission to **edit the genomes of human embryos** — the first such approval ever given, The New York Times reported on Monday. A **technique called CRISPR**, which allows scientists to easily cut and paste segments of DNA, has made such genetic tinkering possible, but doing so brings up tough ethical questions.

The developmental biologist who plans to do the editing, Kathy Niakan of the Francis Crick Institute in London, has no intention of implanting the embryos, which she will **not allow to develop** beyond 7 days of age, according to *Nature*. Niakan aims to use the embryos to better understand the early genetic changes in fertilized eggs, knowledge that may assist with treating some cases of infertility, the *Times* reported.

George Daley, a stem cell biologist at Boston Children's Hospital, told *Nature* that Niakan's work represents "an important first" that "establishes a strong precedent for allowing this type of research to go forward."

SOURCES:

The New York Times / 01 Feb 2016

British researcher gets permission to edit genes of human embryos

<http://www.nytimes.com/2016/02/02/health/crispr-gene-editing-human-embryos-kathy-niakan-britain.html>

Nature / 01 Feb 2016

UK scientists gain licence to edit genes in human embryos

<http://www.nature.com/news/uk-scientists-gain-licence-to-edit-genes-in-human-embryos-1.19270>

Race debate

Race is a social construct. Research comparing the genomes of diverse groups of individuals has revealed no clear-cut genetic difference between races. For example, there is no genetic variant that appears solely in one race and not in another. Still, many genetic studies include race as a biological variable.

It's time to **phase out racial categories** in genetic studies, a group of researchers argues in an article appearing today in *Science*. "Language matters, and the scientific language of race has a significant influence on how the public (which includes scientists) understands human diversity," the researchers write. "Historical racial categories that are treated as natural and infused with notions of superiority and inferiority have no place in biology."

The authors urge the U.S. National Academy of Sciences, Engineering and Medicine to bring together a panel of experts to figure out ways to investigate human diversity without the use of race.

SOURCES:

Science / 05 Feb 2016

Taking race out of human genetics

<http://science.sciencemag.org/content/351/6273/564>

Microbial makeover

The billions of microbes that live within our bodies **contribute in important ways** to human health. We acquire many of our microscopic helpers **at birth**. As babies pass through their mother's birth canal, they get a healthy dose of mom's microbes. Babies delivered by cesarean section (C-section), however, miss out on those benefits.

A study published Monday in *Nature Medicine* **offers a possible solution**: soaking a gauze pad in a mother's birth canal just before delivery, and then rubbing the baby with it right after birth, starting with the mouth and face and continuing with the rest of the body. In a study of four newborns delivered by C-section, researchers showed that the simple method can at least partially **reconstitute a baby's microbiome**, NPR reports.

No one knows how long the treatment's effects might last. "Obviously the final study — the most important one — is to follow babies for three or five or seven years and determine if this restoration decreases the risk for some of the diseases that we know are associated with having been born by C-section," **Maria Dominguez-Bello**, associate professor of medicine at the New York University

School of Medicine, told NPR.

SOURCES:

Nature Medicine / 01 Feb 2016

Partial restoration of the microbiota of cesarean-born infants via vaginal microbial transfer

<http://www.nature.com/nm/journal/vaop/ncurrent/full/nm.4039.html>**NPR** / 01 Feb 2016

Researchers test microbe wipe to promote babies' health after C-sections

<http://www.npr.org/sections/health-shots/2016/02/01/464905786/researchers-test-microbe-wipe-to-promote-babies-health-after-c-sections>

Autism, animated

“Life, Animated,” an award-winning documentary about a boy with autism, will **soon be available to viewers** across the U.S. According to *Variety*, director/producer Roger Ross Williams just sold its North American rights to The Orchard, a division of Sony Music Entertainment that plans to release “Life, Animated” in theaters soon.

The documentary is based on the **best-selling book** by **Ron Suskind**, a Pulitzer Prize-winning journalist whose son Owen has autism. Owen was nonverbal for years, but when he was 6 and a half, Suskind and his wife began communicating with him in a new way: using dialogue and song lyrics from the animated Disney films their son loves.

As his father **explains it**, Owen used the films to make sense of the often-bewildering world. He responded to scripted phrasings and character impressions, which his parents had memorized, better than spontaneous language. At the Sundance Film Festival, the film won the directing award for a U.S. documentary, *Variety* reports, and the Oscar buzz has already begun.

SOURCES:

Variety / 03 Feb 2016

Sundance autism doc ‘Life, Animated’ sells to The Orchard

<http://variety.com/2016/film/festivals/life-animated-autism-the-orchard-sundance-1201687548/>
