

CGS COMMENTARY

Designer DNA Isn't Just for "Designer Babies"

By Katie Hasson, Zócalo Public Square The term "designer babies" captures headlines but often limits discussion of serious concerns in debates about human gene editing. Here's why we need to talk about that.

The Inconvenient History of IVF

By Pete Shanks, Medium

A misleading historical account about public attitudes toward "test tube babies" is threatening to distort today's debates about human cloning and heritable gene editing.

First monkeys, and then us? Human cloning must stay off limits

By Marcy Darnovsky, New Scientist

If this experiment revives debate about cloned humans, echoes will reverberate in the ongoing controversy about germline editing.

Pop Culture and Policy: Can Works of Art Shed Insight on Synthetic **Embryos**?

By Katayoun Chamany, Pop A.R.T. Guest Columnist A scholarly article is unlikely to effectively encourage public input on the social implications of new biotechnologies. What if we looked instead to artistic endeavors and popular culture for inspiration?

Hacking Your Own Genes: A Recipe for Disaster

By Marcy Darnovsky, Leaps Magazine With powerful new technologies shaping the world, there's a lot riding on our capacity to democratize science. But is the biohacking movement the answer?











First 3-person IVF pregnancies planned in UK

By Leah Lowthorp, Biopolitical Times Will mitochondrial manipulation in humans open the door to other forms of human inheritable genetic modification?

Who Knew Genomics Could Be So Complicated?

By Pete Shanks, *Biopolitical Times* Several recent plant and animal studies suggest that genomes are more complex than some people realize.

CGS in the NEWS

Chinese Scientists Clone Monkeys Using Method That Created Dolly

The Sheep

[cites CGS' Marcy Darnovsky]

by Rob Stein, NPR

"To say it's OK for some scientist or some parent to go ahead for no good reason to produce a cloned child would really demean what it means to be human," says Marcy Darnovsky.

Scientists successfully clone monkeys; are humans up next?

► [cites CGS' Marcy Darnovsky]

by Malcolm Ritter, Associated Press

Researchers have used the cloning technique that produced Dolly the sheep to create monkeys.

Scientific breakthrough: Chinese scientists clone 2 female monkeys

[cites CGS' Marcy Darnovsky]

by Jim Axelrod, CBS News

"Now, more than 60 countries and 15 states in the U.S. actually have laws on the books saying that human reproductive cloning is illegal," said Marcy Darnovsky.



TOP -











NEWS

Assisted Reproduction

Human Genetic Modification

Various

Genomics

HUMAN GENETIC MODIFICATION

UK doctors select first women to have 'three-person babies'

by Ian Sample, The Guardian

Fertility doctors in Newcastle received permission from the Human Fertilisation and Embryology Authority to take the UK's first steps into clinical use of 3person IVF.

China Has Already Gene-Edited 86 People With CRISPR

by Kristen V. Brown, Gizmodo

China's rapid advancement is the result of more relaxed regulations, and a willingness to forge ahead with cutting-edge research despite potential unknowns and safety concerns—which are significant.

The doctor responsible for gene therapy's greatest setback is

sounding a new alarm

by Antonio Regalado, MIT Technology Review

Essentially any drug becomes toxic if too much is given, but this is the first time that limit has been detected for the popular and widely employed gene-therapy viruses.

Genetic engineering is advancing fast, and it's time to talk about ethics

by Matthew Hansen, Omaha World-Herald

Two scientists consider why it's important to have dinner-table and global discussions about human gene editing now—before we muck up the human race in ways most of us have barely considered.

Why gene therapy is no longer a pipe dream

by Michael White, *Pacific Standard Magazine* For decades, gene therapy symbolized unfulfilled promises of biomedical scientists who claimed that they could not just treat, but also cure disease by fixing genes. Those promises are beginning to be realized.

Scientists Don't Fear a New Crispr Snag

by Faye Flam, Bloomberg

There are ways scientists could proceed to test CRISPR that would save lives and heal the sick, and other ways that would accidentally harm or even kill people. Scientists are now standing at the frontier.

GENOMICS

- News TOP -

Nature still battles nurture in the haunting world of social genomics

by Nathaniel Comfort, Nature

Catherine Bliss' latest book, *Social by Nature: The Promise and Peril of Sociogenomics*, seeks social explanations about why the nature-nurture binary persists in the face of DNA-sequence data that once promised to erase it.

This new company wants to sequence your genome and let you share it on a blockchain

by Emily Mullin, STAT

People will be able to earn cryptocurrency in exchange for letting pharma companies use their data.

<u>Cracks in the code: Why mapping your DNA may be less reliable</u> <u>than you think</u>

by Carolyn Abraham, The Globe and Mail

Scientists leading Canada's Personal Genome Project conducted the most thorough analysis that current computing allows on the whole genome sequences of 56 Canadians. They found that the more they study, the more evidence mounts that using DNA to predict health risks is anything but precise—for now, at least.

Will your baby like cilantro? These genetic tests say they can tell

by Megan Molteni, Wired

The companies behind these tests say they're mostly for entertainment, and for educating folks about how genetics work. But doctors and public health officials have concerns that they might, in fact, do the opposite.

Now You Can Genetically Test Your Child For Disease Risks. Should You?

by Sarah Elizabeth Richards, Smithsonian

From a child's perspective, imagine the emotional toll of going through puberty if you knew you had the gene for breast cancer, or being the "melanoma kid" on your soccer team.

Down's syndrome test could see condition disappear, Church of England warns

by Harriet Sherwood, The Guardian

The new non-invasive prenatal test, which is expected to be offered to pregnant women this year by the National Health Service, could lead to more terminations and fewer people born with condition.

International Society of Prenatal Diagnosis issues new guidelines for prenatal genome-wide sequencing

by Marsha Michie, <i>Prenatal Information Research Consortium</i> The joint position statement takes a cautionary approach to prenatal sequencing, and discourages using it routinely as a diagnostic test.
Scientists Edge Closer To A Blood Test To Detect Cancers by Richard Harris, NPR The research team will need to demonstrate that the test will be useful in patients without symptoms, and that the rate of false alarms remains very low— otherwise people will be sent on needless and expensive medical odysseys.
You Are Shaped by the Genes You Inherit. And Maybe by Those You Don't. by Carl Zimmer, New York Times There is no clean line between nature and nurture: How a particular variant acts, if at all, may depend on your environment.
ASSISTED REPRODUCTION - News TOP -
Same-Sex Couples Sue U.S. Government For Kids' Citizenship by Leila Fadel, NPR The State Department has demanded a genetic or biological link between parent and child. But the broader use of assisted reproductive technology is raising questions about whether the government's requirements are fair.
 Court to weigh if one parent has the right to use frozen embryos if the other objects by Ariana Eunjung Cha, Washington Post The Colorado Supreme Court will hear oral arguments in a case in which constitutional questions are front and center. If the judges decide the dispute on such grounds, it could be appealed to the U.S. Supreme Court—where a ruling would apply nationwide.
The Complicated History of Surrogacy From 'Baby M' to Kim Kardashian and Kanye West by Olivia B. Waxman, <i>Time</i> Even after two decades since the 'Baby M' case grabbed national headlines, the deep questions about reproductive health, rights, and justice in surrogacy arrangements still persist.
After woman finds her baby via surrogate unhealthy, Chinese surrogacy agency says she can 'return it' for new one by Hu Yuwei, <i>Global Times</i> Without a Chinese governmental department to accept surrogacy cases, intended parents are faced with legal gray areas and little protection.
 Urgent Need for an International Declaration to End Cross-Border Surrogacy by Olinda Timms, <i>The Wire</i> This is a suitable time to view cross-border surrogacy and third party reproduction as a global health and human rights issue emerging out of the demand for assisted reproductive technology.

In the Internet Age, Is Sperm and Egg Donation Ever Truly Anonymous?

by Lindsay King-Miller, Rewire

What it means to be a donor-created family is changing quickly in a time of increasingly accessible assisted reproduction technologies, online genetic databases, and a growing field of knowledge about child development among donor offspring. The expectations of parents and donors alike are struggling to keep up.

Can a DIY fertility test help you plan when to have a baby?

by Zoë Corbyn, The Guardian

A new wave of tech startups is promising women details about their ability to conceive. But experts are sceptical—worrying that the marketing of these tests is getting ahead of the science, which may mislead consumers.

Here's What Five Couples Spent To Have A Child

by Doree Shafrir, Buzzfeed

Using personal experience, five couples calculate the costs of using assisted reproductive technologies and adoption to build their families.

Women Not Aware Of Possible Hidden Risks Of Being An Egg Donor

by Andria Borba and Molly McCrea, CBS SF Bay Area

To understand the long-term risks egg donors face, advocates suggest creating a registry that would provide a clearer picture.

What Should IVF Practitioners Disclose to Expectant Parents?

by Nana Matoba, Scientific American

For many families, this child is their miracle baby, their last chance at IVF. It's irresponsible to withhold disclosing risks, both known and unknown, from the beginning, and certainly before embryo transfer.

What AI Can Do for IVF

by Carol Lynn Curchoe and Charles L. Bormann, *Scientific American* A new AI startup, Life Whisperer, claims that retrospective trials conducted with its commercial partner Monash IVF have shown a "high level of accuracy level in identifying viable embryos"—which could mean almost anything.

The struggle to conceive with frozen eggs

by Ariana Eunjung Cha, *Washington Post* Brigitte Adams became the poster child for freezing your eggs. But things didn't quite work out how she imagined.

VARIOUS

Calif. Stem Cell Agency Has Yet to Fund an FDA-Approved Cure. Will Voters Give It \$5 Billion More?

by David Gorn, KQED

In the 2020 election, stem cell research proponents—including the same advocacy group that backed California's Proposition 71—want to continue the

- News TOP -

work of the California Institute for Regenerative Medicine. Will the voters buy it?

<u>Why CRISPR-Edited Food May Be in Supermarkets Sooner Than</u> <u>You Think</u>

by Kristen V. Brown, Gizmodo

The U.S. Department of Agriculture allows CRISPR-edited crops to fall outside of its regulatory purview, on the basis that they are not "genetically modified" because they do not add any foreign DNA.

China's first GM rice gets US FDA approval

by Bai Tiantian, Global Times

Huahui No.1 rice, developed by a group of Chinese scientists, is allowed to enter the US market, while genetically modified crops still face strong opposition from the Chinese public.

DARPA wants to build an image search engine out of DNA

by Megan Molteni, Wired

With denser storage potential and durability, molecules like DNA might prove to have some serious advantages over the in silico state of the art. But they're not a silver bullet.

The Rise and Fall of China's Science Superstar

by Wang Yingying, Sixth Tone

Han Chunyu retracted disputed "breakthrough" research that he claimed to be more efficient and precise than Cas9. He still enjoys support from university and local government.

