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BIOPOLITICAL VIEWS & NEWS

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Resource Page on "3-Person IVF"

In light of recent breaking news of a baby born in Mexico via maternal spindle transfer, we have updated our 3-Person IVF resource page. The page includes technical explanations, a summary of key research and players, a timeline of recent UK and US policy discussions, and frequently asked questions.



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CGS COMMENTARY

Comment on "3-person IVF" procedures for infertility reportedly conducted in Ukraine

[Press statement]

"These developments are another urgent sign that we need clear rules placing heritable human genetic modification off-limits on a national and international level."



<u>7 Highlights from Nuffield Council's Review on the Ethics of Genome Editing</u>

by Jessica Cussins, Biopolitical Times guest contributor

A recent UK report discusses social and political implications of genetically engineering human reproduction and other controversial CRISPR applications.



<u>Dangers of an Unscientific Policy Process: Why the UK's legalization</u> of "three-person babies" should not be the model for CRISPR

by Jessica Cussins, Biopolitical Times quest contributor

The UK's consideration of the science and public support for "mitochondrial replacement" may seem robust on its surface, but when it comes to CRISPR germline genome editing policy, we can and must do better.



3-person IVF and Infertility: What Kind of Slippery Slope Is This?

by Leah Lowthorp

To what extent has anticipation of using 3-person IVF for infertility been part of the story from the start? While we can't know for sure, here are some possible connections.



18 Years Later: First Update on Children Born Using 3-person IVF Precursor

by Leah Lowthorp

Citing a recent study, the media is celebrating "proof" that there is little danger in 3-person IVF. The study itself, however, is not at all certain of the reliability of its results.



Just What We Need: Slicker Infertility Marketing

by Gina Maranto, Biopolitical Times guest contributor

A serial tech entrepreneur launches a new start-up called Prelude with a hipsterchic website downplaying the many unknowns of egg freezing.



World Bioethics Day: Human Dignity and Human Rights

by Leah Lowthorp

October 19 marks the first such international event sponsored by the UNESCO Chair in Bioethics. This year's theme of Human Dignity and Human Rights will be celebrated in 55 countries worldwide.



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CGS in the NEWS

Three-person baby 'race' dangerous

[citing CGS' Marcy Darnovsky]

by James Gallagher, BBC

Scientists and ethicists warn of fertility doctors forum-shopping to perform dangerous mitochondrial manipulation experiments.



Meet Prelude Fertility, The \$200 Million Startup That Wants To Stop

► The Biological Clock

[citing CGS' Marcy Darnovsky]

by Miguel Helft, Forbes

Despite the short and long-term risks of egg retrieval, fertility companies target young people as a new customer base, putting profits ahead of safety.



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NEWS

3 Person IVF

Assisted Reproduction Technology

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Gene Testing

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Human Germline Modification

Synthetic Human Genome

Stem Cells

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3 Person IVF

► Reports of 'three-parent babies' multiply

by Sara Reardon, Nature News

Claims of infants created using mitochondrial manipulation techniques in Mexico and China, and two pregnancies in the Ukraine, stir scientific and ethical debate.

First Spindle Nuclear Transfer Baby Has Low Mutant DNA Load

by Kate Johnson, Medscape

At the ASRM Scientific Congress, fertility doctors said they would continue using the mitochondrial manipulation procedure.

Synthetic Human Genome

Designer and Discarded Genomes

by Ruha Benjamin, e-flux Architecture

Field notes from a Harvard meeting on a "synthetic human genome" moonshot reveal the anti-democratic foundations of HGP-Write.

Writing the First Human Genome by 2026 Is Synthetic Biology's Grand Challenge

by Jason Dorrier, Singularity Hub

AutoDesk's Andrew Hessel promises a functional fully synthesized human genome by 2026, continuing the HGP-Write hype that began with a closed meeting at Harvard in May.

Human Germline Modification

- News TOP -

CRISPR gene-editing controversy shows old ideas about East and West still prevail

by Calvin Wai-Loon Ho, Econtimes

Western imaginations tend to fantasize Asian countries as exotic, crude "others," viewing Chinese research as advancing primarily due to an assumed lack of regulation.

13 Urgent Science and Health Issues the Candidates Have Not Been Talking about

by C.U.N.Y. Graduate School of Journalism, *Scientific American* The prospect of genetically enhanced humans is looming, but has remained unaddressed during this election season.

CRISPR

- News TOP -

Crispr's IPO doesn't hit its target

by Robert Weisman, The Boston Globe

CRISPR Therapeutics' public offering raises half that of its rivals Editas & Intellia -- a sign that the market may be pulling back on genome editing stocks.

<u>Dramatic Twists Could Upend Patent Battle Over CRISPR Genome-</u> Editing Method

by Jon Cohen, Science Magazine

The Broad Institute has asked officials to separate four of its issued patents from the larger case, which could permit "a way for both sides to walk away with a little IP in their pockets."

With New Program, DARPA To Encourage Safety "Brakes" For Gene Editing

by Alex Lash, Xconomy

The US military R&D agency has launched a funding program called "Safe Genes" to find "safety measures that don't slow us down."

Mouse eggs made from skin cells in a dish

by David Cyranoski, Nature

A research breakthrough sparks debate over the prospect of using stem cell techniques to produce synthetic human eggs from body tissue

► CRISPR deployed to combat sickle-cell anaemia

by Heidi Ledford, Nature News

Gene therapy aimed at a single-cell genetic condition shows some success in mice, while highlighting unknowns of human gene editing.

Gene Testing

- News TOP -

Genetic test costs taxpayers \$500 million a year, with little to show for it

by Casey Ross, STAT

A new study shows that genetic testing can waste half a billion dollars a year, and lead to unclear results, anxiety, and more testing.

► There Is No Leadership Gene

by Tracy Staedter, Seeker

As genetic testing becomes mainstream, some consider using it to screen job applicants. Besides being unlawful discrimination, the science is highly unreliable.

Surprisingly few new parents enlist in study to have baby's genome sequenced

by Jocelyn Kaiser, Science Magazine

The NIH-funded project, BabySeq, seeks to analyze protein-coding DNA for mutations in 7000 genes associated with childhood diseases.

▶ "Personalized nutrition" isn't going to solve our diet problems

by Julia Belluz, Vox

The trend of looking at DNA to "revolutionize" health lacks scientific backing and threatens to obscure environmental influences.

▶ DNA database could help predict your disease — then get you fired

by David Lazarus, Los Angeles Times

Precision medicine raises the disturbing prospect of genetic haves and havenots, and of discrimination based not on race, age or gender but on health.

Advocacy group anecdotes present one-sided picture of genetic testing for breast cancer

by Mary Chris Jaklevic, Health News Review

The push to test for BRCA genes often glosses over the limited information it provides, advocates' corporate ties, and the lack of support for women who test positive.

► Can a DNA Test Really Predict Opiate Addiction?

by Zachary Siegel, The Daily Beast

A precision medicine company claims it can predict a patient's risk of becoming addicted to opioids with 93% accuracy. But it has no peer-reviewed evidence.

White Nonsense: Alt-right trolls are arguing over genetic tests they think "prove" their whiteness

by Elspeth Reeve, VICE News

The pseudo-science of "biological race" is perpetuated by white nationalist online communities with "ancestral evidence" provided by 23andMe.

Fruity with a hint of double helix: A startup claims to tailor wine to your DNA

by Rebecca Robbins, STAT News

Sequencing giant Illumina's new app store Helix is leading the charge of linking DNA analysis to lifestyle marketing.

► Genetic testing fumbles, revealing 'dark side' of precision medicine

by Sharon Begley, STAT

Inconsistency in DNA interpretation and in the algorithms used among databases, unregulated by the FDA, contributed to a fatal outcome for a 5-year-old boy.

► Mail-Order Tests Check Cells for Signs of Early Aging

by Melinda Beck, Wall Street Journal

Personal genetic testing companies claim telomere length can signal disease risk, but top scientists say it all amounts to high-tech palm reading.

Colin Kaepernick's 'I Know My Rights Camp' cements his status as a cultural superhero in the black community

by Shaun King, New York Daily News

NFL player Colin Kaepernick distributed DNA ancestry tests at a "Know My Rights" youth camp in Oakland, citing their reconciliation value.

DNA Forensics

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23andMe Has Abandoned The Genetic Testing Tech Its Competition Is Banking On

by Stephanie M. Lee, BuzzFeed

Other companies are starting to sell next-generation sequencing-based tests to the public, but 23andMe has let go the team that had been working on its project.

The controversial DNA search that helped nab the 'Grim Sleeper' is winning over skeptics

by Marisa Gerber, Los Angeles Times

Use of familial DNA to solve crimes is growing in popularity, raising concerns of 4th Amendment unreasonable search and seizure violations.

Eugenics

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► The Promise of Indigenous Epigenetics

by Emma Kowal, Discover Society

Amid the hype surrounding the biological study of inter-generational trauma, we need to be aware that epigenetics could be used for racist agendas that work against Indigenous health and well-being.

▶ President signs Senate bill that protects eugenics victims

by Richard Craver, Winston-Salem Journal

State restitution payments will not decrease or eliminate federal benefits for people who were forcibly sterilized.

Stem Cells

- News TOP -

California stem cell agency approves \$30 million to fast-track clinical trials

by David Jensen, The Sacramento Bee

Dubbed the new "pitching machine," CIRM's new \$30 million effort is designed to accelerate clinical trials of stem cell therapies.

What Stem Cell Researchers Talk About When They Talk About Ethics

by Danielle Venton, KQED

"Engineers who design something expect it to work. But if you put something [designed] into an organism, the chances that something odd will happen are extremely high."

Assisted Reproductive Technologies

- News TOP -

► The Misleading Promise of I.V.F. for Women Over 40

by Jane E. Brody, The New York Times

The fertility industry focuses on the 20 percent of women who succeed, not the 80 percent failure rate.

Should young women sell their eggs?

by Donna de la Cruz, The New York Times

The number of eggs used for IVF procedures is increasing, but few studies have been done on the long-term impact egg retrieval has on a woman's fertility and overall health.

► The Cash Cow in 'Fertility' Medicine

by Pamela M Tsigdinos, Healthcare in America

The unregulated fertility industry often fails to disclose: lucrative profits, poor outcomes, emotional burdens, and medical risks.

▶ UK's national sperm bank stops recruiting donors

by Laura Lea, BBC

A joint project set up with a small government grant in response to couples turning to foreign markets for sperm yielded only seven donors.

Cambodia bans booming commercial surrogacy industry

Channel News Asia

A government edict makes Cambodia the latest country to ban commercial surrogacy after prohibitions in other parts of the globe sparked a local boom in business.

► Some I.V.F. Experts Discourage Multiple Births

by Jane E. Brody, The New York Times

The first IVF baby resulted from a single transferred embryo. After years of encouraging multiple embryo transfers and multiple births, the rates are finally dropping.

Boys conceived through IVF technique have lower than average fertility

by Hannah Devlin, The Guardian

Tests on young men conceived via intra-cytoplasmic sperm injection show that they have on average lower sperm quantity and mobility.

Genetically Modified Organisms

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► Doubts About the Promised Bounty of Genetically Modified Crops

by Danny Hakim, The New York Times

Genetic modification in the US and Canada has not accelerated increases in crop yields or led to overall reduction in pesticide use.

▶ Are Altered Mosquitoes a Public Health Project, or a Business?

by Antonio Regalado. MIT Technology Review

The fight against dengue and Zika in Latin America is turning into a contest between mosquito-altering technologies, and between profits and public health.

Various - News TOP -

► The shifting landscape in biosocial science

by Brett Milano, Harvard Gazette

Dorothy Roberts' two-part Tanner Lectures examine how a profound shift in biosocial science is affecting race and social inequality.

► Obama Brought Silicon Valley to Washington

by Jenna Wortham, The New York Times

The White House South by South Lawn festival presented the U.S. as a start-up of dreamers and inventors looking to "fix" social problems with tech.

▶ Social science: Include social equity in California Biohub

by Science FARE (Feminist Anti-Racist Equity) Collective: Jessica Cussins, Kate Weatherford Darling, Ugo Edu, Laura Mamo, Jenny Reardon & Charis Thompson, *Nature*

The Chan-Zuckerberg initiative should use 5-7% of its Biohub research budget to design and monitor goals of justice and equality. Otherwise, social inequalities could limit the project's potential.

► Science group seeks to guide Silicon Valley philanthropists

by Erika Check Hayden, Nature News

The Science Philanthropy Alliance works with wealthy individuals, including the Chan-Zuckerberg Initiative, on a confidential basis to advise them on funding basic research.

► Blame bad incentives for bad science

by Bethany Berkshire, ScienceNews

The publish-or-perish culture rewards researchers for the number of papers they publish, leading to sloppy and irreproducible science, and sometimes unethical practices.

► The Ethics of Hunting Down 'Patient Zero'

by Donald G. McNeil, Jr., The New York Times

The debunking of a myth raises a moral question about a regular feature of journalism: Is it right to hunt down the first case in any outbreak?

Fatal experiments: a maverick surgeon strikes back

by Nell Frizzell, The Guardian

A new documentary looks at the six patients who died on Dr. Paolo Macchiarini's watch. When does pioneering medicine become reckless endangerment?

▶ Uterus Transplants Fail Again: Why Are They So Difficult?

by Rachael Rettner, Live Science

Four uterus transplants using live donors took place in Dallas, a first in the U.S. But three of the uteruses had to be removed due to lack of proper blood flow.

▶ What's the Longest Humans Can Live? 115 Years, New Study Says

by Carl Zimmer, The New York Times

Despite improvements in modern life and medicine, researchers claim that humans have reached the upper limit of longevity.

