

An Institute of Medicine committee is studying the "ethical and social policy" implications of germline mitochondrial manipulation. Why do most of its members seem uninterested in social or policy questions?

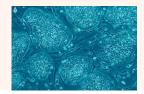
DARPA, Synthetic Biology and Human Germline Engineering

by Pete Shanks

The Defense Advanced Research Projects Agency is committed to synthetic biology as one of its four main project areas, and may be involved in human germline experiments.

Hype, Money and Stem Cell

by Pete Shanks Michael Hiltzik of the *Los Angeles Times* used newly published research to write a scathing article largely focused on the California Institute for Regenerative Medicine.



NEWS

A Modern Woman's Burden

[Quotes CGS's Marcy Darnovsky] by Natalie Lampert, *New Republic* How much does egg-freezing technology help delay reproduction?

Who's Getting Rich Off Your Genes?

by Patricia J. Williams, *The Nation* The post-war aversion to eugenics — the understanding that despite great variability from one human to another, no one life is worth more than another — has eroded.

Human Genetic Engineering Demands more than a Moratorium

by Sheila Jasanoff, J. Benjamin Hurlbut and Krishanu Saha, *The Guardian*

Expert calls for a moratorium on germline gene engineering are no substitute for richer public debate on the ethics and politics of our biotechnological futures.

Lisa Ikemoto Guest Piece on Human Germline Genetic Modification

by Lisa C. Ikemoto, *Knoepfler Lab Stem Cell Blog* The call for a moratorium is as much a game changer as the technology itself. It creates an opportunity for research transparency and open exchange between the scientific community and the lay public.

Practical Plan for Managing Human Germline Genetic Modification

by Paul Knoepfler, Knoepfler Lab Stem Cell Blog

There is a growing sense of urgency amongst biomedical scientists to take a proactive approach to current and future use of CRISPR technology in human germ cells and embryos.

Genetic Engineering & The Future of Humankind

by Jamie Metzl, Ivy Magazine

We're on the verge of this fundamental transformation, not just of our reproductive processes, but of how we think of ourselves as humans.

Scientists Urge Temporary Moratorium On Human Genome

by Rob Stein, *NPR* Leading biologists and bioethicists are calling for a worldwide moratorium.

Strategy: Lines in the Sand

by C. Simone Fishburn, *BioCentury*

With some researchers calling for restraint on the use of gene editing while ground rules are laid, schisms are already surfacing on whether there's any case to be made for using the technology in human germline cells.

Genome Editing Poses Ethical Problems that we Cannot Ignore

by Anthony Wrigley and Ainsley Newson, *The Conversation* With great power comes great responsibility – and few subjects elicit such heated debates about moral rights and wrongs.

Why is the Scientific World Abuzz about an Unpublished Paper? Because it Could Permanently Change Human DNA

by Ashley Csanady, National Post

Scientists around the world are anticipating the results of a Chinese study that would mark the first time DNA in a human embryo has been modified in a way that would carry into future generations.

Who Owns CRISPR?

by Jenny Rood, The Scientist

"The technology seems so powerful, the technology seems so profitable, and the intellectual property issues seem so irreconcilable that it's a big mystery as to what's going to happen."

Mini Enzyme Moves Gene Editing Closer to the Clinic

by Heidi Ledford, Nature News

The discovery expands the potential CRISPR toolbox for treating genetic diseases in humans.

Doudna's Caribou Bio Raises \$11M To Expand Uses For Gene Editing Tech

by Bernadette Tansey, *Xconomy*

The money will help the company speed up its efforts to adapt a versatile genome editing technique for uses including drug research and development, and industrial technology.

Genetic Engineering, Humankind Creeps Toward A 'Planet Of The Apes'

by Laurent Alexandre, World Crunch

The astounding developments in nanotechnology, biotechnology, information technology and cognitive science are posing problems that we thought only existed in science fiction.

The Next Manhattan Project

by Patrick Tucker, The Atlantic

Anticipating cutting-edge scientific research before it happens may be key to protecting against bioterrorism.

New DNA Tech: Creating Unicorns and Curing Cancer for Real?

by David Ewing Duncan, *The Daily Beast* We have the earth-shattering technology in our hands—but even its inventors worry about its awesome power to alter our genetic future.

The Pentagon Is Putting Big Money Into Synthetic Biology

by Dan Vergano, *BuzzFeed News*

Genetically engineered bacteria, bionic limbs, and synthetic vaccines will help the U.S. build a more powerful military, according to DARPA, the Pentagon's futuristic research arm.

The Brave New World of DNA Synthesis

by Jeffrey Marlow, *Wired* DNA synthesis companies range from scrappy start-ups to Cambridgearea behemoths, each touting a distinct set of tools that carves out a slice of the ever-increasing pie.

Tech Titans' Latest Project: Defy Death

by Ariana Eunjung Cha, *Washington Post* For centuries, explorers have searched the world for the fountain of youth. Today's billionaires believe they can create it, using technology and data.

Ancestry.Com Is Quietly Transforming Itself Into A Medical

Research Juggernaut

by Daniela Hernandez, *The Huffington Post* Since it has been collecting ancestral data for decades, the \$1.6 billion company knows health information not just about its users, but about their great-grandparents and great-great-grandparents.

Fetal DNA Tests Prove Highly Accurate but Experts Warn of Exceptions

by Julie Steenhuysen, Reuters

The newer tests are not regulated by the FDA, and companies are heavily promoting their performance in ways that may mislead patients, critics say.

Genome Study Predicts DNA of the Whole of Iceland

by Antonio Regalado, *MIT Technology Review* Large genome databases are starting to reveal critical health information—even about people who have not contributed their DNA.

Baby Genes to be Mapped at Birth in Medical First

by Helen Thomson, New Scientist

Could genome sequencing of newborns give valuable insight or do harm? That's the question US doctors are trying to answer in a pioneering trial starting this month.

A New Facebook App Wants To Test Your DNA

by Virginia Hughes, *BuzzFeed News*

Some people are growing wary of Facebook's reach into seemingly every aspect of life, and all of the privacy and security concerns that come with that.

New Study: Stem Cell Field is Infected with Hype

by Michael Hiltzik, Los Angeles Times

Stem cell researchers often ply journalists with "unrealistic timelines" for the development of stem cell therapies, and journalists often swallow these claims uncritically.

Controversial Fertility Treatments Focus on Eggs' Power Plants

by Jennifer Couzin-Frankel, Science Magazine

A Massachusetts company is convinced that mitochondria are key to conceiving a baby. More than 10 women are now pregnant via the firm's method, which adds a bolus of a woman's own mitochondria to her mature egg.

Kaiser to Look for Autism's Causes in Large-Scale Study

by Victoria Colliver, San Francisco Chronicle

Scientists have long suspected that autism results from a combination of genetics and environmental factors, but no one knows for sure.

Gene Counsellors Expect Resurgence of 'Jolie Effect'

by Erika Check Hayden, Nature

Misinterpreted results of tests for cancer risk can result in unnecessary surgery.

Squealing on DNA: The Law and Secondary Uses of Genetic Information

by Nils Hoppe, *BioNews*

One of the legally and ethically problematic issues regularly debated in the context of biobanks and tissue repositories is that of its potential for forensic use.

Precision Medicine is Coming, But Not Anytime Soon

by Beverly Merz, Harvard Health Blog

Identifying disease-related genes doesn't mean these genes are useful today.

This is Why you Shouldn't Believe that Exciting New Medical Study

by Julia Belluz, Vox

All studies are biased and flawed in their own unique ways. The truth usually lies somewhere in a flurry of research on the same question.

Astronaut Twins Study Raises Questions About Genetic Privacy

by Alexandra Witze, Nature

Researchers will gather reams of genomic and other data on astronaut Scott Kelly and compare it to his Earth-dwelling twin, but the results may never be published if they discover sensitive medical information.

Bioethics Commission Releases Final Neuroscience Report as Part of BRAIN Initiative

Misti Ault Anderson, The blog of the Presidential Commission for the Study of Bioethical Issues

The report focuses on topics that must be addressed if neuroscience is to progress and be applied ethically.

Attorneys: Sterilizations were Part of Plea Deal Talks

by Sheila Burke, Associated Press Nashville prosecutors have made sterilization of women part of plea negotiations at least four times in the past five years.

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