



CENTER FOR
GENETICS
AND SOCIETY

BioPolitical

News&Views

January 9, 2021

SPOTLIGHT

The Center for Genetics and Society in 2020



The last year was extraordinary. It touched, challenged, and changed all of us at the Center for Genetics and Society. The CGS team adapted and reacted to the circumstances, while maintaining focus on our goal of working to ensure an equitable future where human genetic and reproductive technologies benefit the common good. [Read on](#) for highlights of CGS's 2020 activities.

ANNOUNCEMENTS



Dorothy Roberts, [CGS Advisory Board](#) member and professor of law and sociology at the [University of Pennsylvania](#), will deliver the keynote address at the 2021 Martin Luther King Jr. Health Equity Symposium convened by the Penn Medicine Office of Inclusion and Diversity on January 20. The title of her talk is "The History and Future of Race, Health and Justice." [Register for this free event here.](#)

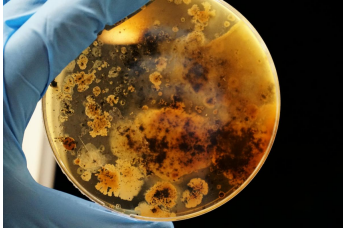
COMMENTARY

Notable Blog Posts in 2020

[CGS](#), *Biopolitical Times* | 01.07.2021

Following a *Biopolitical Times* tradition, we present some of our favorite blog posts of the past year, in chronological order. There are certainly many more posts worth your time, which can be found at the [Biopolitical Times archive](#); scroll down and "VIEW MORE" as needed.





The Biden Administration and Genetically Engineered Bioweapons Research

[Gwen D’Arcangelis](#), *Biopolitical Times* | 01.07.2021

The incoming Biden-Harris administration promises a restoration of the role of science in government, but we’ll need more than a “return to normal.” This is especially true in a technoscientific area deserving extra vigilance—gene editing and bioweapons.

WHAT WE’RE READING

HUMAN GENOME EDITING | RACE & EUGENICS | ASSISTED REPRODUCTION |
EXPERIMENTAL THERAPIES | PRIVACY | MARKET WATCH | VARIOUS

HUMAN GENOME EDITING

Human Molecular Genetics and Genomics — Important Advances and Exciting Possibilities

[Francis S. Collins](#), [Jennifer A. Doudna](#), [Eric S. Lander](#), and [Charles N. Rotimi](#) , *New England Journal of Medicine* | 01.02.2021

This broad-brush overview is optimistic about the prospects for applying research into genomic variations among people of diverse backgrounds to gene therapy. The authors gesture toward remaining uncertainties and the possibility that scientists alone cannot answer all of the important questions.

“Prevention” and Human Gene Editing Governance

[Eric T. Juengst](#), *AMA Journal of Ethics* | 01.01.2021

The Holocaust and the racial hygiene doctrine that helped rationalize it still overshadow debates about using gene editing for disease prevention. (In the issue “**Legacies of the Holocaust in Health Care.**”)

30 Years Since the Human Genome Project Began, What’s Next?

[Megan Molteni](#), *Wired* | 12.30.2020

Eric Green, head of the nation’s top genomics research institute, looks back on how far the field has come and shares his bold vision for the future. He is optimistic, but clear about the complicated problems, technical and social, in the application of research.

RACE AND EUGENICS

Is Reducing Down Syndrome Births a Form of Eugenics?

[Richard Gundersman](#), *Psychology Today* | 01.03.2021

The point is not that parents should be branded eugenicists, but simply to indicate that eugenics has not been fully consigned to history’s dustbin. As a society, we are still deciding who is and is not born based on genes, and the decisions we make shape humanity not just into the next generation, but generations to come.

The Dark Past of Algorithms That Associate Appearance and Criminality

[Catherine Stinson](#), *American Scientist* | 01.01.2021

Both “old” and “new” phrenology have been critiqued for their sloppy methods, but simply calling facial-recognition research “phrenology” isn’t the most effective strategy for communicating the force of the complaint. For scientists to take their moral responsibilities seriously, they need to be aware of the harms that might result from their research.

ASSISTED REPRODUCTION

England's first not-for-profit IVF clinic to open in 2021

[Helen Pidd](#), *The Guardian* | 12.29.2020

The British Pregnancy Advisory Service, which has been helping women terminate pregnancies for more than 50 years, has decided to set up its own fertility network to address the inequalities in IVF provision in England. It plans to undercut private clinics and charge only the true cost of treatment, with no expensive "add-ons."

EXPERIMENTAL THERAPIES

CRISPR cures progeria in mice, raising hope for one-time therapy for a disease that causes rapid aging

[Sharon Begley](#), *STAT* | 01.06.2021

David Liu of the Broad Institute and NIH Director Francis Collins collaborated on an experiment that worked remarkably well. The base editor was so good at repairing the mice's progeria that half the animals lived 510 days — old age for mice, and twice as long as untreated mice.

The First Pig-to-Human Organ Transplants Could Happen This Year

[Emily Mullin](#), *Future Human* | 01.05.2021

In December, the FDA deemed "GalSafe" pigs safe both for human food consumption and as a source for potential therapeutic uses. But United Therapeutics doesn't plan to start producing allergy-free pork anytime soon: "Our ultimate goal is to essentially have an unlimited supply of organs."

Liver tumor in gene therapy recipient raises concerns about virus widely used in treatment

[Jocelyn Kaiser](#), *Science* | 12.22.2020

A hemophilia patient injected with a virus carrying a therapeutic gene in a clinical trial has developed a liver tumor. The FDA has halted the associated clinical trials, and uniQure, the Dutch firm behind the studies, is now investigating whether the virus itself caused the cancer.

2020 Was the Turning Point for CRISPR

[Emily Mullin](#), *Future Human* | 12.13.2020

Despite continuing challenges, scientists took huge strides toward using the gene-editing tool for medical treatments, with experimental therapies for sickle cell disease, beta-thalassemia, and Leber congenital amaurosis (a type of progressive vision loss). Advances in base editing may be reducing the errors that have plagued the technology.

PRIVACY

U.S. law sets stage for boost to artificial intelligence research

[Jeffrey Mervis](#), *Science* | 01.06.2021

The National Artificial Intelligence Initiative Act of 2020, which became law last week, authorizes spending but doesn't appropriate money. It authorizes \$4.8 billion for the National Science Foundation over the next 5 years, with another \$1.15 billion for the Department of Energy and \$390 million for National Institute of Standards and Technology.

Singapore says police will be given access to Covid-19 contact tracing data

[Josh Taylor](#), *The Guardian* | 01.05.2021

The TraceTogether scheme is used by almost 80% of the nation's population. Authorities have said the data is encrypted, stored locally, and tapped only if individuals test positive for Covid-19. However, some politicians are suggesting that other uses may be appropriate, where the safety of citizens is affected.

Prestigious AI meeting takes steps to improve ethics of research

[Davide Castelvecchi](#), *Nature* | 12.23.2020

For the first time, organizers of the Neural Information Processing Systems meeting required speakers to consider the societal impact of their work. The revamped review process and the ethics-focused discussions are the latest efforts to improve practices in machine learning and AI.

MARKET WATCH

Haven, ambitious health venture backed by Amazon, to shut down

[Erin Brodwin](#), *STAT* | 01.04.2021

The high-profile health-care venture backed by Amazon, JPMorgan, and Berkshire Hathaway will cease operations at the end of February. The three companies will “continue to collaborate informally” on programs for their individual employee populations. In the meantime, Amazon has built out a health care empire of its own.

23andMe raises \$82.5 million in new funding

[Darrell Etherington](#), *TechCrunch* | 12.29.2020

The funding, confirmed by the *Wall Street Journal*, comes from investors including Sequoia Capital and NewView Capital. It brings the total raised by 23andMe to date to over \$850 million. There’s no specific agenda earmarked for this round, beyond general use to continue to fund and grow the business.

VARIOUS

Gene editing of crops and livestock may soon be permitted in England

[Fiona Harvey](#), *The Guardian* | 01.06.2021

Ministers said changing the current strict rules, which originate from the EU and make gene editing for crops and livestock almost impossible, would bring widespread benefits to consumers and farmers. But some activist groups raised concerns about animal welfare.

Shobita Parthasarathy on Why We Need to Diversify Expertise

[Daniel Sarewitz](#), *Public Books* | 01.04.2021

“Bioethics tends to not interrogate the details of science, let alone the more technical questions. ... In the history of how bioethicists have figured in discussions around intellectual property, their position has almost uniformly been: we need to support science, that’s our job.”

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