

Progress in genetic testing of embryos stokes fears of designer babies

November 16 2018, by Bob Yirka



Human Embryo. Credit: Ed Uthman, MD/Wikipedia

Recent announcements by two biotechnology companies have stoked fears that designer babies could soon be an option for those who can afford to pick and choose which features they want for their offspring. The companies, MyOme and Genomic Prediction, have been working on technology that they hope to sell to fertility clinics, which could someday lead to the option of terminating pregnancies if fetuses have undesirable characteristics, such as low IQ levels.

Genetic testing of [embryos](#) fertilized via [in vitro fertilization](#) has been available for almost 30 years—it is routinely conducted to look for abnormalities in chromosomes that lead to disorders such as cystic fibrosis. But such tests have been limited in scope. Advances in technology now allow for screening for more possible conditions and soon, certain undesirable characteristics.

More specifically, there are two new options that will soon be made available to parents considering IVF. The first involves obtaining genetic samples from both parents and the embryo, and using a computer algorithm to come up with a more complete chromosomal profile for the embryo. The second technology involves sequencing the embryo's DNA and subjecting the results to machine learning algorithms that are able to identify patterns among DNA elements that suggest the likelihood of a person developing some types of diseases, such as certain cancers.

The new technology gives prospective parents more leeway in deciding whether to implant an embryo and allowing it to grow and eventually to be born. But it also opens the door to more [difficult decisions](#) in the future, as biotechnology continues to improve. Researchers at such companies as MyOme and Genomic Prediction have mentioned that it might soon be possible to make a better-than-average prediction of intelligence based on genetic markers. That poses the question of whether it is unethical to filter for intelligence or other non-health related characteristics, such as eye or hair color—or perhaps someday,

how good-looking a child will be, or how personable.

Officials for both companies have been careful to point out that they will only be offering testing for diseases, at least for now. Critics have suggested that it is just a matter of time, however, before designer-baby options become available.

More information: www.myome.com/genomicprediction.com/

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Citation: Progress in genetic testing of embryos stokes fears of designer babies (2018, November 16) retrieved 9 April 2024 from <https://medicalxpress.com/news/2018-11-genetic-embryos-stokes-babies.html>

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