Diverse Cell Lines Matter in Preclinical Research

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Researchers around the world are calling on the biomedical community to help raise awareness of and ultimately reduce the underrepresentation of Black and brown cell lines in medical research, arguing that doing so is essential for making potentially lifesaving treatments both more effective and more equitable for generations to come, Medical News Today reports.

The international call to action comes via a new report published this month in Cell alerting biologists and other medical researchers of the vast disparities that persist when selecting cell lines in preclinical research. Cell lines are grown from a single cell taken from living tissue to produce a cell population with the same genetic makeup for use in testing new medical treatments.

Studies show that up to 95% of commonly used cell lines today come from people of European descent, including 98% of prostate cancer cell lines and up to 80% of breast cancer cell lines. The resulting medicine isn't just biased, it may also increase the risk of harm for people taking medications that have not been sufficiently been tested in their population. For example, current research shows that Black men are up to 2.5 times more likely to die of prostate cancer than white American men—a disparity that could potentially be mitigated by more inclusive science.

The report calls for researchers to actively disclose and consider the diversity of their future preclinical work, that is, not only to seek out more diverse study populations but also to clearly publish the origin of their cell lines in the main text of their studies.

"Awareness is created by visibility," said Sophie Zaaijer, PhD, coauthor of the report. "When no one publishes the ancestral origin of a cell line in the methods section of scientific manuscripts—it will not be on the radar of its scientific readership."

The report also encourages researchers to build trust with Black and other marginalized populations to encourage them to participate in research studies.

Without these changes, experts say advances in the burgeoning field of personalized or precision medicine will be severely limited. But with a more inclusive industry, researchers could help improve health outcomes for people around the world who have been otherwise excluded from clinical research.

To learn more about how inequity in medical research drives disparities in medicine, see "New Study Highlights Lack of Diversity and Inclusion in Vaccine Clinical Trials."
