



How can we improve genetic research?

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The solution is to acquire more data across a more diverse population, create better statistical methods, and plug the gap in research. Currently, Eurocentricity in genetics is so problematic that rolling out genetic analysis across populations can actually be dangerous due to its inaccuracy.

There needs to be a boosting of diverse sample sizes and it needs to be a global push. There are currently good examples of this research: H3 Africa, All of Us in the United States, and East London Genes and Health in the UK. Other collection efforts include the condition-specific Stanley Centre for Psychiatric Research, and biobanks in Japan and China Kadoorie.

Researchers must also give back to local communities through engagement with diverse collaborators and the training of local researchers who can go on to build future labs. This can bring sustainability to the global effort of genetic research and reduce the need for future foreign aid.

Dr Martin outlines this issue clearly: 'one area that's really important to think about is what local communities, who are typically underrepresented in genetic studies, have to gain from those studies and what the balance is with global engagement. So, for example, when we do genetic studies I think it's really important that we give something back to the local communities and that this, sort of, 'safari' research or 'helicopter' research is not happening - where geneticists are going into new parts of the world which has not traditionally been involved in genetics

research, taking samples and doing whatever with those samples and then not returning anything to the communities. So I think we need to have some research capacity building going on for those areas of the world that are newer to genetics research, so that we can actually build these fruitful, long term, sustainable research collaborations and that people who are developing these new technologies can develop them both for globally diverse and local communities that haven't really been involved or engaged quite as much - either due to limited resources or just being newer to the genetics landscape.'

What does the future hold?

Work is being done, but Dr Martin argues that direct-to-consumer genetics must also play a role: 'they actually have a responsibility to help with those inequities and those issues because they're so consumer-facing and they are delivering this information to individuals of very diverse ancestries.'

Many of these companies are already worried about this Eurocentricity and the lack of information about varied ethnicities. Many of their customers are diverse, and their genetic analysis may be lacking due to not enough research. While there is always going to be an imbalance in research, and biases genetically, through improved research practices and an increase in data progress can be rapid.

The issue of Eurocentricity in genetic data can be solved to some extent, but it must be a global effort from researchers and consumer companies alike.