Whole genome sequencing fuels DNA ‘intelligence revolution’

We’ve entered a new phase in the history of whole genome sequencing (WGS). Consider that researchers at University of Toronto just launched a massive project to sequence the whole genomes of 10,000 people per year. This is truly astounding when you recall that it took 13 years and $3 billion to sequence the first human genome, and that as recently as 2012 there were only 69 whole human genomes that had ever been sequenced.

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[A]s our public and private reference databases grow and we have access to more genomic data than ever, we’ll begin to rely heavily on machine learning to realize the full potential of WGS.
…

Converting the raw data of the human genome into medically useful and understandable information has historically been a huge technical bottleneck, but over the course of the last decade, advances in compute, rather than laboratory processes, have driven the most dramatic time and cost reductions associated with WGS.

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At the institutional level, the power of genomics will play an interesting role in helping payers and providers improve population health…Genomics [can help] identify patients who are high-risk for developing certain diseases, and intervening early.

Downstream, at the consumer level, personalized medicine will continue to be a major focus for WGS….

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: The genomics intelligence revolution