

PRABHA IAS IPS COACHING ACADEMY



Scientists recently used a genetic sequencing technique called whole exome sequencing to discover a new rare genetic disease.

Whole-Exome Sequencing (WES)

WES is the approach used to sequence only the protein-coding regions of the human genome.

These protein-coding regions within the genome are known as exons, and they make up less than 2% of our entire genome, but they are very important because they contain about 85% of the genetic variants linked to different diseases.

Together, all the exons in a genome are known as the exome.

WES focuses on the exome and provides a more targeted approach compared to whole-genome sequencing (WGS), which sequences the entire genome, including non-coding regions.

Since most disease-related mutations are found in the exome, this makes WES an effective tool for diagnosing genetic conditions and understanding disease mechanisms.

WES is a faster and cost-effective alternative to WGS. It also simplifies the data analysis process.

WES is especially useful in research and clinical settings to identify both common and rare genetic variants.