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India creates worldâ??s first database of genomic variants of oral cancer

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dbGENVOC is a browsable online database of GENomic Variants of Oral Cancer and is a free resource



National Institute of Biomedical Genomics (NIBMG), Kalyani, an autonomous institute funded by the Department of Biotechnology, has created a database of genomic variations in oral cancer; the first of its kind in the world. NIBMG has made this database publicly-accessible.

dbGENVOC is a browsable online database of GENomic Variants of Oral Cancer and is a free resource. First release of dbGENVOC contains (i) ~24 million somatic and germline variants derived from whole exome sequences of 100 Indian oral cancer patients and whole genome sequences of 5 oral cancer patients from India, (ii) somatic variation data from 220 patient samples drawn from the USA and analyzed by TCGA-HNSCC project and (iii) manually curated variation data of 118 patients from recently published peer-reviewed publications. Variants were identified by the community approved best practice protocol and annotated using multiple analytic pipeline.

dbGENVOC is not just a catalogue of genomic variants, it has a built-in powerful search engine. It also allows a reasonable extent of statistical and bioinformatic analysis to be carried out online, including identifying variants in associated altered pathways in oral cancer.

The repository, which will be updated annually with variation data from new oral cancer patients from different regions of India and southeast Asia, has the potential to support advances in oral cancer research and will be a major step in moving forward from simply cataloguing variants to gain insight into their significance.