

Taiwan Biobank for the Health of Future Generations

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Abstract

Taiwan Biobank is an infra-structured resource accessible to biomedical researchers aiming to further understand the association between genomic, environmental exposure, lifestyle, and chronic diseases. Through the recruitment and follow-up of 200,000 participants in the Taiwanese general population, the Taiwan Biobank aims to facilitate multi-omics research in the post-genomic era and to improve the health of future generations. Currently, more than 129,585 participants with whole-genome genotyping and questionnaires can be released. Structured questionnaires have been administered to collect comprehensive information on risk factors, dietary patterns, lifestyle, and family history of diseases. Physical examinations and biochemical measurements have been also performed. Over 1,400 participants have multi-omics data such as whole-genome sequencing, whole-genome methylation, blood metabolomic, and urine plasticizer data. Taiwan Biobank have accumulated digital data over 1.5 petabytes. More than 3,000,000 biospecimens including blood, urine, and DNA are deposited in Taiwan Biobank. All participant data and specimens collected by Taiwan Biobank have been made publicly available https://www.twbiobank.org.tw/dtrls_link.php. Our goal is to change the future of health care with data.