



# NCHC Biomedical Data Platform

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As a leading cyberinfrastructure provider in Taiwan, NCHC is building data commons for the biomedical data ecosystems. We transform, synchronize, and maintain complex biological data from various biobanks and healthcare organizations, allowing researchers to access the information in a scalable, repeatable, and secure way. We partner with Taiwan Biobank (TWB), a cohort of 200,000 individuals from the general Taiwanese population. We made TWB data accessible for approved researchers by enabling flexible data integration, real-time inquiry, and secure cloud-based supercomputing analysis. In parallel, NCHC is developing a sustainable platform for a multi-governmental "Health Big Data Platform Program" in which efforts have been made to combine real-world electronic medical records, medical images, digital pathology, and genomics data of 10 cancers from 8 healthcare institutions. We are creating and harmonizing a patient-centric database, and coming soon are the one-stop analysis services with co-located data analysis, data aggregation, high-performance data analytics, result visualization, expert annotation, customized filtering, candidate variants, and analytic results sharing. Using a very low cost and open innovation paradigm, NCHC staff members voluntarily created the user-friendly COVID-19 open data platform, which has worked very successfully for all members of society, particularly academics and healthcare professionals.

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