

10.53106/199457952023111706002

Global Development Trends of Biobanks

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Abstract

As we exit the COVID-19 pandemic, the biomedical industry is exploring opportunities to harness the potential of big data for transformation and growth. Biobanks are critical pieces of infrastructure in this endeavor, and they integrate various types of health data, including clinical and genetic information. Data from these biobanks are used for genetic sequencing with the help of advanced cloud computing and artificial intelligence technologies; these technologies eliminate obstacles associated with hardware or geographical distance and enhance trust and agreement among participants. Biobanks connect a variety of stakeholders together—such as researchers, participants, and clinicians—and give rise to a brand new ecosystem that brings us closer to the goal of precision health.

Keywords: biobanks, gene, precision health, big data


人體生物資料庫於全球之發展趨勢

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摘要

隨著疫情的衝擊逐漸退去，生醫產業如何抓住後疫情重啟的契機，利用健康大數據，轉型升級，為先進各國所關注之焦點。人體生物資料庫(Biobank)因具備整合個人醫療、基因資料與其他健康數據的能力，成為人類透過健康大數據跨入精準健康的關鍵設施。Biobank結合已臻成熟的雲端運算與人工智慧，持續推進基因定序、打造跨國境且不受限於軟硬體條件的運用環境，能更有效凝聚參與者的信賴與共識，整合產、官、學，為生醫產業孕育全新生態系，向精準健康邁進。

關鍵詞：人體生物資料庫、基因、精準健康、大數據