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Transforming Taiwan into an Asian Biomedical Hub

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Taiwan's evolution into an Asian Biomedical Hub requires concerted efforts from diverse stakeholders



Known for its world-class Information and Communications Technology industry and bolstered by high-quality healthcare services, Taiwan uniquely positions itself to drive innovation in the biomedical sector. Yet, despite substantial efforts by government and industry players, the journey to establish Taiwan as a biomedical powerhouse initially faced challenges. Many biomedical innovation teams and startups found themselves allocating significant resources to product development, only to encounter a lukewarm market response. The heart of the issue often rested on a mismatch between the products and the actual unmet clinical needs.

To strengthen Taiwan's biomedical industry, the Ministry of Science and Technology (now the National Science and Technology Council), in collaboration with NARLabs, initiated the Stanford-Taiwan Biomedical (STB) Fellowship in 2008. This was followed by the launch of the SPARK Taiwan programme in 2013 and the Berkeley-Taiwan Biomedical (BTB) Fellowship in 2016. By 2020, Taipei Medical University (TMU) took decisive action, launching the TMU Biomed Accelerator and TMU-Stanford Biodesign Global Faculty Programme.

These initiatives highlighted the need for a robust biomedical innovation ecosystem—one that helps biomedical innovators identify high-value, unmet clinical needs and transform ideas into tangible products. With this vision, TMU fostered such an ecosystem, strengthening the national push toward biomedical industry development. The TMU Biodesign Centre, serving as the ecosystem's gateway, facilitated collaborations among medical professionals, engineers, and business specialists. This interdisciplinary synergy allowed teams to pinpoint real, significant unmet needs within the clinical landscape.

Teams that successfully identified a compelling need could further incubate their projects in hospital-based incubators, such as the Wan Fang Hospital Biomed Innovation Centre or the TMU Hospital Prospective Innovation Centre. They also had the

opportunity to join the TMU SPARK programme to refine their ventures.

As these teams matured into startup companies ready for venture capital funding, they transitioned into the TMU Biomed Accelerator. Here, they received guidance on clinical, regulatory, reimbursement, and business model strategies, as well as funding opportunities from TMU and BE Health Ventures. A key aspect of the accelerator was the assistance provided to these burgeoning companies to expand into major international markets, transforming their locally-developed ideas into global solutions.

Adding another dimension to its objective, the TMU x BE Acceleration Programme also aspires to position Taiwan as the ‘gateway to Asia for international startups. By leveraging Taiwan's unique strengths - such as access to high-quality clinical studies, robust medical electronic databases, top-notch talent, and renowned manufacturing capabilities - the programme provides a launchpad for global startups to penetrate the Asian market. This not only helps elevate Taiwan's position in the global biomedical scene but also contributes significantly to the regional and international biomedical industry.

Undoubtedly, Taiwan's evolution into an Asian Biomedical Hub requires concerted efforts from diverse stakeholders, including government departments, universities, society, investors, and startups. Esteemed institutions such as National Taiwan University, National Cheng-Kung University, National Yang-Ming Chiao Tung University, and Show Chwan Healthcare System/IRCAD Taiwan have underscored this imperative, each establishing their biomedical innovation programmes. As the biomedical industry ascends as a strategic cornerstone of Taiwan's economy, the potential to unlock significant value from this burgeoning sector is unmistakably clear.

Our innovative ecosystem seeks not only to energise the regional and international economy but also to enhance patient care and improve global healthcare outcomes. Taiwan's efforts have gained increased recognition in the global biomedical innovation community, as evidenced by its success in co-hosting the BME IDEA Asia Pacific 2021-2023 with Biodesign Australia, supported by partners including Stanford Biodesign, Japan Biodesign, Singapore Biodesign, Biodesign Israel, and School of International Biodesign. Moving forward, we are optimistic that Taiwan will continue its upward trajectory as a global player in the biomedical sector, delivering solutions that meet the world's unmet healthcare needs.

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