

GLOBAL OUTLOOK

Decoding Genomics with Precision

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Dr. Yen-Hsuan Ni, Director of CGPM (third from the right, back row) and the team of CGPM.

NTU Centers of Genomic and Precision Medicine (CGPM) is committed to doing research that benefits society. The primary feature of CGPM is platform-based integration of basic research and clinical studies in translational medicine in conjunction with the synergy of NTU’s medical system and the biomedical industry. In the shadow of the COVID-19 pandemic, CGPM actively conducts research related to policy development and clinical treatment. As the pioneer in working on SARS-CoV-2 whole genome sequencing and phylogenetic analysis, it aims to identify the possible origins and transmission pathways of the viral strain.

CGPM leverages multiple omics research methods in addressing three unmet medical needs—infectious diseases, stress biology, and cancer. It aims to reduce incidence rates and fatality rates in infectious diseases and cancer by proposing targeted treatment plans for individual or racial variants. With resources and expertise in multiomics, bioinformatics, and structural biology, CGPM has built a solid scientific platform with international academic collaborations.

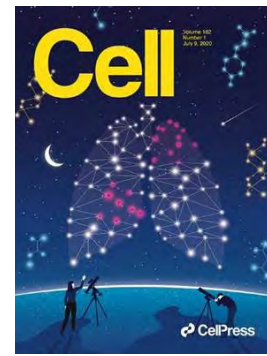
With well-equipped core labs and ample biomedical resources, CGPM is a top research center integrating translational medicine and multiomics in Taiwan. While Genomic Research Center at Academia Sinica is larger in size, it is focused



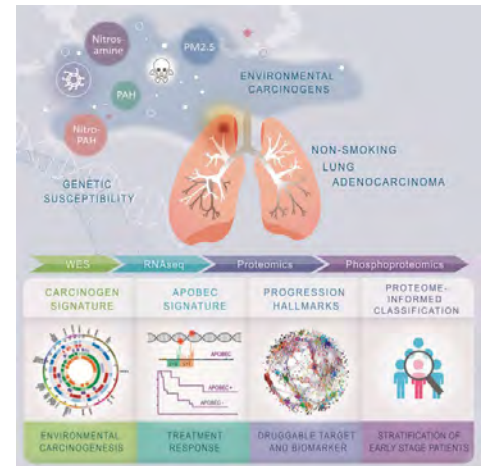
NGS & Microarray Core Lab of CGPM’s participation in the USA’s Cancer Moonshot Project featured on the cover of Cell in 2020.

solely on basic research. Few universities in Asia host such a research center with commitment to clinical medicine. 48% of the CGPM members are healthcare professionals with clinical backgrounds. For years, CGPM and the College of Medicine have been facilitating international collaborations. All of the over 100 scholars and experts, as well as several university presidents, who have visited CGPM from Europe, America, and Japan, regard it as a great model for emulation.

NTU is committed to educating and training first-rate researchers and leaders. To this end, CGPM has adopted multiple approaches for undergraduates, graduate students, postdocs, and faculty. By working with NTU Promotion Center of Precision Medicine, NTU SPARK, BioGroup, and NTU Center for Biotechnology, CGPM has organized programs for 500 physicians, scholars, postgraduates, and college students from NTU and beyond. It takes considerable effort to build a biomedicine ecosystem on campus. During the past five years, CGPM has trained 622 postgraduate students and recruited 181 high-level researchers. It has also published 323 academic papers in international journals, including 71 high-impact ones. In the meantime, 31 (18 local and 13 international) collaborative studies among industries and research labs have been published. Industry players have contributed over TWD 50 million in support of these projects. CGPM also engages in projects with multiple international partners, such as a cancer research center with MD Anderson Cancer Center in America, and TRANSCAN with France, Italy, and Belgium. CGPM aspires to become a representative and primary collaborator on behalf of NTU and medical research in Taiwan.



NGS & Microarray Core Lab of CGPM's participation in the USA's Cancer Moonshot Project featured on the cover of Cell in 2020.



Since 2016, CGPM has participated in the Taiwan Cancer Moonshot Project organized by Academia Sinica as one of the founding members in the Cancer Moonshot Project launched by the National Cancer Institute in the U.S.



Click or Scan the QR code to visit the website of NTU Centers of Genomic and Precision Medicine for more details.



Director Ni's vision for the future of CGPM.