Mission (科研使命)

To harness chemical diversity to develop new therapies for cancer, infectious diseases and neurological disorders
利用化学的多样性来开发治疗癌症, 感染性疾病及神经系统疾病的新疗法

Key Resources (重要资源)

Nature Bank  天然产物资源库
Compounds Australia® ~600,000 compounds/extracts  澳大利亚化合物库®存有 60万个化合物及天然产物
High throughput/content screening platforms  高通量及高内涵筛选平台
NeuroBank >200 Parkinson’s & Schizophrenia stem cell lines  神经库存有多种帕金森症及精神分裂症干细胞系统
Partnerships (商业伙伴)

e.g. AstraZeneca, Pfizer, Actelion, Gates Foundation, Medicines for Malaria Venture, Drugs for Neglected Diseases

阿斯利康，辉瑞，Actelion公司，盖茨基金会，抗疟药研发基金会，抗被忽视疾病药物基金会

和肺结核
Nature Bank 天然产物资源库

Biota Samples 生物样品
Fraction Library 具有先导化合物性质的组分

63,000 Acquisitions 63,000 获取
34,000 Terrestrial 34,000 陆地
29,000 Marine 29,000 海洋

200,000 Fractions 200,000 分隔
Lead-Like Enhanced (LLE) Fractions 铅类似物增强 (LLE) 分隔

Photo: Stuart Newman, Griffith University
TCM, Brain Function and Drug Space

TCM, Brain Function and Drug Space

TCMs used to treat neurodegenerative diseases

Similar physico-chemical space, following PCA analysis, as occupied by current anti-PD and anti-AD drugs or candidates

Convergence between TCM components and modern medicinal chemistry understanding of physico-chemical properties is amazing

TCM, Brain Function and Drug Space

A common physicochemical base for TCM and western medicine, is pivotal to further development of ancient TCM

Herbal materials with distinct chemical constitution, known mechanism of action and identified targets will contribute to the modernization, standardization and globalization of TCM

Herbal medicines

1,892 drugs with 1,095 of them being herbal medicines (58%)

A total of 1,146 in the 2010 version including herbal medicines, animal and mineral medicines.
Compound formula (复方)

君  Principle Drug
臣  Assistant Drug
佐  Complement Drug
使  Guide Drug
Herb pairs (药对)

— the cutting-point for in-depth research of TCM
— 深入研究中医药的切入点

- Consisting two relatively fixed Chinese herbs
  包含两个相配伍的中草药

- Expressing the basic theories of the compound formula
  表达复方药物的基本原理

*Tianma Gouteng Decoction* (天麻钩藤饮)

- *Gastrpdoae rhizoma*
  天麻

- *Ramulus uncariae cum uncis*
  钩藤
Unbiassed Phenotypic Analysis to Understand Drug Combinations in TCM

482 Natural Products

Vial, Qunn. unpublished
Collaborations

Technology can be applied to TCM to facilitate translation to the Western Market

Clinical Trials Unit at the Gold Coast University Hospital

格里菲斯大学黄金海岸医院的临床试验单位