Stages d’été en recherche à l’international pour étudiants du premier cycle (SÉRI)
Summer Undergraduate International Research Internships (SIRI)

Shanghai Jiao Tong University – Project SJTU8

Title: Study on Mutation Profile of EGFR tyrosine kinase domain in Chinese Patients with Lung Squamous Cell Carcinoma (ZiXin Deng’s Lab)

Project Description:
The abnormal catalytic activity of tyrosine kinase (TKs) domain of epidermal growth factor receptor (EGFR) by mutation or over-expression plays an important role in tumor initiation and progression in numerous cancer. Mutated EGFR can be identified in 80% of non-small cell lung cancer (NSCLC) patients, especially in Asian, no smokers and women patients with adenocarcinoma histology. Tyrosine Kinase Inhibitors of EGFR (EGFR-TKIs) are recommended as first line treatment for advanced NSCLC recently and significantly improves the treatment outcomes of lung adenocarcinoma patients with mutated EGFR. However, the application of TKI for lung squamous cell carcinoma (SCC), second largest pathological subtype of NSCLC, remains controversial, because available data of EGFR mutation profile and frequency in SCC patients is limited. Though Fang et al reported that the mutation frequency of EGFR in SCC was reported only around 1-15%, several studies demonstrated that the SCC patients could be benefit from TKI therapy, although the treatment outcome were not as good as adenocarcinoma patients.

This project is aimed to obtain the mutation profile of EGFR in TKs domain of Chinese SCC patients with optimized PCR-DGGE established in our lab, to provide information for understanding the mechanism of poorer treatment outcome of EGFR-TKI therapy for SCC patients and development of better TKI.

Requirements: student interested in health science and molecular biology

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