

# BAOMS Travel Grant Report

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Program: Reconstructive Microsurgery Fellowship + MSc Reconstructive Microsurgery

Program Director: Prof. Fu-Chan Wei

Location: Chang Gung Memorial Hospital, Taiwan

Duration: 1<sup>st</sup> July 2023 – 30<sup>th</sup> June 2024 (12 months)

## Introduction

Professor Fu-Chan Wei is a pioneer in Reconstructive Microsurgery, renowned for training over 200 reconstructive microsurgeons internationally over the last 30 years. I completed a one-year fellowship under his supervision in the Plastic Surgery department at Chang Gung Memorial Hospital, Taiwan. Our cohort consisted of six post-CCT fellows from the USA, Malaysia, New Zealand, Rwanda, and myself. The fellowship comprised six two-month rotations focusing on Head and Neck reconstruction (8 months) and Peripheral nerve reconstruction (4 months), emphasising the management of facial palsy. This hands-on experience allowed me to perform nearly 100 free flap microvascular reconstructions. Academically, the fellowship was integrated with a master's degree program in Reconstructive Microsurgery from Chang Gung University, with lectures held twice a week. My research focused on Professor Wei's educational method, "Immediate Preoperative Small-group Discussion."

## Key Learning and Skills Acquired

### ***1. Surgical Skill Maturation***

The fellowship provided hands-on, indirectly supervised training tailored to my learning needs, allowing for independent practice and decision-making. I completed six rotations and benefited from personalised guidance and peer support, significantly enhancing my surgical skills and confidence. The extensive practice during the fellowship helped me develop reconstructive microsurgery as second nature.

### ***2. Different Approaches to UK Practice***

The fellowship exposed me to different reconstruction approaches. In Taiwan, the profunda artery perforator flap is preferred over the radial forearm free flap, which is more common in the UK. The Taiwanese approach to the fibula osteocutaneous free flap, which involves dissecting and visually

confirming perforators from the skin paddle to the peroneal artery, contrasts with the UK's method of assuming their course within the flexor hallucis longus muscle. These experiences broadened my surgical techniques and adaptability.

### **3. Facial Palsy Management**

Under the guidance of Professor Chuang, a world-renowned expert in peripheral nerve reconstruction, I gained insights into various management techniques for facial palsy, including dynamic facial reanimation using the gracilis functional muscle and selective facial nerve neurectomy. Assisting in three cases during an international conference on Facial Palsy provided invaluable practical skills.

### **4. Robotic Surgery**

Dr. Tommy Nai-Jen Chang introduced me to robotic surgery, utilising it for peripheral nerve reconstruction. He organised a course on the Da Vinci system, which allowed me to operate in the theatre and appreciate the potential advantages of robotic technology in head and neck microvascular reconstruction.

### **5. New Perspectives**

The fellowship instilled confidence in the robustness and reliability of microvascular reconstruction, emphasising innovation and the expansion of surgical boundaries. This experience profoundly shaped my approach to surgery, encouraging continual improvement and innovation.

## **Collaborations, Publications, and Degree Achievements**

### **1. Entrustable Professional Activities (EPAs)**

I led a project to develop EPAs for one-year head and neck reconstruction fellowships. Collaborating with international experts, we developed four EPAs and are employing the Delphi process to achieve global consensus. The project outcome will be presented at the World Society of Reconstructive Microsurgery conference in April 2025.

### **2. Publication**

I co-authored the manuscript "Immediate Pre-operative Small-group Discussion" with Professor Wei, scheduled for release in May 2025 in the *Hand Clinics*, Elsevier.

### **3. International Master Program in Reconstructive Microsurgery**

I completed all required modules and submitted my thesis for the Master of Science degree from Chang Gung University. The degree will be awarded upon the publication of our manuscript in *Hand Clinics*.

## **Challenges and Solutions**

### ***1. Chinese Language Barrier***

Understanding Chinese was beneficial for better communication with local trainees and staff. I attended weekend Chinese language classes, completing the beginner level, which helped in general conversations with patients and staff.

### ***2. Financial Burden***

The non-salaried fellowship required me to support my family while living in Asia and continue paying the mortgage in the UK. Grants and sponsorships, including from BAOMS and the Ministry of Foreign Affairs (MOFA), alleviated this burden, allowing me to focus on my training and professional development.

## **Conclusion**

The fellowship at Chang Gung Memorial Hospital under Professor Wei's supervision significantly enhanced my surgical skills and broadened my perspectives in reconstructive microsurgery. The hands-on experience, exposure to different techniques, and opportunities for collaboration and innovation were invaluable.

## **Acknowledgements**

I extend my gratitude to the oral and maxillofacial teams in Liverpool and North Wales for their foundational teaching and support. I am deeply thankful to the Reconstructive Microsurgery team at Chang Gung Memorial Hospital for their hands-on training and mentorship. I also appreciate my family's adaptability and support during this journey. Lastly, I sincerely thank BAOMS for their generous grant, which enabled me to focus on my learning and professional growth.