

麻醉學科

簡史及概況

麻醉學科於民國八十七年四月由陳大樑副教授規劃成立並擔任學科主任。次年即延攬台灣大學毒理所陳瑞明博士進入萬芳醫院麻醉科實驗室，一起為科學理念及研究共同努力，華路藍縷跟著學科一同成長。陳大樑主任於八十九年升任教授後，陸續有陳廷貴、戴裕庭、吳啟誠、以及張懷嘉等在八十九年至九十一年間加入講師陣容，並聘請北醫在各院優秀的校友擔任兼任教師。這時期經過大家的努力，學科的教學建立起完善的制度及規模。吳啟誠主任由九十三年度第一學期開始擔任學科主任，學科初期鼓勵主治醫師的再進修，期間陸續有林鈺樺、李元文及陳睿泰醫師以學位升等，獲得講師資格，同期並延攬中國醫藥大學附設醫院，學經歷豐富的張淳昭醫師為助理教授。九十四學年度台北醫學大學麻醉護理專班由陳大樑教授創辦。期間是經過多位兼任的外院教授及資深的護理人員，透過護理學院的協助順利的讓麻醉護理專業進入正式的學制，對於麻醉護理人員的訓練因而奠定其學校教育的根基。同期由陳大樑主任擔任學科主任帶領大家在學術的專業領域衝刺，廣納各地的菁英，延攬各醫學中心優秀的主治醫師包括奇美醫學中心曾劍英、邢中熹及新光醫學中心溫永銳為助理教授，藉由大家在麻醉的臨床專業及學術研究的長才豐富了學科教學資源。九十五年度第一學期起聘任林豐彥助理教授策劃執行麻醉藥物及毒理研究中心，增加實驗室的研究潛能，並成為協助臨床醫師從事基礎研究的橋樑。其後，自九十五年第二學期至九十七年第二學期起有陳廷貴、戴裕庭及程毅君等醫師順利升等為助理教授，接著又有新光醫學中心吳鋼治副教授，張懷嘉助理教授的升等，學科至此已建立充沛的教學人力資源。

十年樹木百年樹人。過去這十年來學科的耕耘也在北醫的學子播下種子，導引許多醫學生對麻醉產生莫大的興趣，進而希望以麻醉當成一生志業。這時期學科俱有豐富及優秀的人力與北醫大三院資源，希望有大家的齊心及努力，能再為北醫莘莘學子的醫學教育課程更加落實及強化。藉由師資的多元性也豐富了研究領域。對麻醉的臨床服務品質奠定優質的根基並對未來創造出不同的願景。

教學目標

「麻醉學」課程為醫學系五、六年級必修學分，七年級選修學分之一。課程目的在於使醫學生對於麻醉學的知識，包括一般麻醉學概論、麻醉藥物及其藥理學、麻醉專科特論、心肺復甦術及其操作等方面有充分的了解，故此課程涵蓋麻醉學科之臨床應用及基礎理論，並以生理、藥理及病理的角度，分析各種不同疾病患者與麻醉藥物的互動關係及其影響。

「麻醉學」課程分為醫五上學期麻醉學大堂課及醫五下學期與醫六的麻醉學核心課程等兩部分，麻醉學大堂課主要著重在基礎麻醉知識的介紹，內容包含呼吸道處理、麻醉相關藥物之藥理學、各類麻醉方式、急性疼痛處理等；麻醉學核心課程則著重在臨床麻醉應用與麻醉次專科的認識，內容包含麻醉監視器介紹、各種疾病的麻醉處置、門診手術麻醉、恢復室照護、重症照護、慢性疼痛控制等。內容涵蓋麻醉醫學基礎與臨床各個領域，以期對麻醉照護有完整的了解，並提高學生對麻醉科的學習興趣。

教學特色

跨科臨床照護

臨床麻醉強調全心、全人、全程的照顧，注重各專科間的溝通交流與連繫配合。由附設醫院麻醉科每兩個月發起全院性的圍術期討論會，召集相關醫護人員並邀請院長及副院長與會，針對爭議性或具臨床重要性的案例展開跨科際聯合討論，並依此提出改善之流程及提高品質的方針與策略。在萬芳及雙和醫院，於每天晨間會議對於急、重症手術病人與外科醫師進行討論協商並擬定治療方針。

整合三院資源

結合北醫體系所屬台北醫學大學附設醫院、萬芳醫院以及雙和醫院臨床及教學資源，每兩個月定期舉辦三院聯合討論會，並邀請亞東醫學中心、新光醫學中心以及恩主公醫院麻醉科與會，交流麻醉經驗並分享臨床研究的成果，討論內容涵括住院醫師的雜誌評讀、醫護人員再教育、合併症檢討以及各院品質管制檢視。

重視教研人才

教學方面麻醉學科邀請各地區醫學中心麻醉部學有專精的教師提供北醫後進（包括住院醫師、見實習醫師、麻護專班學生以及臨床麻護學員）豐富及多元化的臨床教學內容。研究方面則鼓勵主治醫師攻讀碩博士學位，對於麻醉護理人員也鼓勵在職進修以提升麻醉照護品質。此外，並延攬實驗室專職研究人才，促進臨床與基礎的研究交流，相輔相成且同時延伸研究的深度與廣度。

臨床品質控管

制定麻醉品質及病患安全維護準則，落實在麻醉前、中、後的照護。每月定期檢視評估麻醉品質成效及執行危險因子分析，內容包括臨床麻醉、疼痛控制、儀器保養及維護以及麻醉 ISO 流程等部分，冀能達成以病人為中心的臨床指標學科。

宏觀學習視野

邀請國外知名醫學中心學者不定期訪問指導以充實整體教學內涵。北醫體系麻醉科住院醫師充分享有知與學的自由。在訓練期間也將規劃短期進修，至國內外各大醫學中心觀摩，學習各教學醫院的特色及強項，

得到最佳教學訓練成果。

師資

附醫、萬芳及雙和醫院 三院師資 (依年資及教職排列)

姓名	教職	現職	研究專長
陳大樑	教授	台北醫學大學副校長 台北醫學大學麻醉學科主任 台北醫學大學附設醫院麻醉科主任	藥物動力學 臨床研究
陳廷貴	助理教授	萬芳醫院麻醉科主治醫師	臨床研究
戴裕庭	助理教授	萬芳醫院麻醉科主任	臨床研究
張淳昭	助理教授	台北醫學大學附設醫院麻醉科主治醫師	臨床研究
程毅君	助理教授	雙和醫院麻醉科主任	臨床研究
張懷嘉	助理教授	萬芳醫院麻醉科主治醫師	臨床研究
林豐彥	助理教授	麻醉藥物暨毒理研究中心主持人	天然中草藥 發炎反應
林朝順	講師	台北醫學大學附設醫院麻醉科主治醫師	臨床研究
陳睿泰	講師	萬芳醫院麻醉科主治醫師	臨床研究
李元文	講師	台北醫學大學附設醫院麻醉科主治醫師	疼痛 臨床研究
林鈺樺	講師	台北醫學大學附設醫院麻醉科主治醫師	臨床研究
蘭瑞安	講師	台北醫學大學附設醫院麻醉科主治醫師	鴉片類藥物 臨床研究

其他師資 (依年資及教職排列)

姓名	教職	現職	研究專長
吳鋼治	副教授	新光醫學中心醫務秘書 新光醫學中心麻醉部主治醫師	臨床研究
曾劍英	助理教授	奇美醫學中心麻醉部主任	臨床研究
邢中熹	助理教授	奇美醫學中心麻醉部主治醫師	臨床研究
溫永銳	助理教授	新光醫學中心麻醉部主治醫師	疼痛 臨床研究
鄭仁坤	助理教授	馬偕醫學中心麻醉部主治醫師	臨床研究

研究特色及近年重要研究成果

截至 2009 年 10 月校內師資主要著作 (僅列升等著

作)

陳大樑 教授

Chen TL, Wu CH, Chen TG, Tai YT, Chang HC, Lin CJ: Effects of propofol on functional activities of hepatic and extrahepatic conjugation enzyme systems. *British Journal of Anaesthesia* 2000; 84: 771-776. (SCI)

Chen TL, Chen TG, Tai YT, Chang HC, Chen RM, Lin CJ, Ueng TH: Propofol inhibits renal cytochrome P450 activity and enflurane defluorination in vitro in hamsters. *Canadian Journal of Anesthesia* 2000; 47: 680-686. (SCI)

陳廷貴 助理教授

Chen TG, Chen TL, Chang HC, Tai YT, Cherng YG, Chang YT, Chen RM: Oxidized low-density lipoprotein induces apoptotic insults to mouse cerebral endothelial cells via a Bax-mitochondria-caspase protease pathway. *Toxicology Applied Pharmacology* 2007; 219: 42-53. (SCI)

戴裕庭 助理教授

Tai YT, Cherng YG, Chang CC, Hwang YP, Chen JT, Chen RM: Pretreatment with low nitric oxide protects osteoblasts from high nitric oxide-induced apoptotic insults through regulation of c-Jun N-terminal kinase/c-Jun-mediated Bcl-2 gene expression and protein translocation. *Journal of Orthopaedic Research* 2007; 25 (5): 625-635. (SCI)

張淳昭 助理教授 (博士學位新聘)

博士論文：空氣懸浮微粒在自發性高血壓大鼠之心律調節效應研究 *Cardioregulatory effects of particulate matters on spontaneously hypertensive rats.*

程毅君 助理教授

Cherng YG, Chang HC, Lin YL, Kuo ML, Chiu WT, Chen RM: Apoptotic insults to human chondrocytes induced by sodium nitroprusside are involved in sequential events, including cytoskeletal remodeling, phosphorylation of mitogen-activated protein kinase kinase kinase-1/c-Jun N-terminal kinase, and Bax-mitochondria-mediated caspase activation.

Journal of Orthopaedic Research 2008; 26: 1018-1026. (SCI)

張懷嘉 助理教授

Chang HC, Chen TL, Chen RM: Cytoskeleton Interruption in Human Hepatoma HepG2 Cells Induced by Ketamine Occurs Possibly through Suppression of Calcium Mobilization and Mitochondrial Function. *Drug Metabolism And Disposition* 2009; 37: 24-31. (SCI)

林豐彥 助理教授 (博士學位新聘)

博士論文：探討細菌內毒素對血管平滑肌細胞表現第四型類鐸接受器之影響 *The effects of lipopolysaccharide on the toll-like receptor 4 expression in vascular smooth muscle cell.*

林朝順 講師 (碩士學位新聘)

碩士論文：應用類神經網路預測 propofol 的睡眠效應 *Artificial neural network model to predict hypnotic effect of propofol*

陳睿泰 講師 (碩士學位新聘)

碩士論文：靜脈麻醉藥物氯胺酮調控人類臍帶內皮細胞一氧化氮及第一型內皮素表現之研究 *Effects of ketamine on nitric oxide and endothelin-1 biosyntheses in human umbilical vein endothelial cells.*

李元文 講師 (碩士學位新聘)

碩士論文：靜脈麻醉藥物 propofol 對脂磷壁酸活化巨噬細胞生成一氧化氮之抑制作用研究 *Suppressive effects of intravenous anesthetic propofol on nitric oxide synthesis in lipoteichoic acid-activated macrophages.*

林鈺樺 講師 (碩士學位新聘)

碩士論文：探討 midazolam 及 ketamine 對於肝細胞之細胞支架的影響 *Effects of midazolam and ketamine on cytoskeleton of hepatocytes*

蘭瑞安 講師

Lin JA, Lee MS, Wu CT, Yeh CC, Lin SL, Wen ZH, Wong CS: Attenuation of morphine tolerance by intrathecal gabapentin is associated with suppression of morphine-evoked excitatory

amino acid release in the rat spinal cord. Brain Res 2005; 1054: 167-73. (SCI)
(陳大樑 主任/教授)

Department of Anesthesiology

History and Overview

Division of Anesthesiology (AD) was established in April 1998 by associate professor Ta-Liang Chen, and he also named as director of AD. In 1999, professor Ta-Liang Chen recruited Dr. Ruei-Ming Chen from Toxicology Graduate School of National Taiwan University to join AD lab of Wan Fang Hospital. Dr. Ruei-Ming Chen endeavored to work hard with colleagues to make AD continuing growth.

After Dr. Ta-Liang Chen promoted as full professor in 2000, several doctors continuously joined the lecturer team, and superb alumni of Taipei Medical University (TMU) working in various hospitals are also invited to act as part-time lecturers during 2000-2002. During this period, staff built up complete system and considerable capacity for teaching. Dr. Chi-Chen Wu served as the director of AD since fall term 2004, who encouraged members to pursue further education; during this period, several staffs promoted to lecturer, and experienced Dr. Chuen-Chau Chang was also recruited as assistant professor. In 2005 school year, Dr. Ta-Liang Chen established TMU's anesthesia nursing special class. It was achieved by some part-time professors and senior nurses, and with the assistance of Nursing College, anesthesia nursing specialty can smoothly be added as formal education. The training for anesthesia nurses thus established the educational foundation. In the meantime, Dr. Ta-Liang Chen led colleagues contribute in academic research. He summoned outstanding doctors to enrich teaching resources through their anesthetic clinical specialty and academic research.

Fall term 2006, assistant professor Feng-Yen

Lin was hired to project and establish Anesthetic and Toxicology Research Center, which will increase research capabilities and as a bridge of basic research to assist clinicians. Later on, between Spring term 2006 and 2008, three doctors in Wang Fang Hospital were promoted to assistant professor. Besides, promotion of Sing-Kong medical center's associate professor Gong-Jhe Wu had certainly enriched manpower of research resources.

In the past decade, AD has devoted and sowed the seeds at TMU, that guided many medical school students to have great interest in Anesthesiology, and hope to make Anesthesiology as a life career. Under the circumstance of AD's enriched and superb manpower and TMU system's resources, faculty members should work hard to strengthen and fulfill medical education courses. The multi-variety of teachers also enrich research part, built up good foundation for clinical service quality and create various expectations in the future.

Goal of Education

Anesthesiology is a required credit for the 5th and 6th grader of medical department and it is an elective credit for the 7th grader. This curriculum is designed to let medical students have thorough understanding on Anesthesiology, which include theory of common anesthesiology、anesthetic drugs and pharmacology、anesthetic subspecialty、cardiopulmonary resuscitation and so on. Therefore, AD curriculum contains clinical application and basic theory, and analyzed the interaction between patients of different diseases and the effects of anesthetic drugs from viewpoints of physiology, pharmacology and pathology.

"Anesthesiology" curriculum includes 5th grader fall term's Anesthesiology ball class and 5th grader's spring term & 6th grader's Anesthesiology core courses. Anesthesiology

ball class specifies mainly on introduction of basic anesthesia know-how, including airway management, anesthetic pharmacology, various kinds of anesthetic methods, acute pain management, and so on. Anesthesia core courses specify mainly on clinical application of anesthesia and subspecialties, including introduction of anesthesia monitors, anesthesia management for various diseases · outpatient anesthesia · post-anesthesia care · critical care · chronic pain management. We hope the full scope of anesthesia can be understood, and therefore raise students' interest in learning Anesthesiology.

Distinctive Feature of Education

Interdisciplinary clinical care

Clinical anesthesia emphasizes wholehearted, humane, and whole-course care, it also stresses interdisciplinary communication and cooperation. AD of TMU hospital regularly holds a hospital-level symposium every two months. Superintendent, vice superintendent and related medical personnel will be invited to participate in the meeting and we will have interdisciplinary combined discussion, focusing on controversial or important clinical cases. Afterward, we will propose policies and tactics to correct process and to improve quality of care. At Wang-Fang and Shuang-Ho hospital, they also hold a morning meeting everyday, during which surgeons will discuss and exchange opinions and treatment policies regarding emergency operations and patients requiring intensive care.

Integration of the three hospitals' resources

TMU will consolidate its system's clinical and educational resources of TMU hospital, Wang-Fang hospital, and Shuang-Ho hospital to hold a three-hospital joint meeting every two months. ADs from Far Eastern hospital, Shin-Kong Memorial hospital, and En-Chu-Kong hospital will be invited to share anesthesia experience as well as achievements

of clinical research. The discussion includes appraisal of resident journal meeting, medical personnel re-education, mortality & morbidity conference and quality assurance.

Enhancement of educational and research personnel

In the area of education, AD will invite expert of anesthesia at different area's medical center to provide their valuable and various teaching materials for resident doctors, intern doctors, trainees, , and students of anesthesia nursing special class). In the area of research, we encourage clinicians to gain master or medical doctoral degree, and anesthesia nursing personnel are also encouraged to upgrade their anesthesia care quality by on-job-study. Besides, we recruit lab full-time research experts to promote linkage of clinical and basic research field and by doing so we can at the same time extend the depth and width of research.

Clinical quality control and management

Doctrine of anesthesia quality and patient safety is set up to make the standard of peri-anesthetic care be fully complied. To achieve the goal of patient-centered clinical modal division, we examined and assess results of quality control and carry out risk factor analysis every month, including clinical anesthesia statistics, pain control, instrument maintenance and anesthesia ISO process.

Expansion of learning outlook

Scholars from international famous medical centers are invited to direct us for adding and strengthening our educational capacity. Resident doctors at TMU AD fully enjoy the freedom of learning and knowledge acquirement. During the training period, we project short-term further study for resident doctors, and they will visit other medical centers for subspecialties to get the best result of educational training.

Faculty

TMU hospital · Wang-Fang hospital and Shuang-Ho hospital faculty (arrange the name in service seniority and job sequence)

Name	Faculty post	Present post	Research specialty
Ta-Liang Chen	Professor	Director (TMU) Manager of AD (TMU and TMU hospital)	Pharmacokinetics Clinical research
Tyng-Guey Chen	Assistant professor	Attending physician of AD (Wang-Fang hospital)	Clinical research
Yu-Ting Tai	Assistant professor	Manager and attending physician of AD (Wang-Fang hospital)	Clinical research
Chuen-Chau Chang	Assistant professor	Attending physician of AD (TMU hospital)	Clinical research Occupational medicine
Yih-Giun Cherng	Assistant professor	Manager and attending physician of AD (Shuang-Ho hospital)	Clinical research
Huai-Chia Chang	Assistant professor	Attending physician of AD (TMU hospital)	Clinical research
Feng-Yen Lin	Assistant professor	Manager of Anesthetic and Toxicology Research center	Clinical research Natural herbs
Chao-Shun Lin	Lecturer	Attending physician of AD (TMU hospital)	Clinical research Medical informatics
Jui-Tai Chen	Lecturer	Attending physician of AD (Wang-Fang hospital)	Clinical research
Yuan-Wen Lee	lecturer	Attending physician of AD (TMU hospital)	Pain medicine Clinical research
Jui-An Lin	Lecturer	Attending physician of AD (TMU hospital)	Clinical research Opioids

Distinctive Feature of Research and Important research outcome in recent years

TMU faculty's primary works (only promotional works are listed) till Oct 2009. See Chinese

version for detail.

(Ta-Liang Chen, Director/Professor)

家庭醫學學科