

Division of Neurosurgery
University of Cape Town
2012 Academic Report

Unquestionably the theme for the year was the Centenary of the Faculty of Health Sciences and this provided a great excuse for numerous celebrations, few better than the UCT Neurosurgery Alumni gathering held on Friday 14 December in the Wolfson Pavilion. The academic program reflected more than 60 years of academic progress in neurosurgery at UCT, culminating in the Peter Keet Memorial Lecture delivered by Dr Freddie Kieck, "Harvey Cushing- from Boston to Flanders". We were particularly fortunate that both Honorary Professors in the Division were able to attend- Matthew Wood, now Associate Head of the Medical Sciences Division at Oxford, and Peter Siesjo from Lund, Sweden. The day ended with a memorable dinner at Old Mutual House in Bishopscourt, where we were able to pay special tribute to the Yach family and the Parker family, who have supported us in many endeavours. The evening ended on a high note with a special performance by former Intern Dr Riaad Moosa.

Professor Anthony Figaji's Inaugural Lecture, "Brain:Child Interrupted" showcased the tremendous progress made in developing basic science research within the Division over the past year. He has rapidly established himself as one of the world's leading scholars in the field of paediatric brain injury and his *ad hominem* promotion to full professor was enthusiastically affirmed by a full house. Professor Allan Taylor was honoured to be appointed as a Visiting Professor at the University of the Witwatersrand, where he has embarked on training Professor Victor Mngomezulu (Head of Radiology at Charlotte Maxeke Academic (Johannesburg General) Hospital) in neurointervention. This has entailed him and Dr Le Feuvre travelling to Johannesburg on a monthly basis to help perform cases.

Degrees conferred

Dr Nte Mjoli was awarded the degree MMed (Neurosurgery) for a thesis entitled *Bleeding source identification and treatment in Brain Arterio-venous Malformations* (supervised by Professor Taylor and Dr Le Feuvre).

Dr David Roytowski passed his dissertation entitled *Intracranial pressure monitoring as a predictor of third ventriculostomy outcome* (supervised by Professor Semple and Dr Padayachy).

Postgraduate students

Ursula Rohlwick made excellent progress with her PhD (Neuroscience) in Neurosurgery, while the number of neurosurgical trainees remained 10, of whom 3 were supernumerary registrars from Kenya, Libya and Uganda. We were fortunate to recruit Dr Marco Kogels who returned for a year as Chief Registrar having spent a year in the UK. This enabled us to offer 3 month research rotations to 4 registrars which enabled them to submit their MMed dissertations well ahead of their final exams. Two medical students taking the intercalated Honours course, Jacob Hoffman and Sinead Ross, successfully completed projects under Professor Figaji's supervision

Publications

Cederberg D, Figaji A, Siesjo P.

Cytokine analysis in pediatric severe traumatic brain injury.

Brain Inj 2012; 26: 719-720

Fieggen G, Fisher-Jeffes N, Padayachy L, Figaji A.

Aseptic meningitis: a troublesome complication following posterior fossa surgery

Child's Nerv Syst 2012; 28: 1604

Figaji A, Padayachy L, Fieggen G, Rohlwink U.

Continuous cerebral blood flow monitoring in children with TBI.

Child's Nerv Syst 2012; 28: 1590

Langerak NG, Tam N, Vaughan CL, Fieggen AG, Schwartz MH.

Gait status 17-26 years after Selective Dorsal Rhizotomy

Gait and Posture 2012; 35 (2) 244-249

Le Feuvre D, Parkes JD, Mukheibir P, James R, Taylor A.

A late haemorrhagic complication in an arterio-venous malformation cured with radiosurgery.

Interventional Neuroradiology 2012; 18: 149-152

Lubbe DE, Fisher-Jeffes N, Semple PL.

Endoscopic resection of skull base tumours utilizing the ultrasonic aspirator.

JLO 2012; 126: 625-629

Mendelson M, Barday Z, Eastman R, Le Feuvre D, Candy S, Wu HT, Swanepoel C.

rapidly progressive post-transplant lymphoproliferative disease following withdrawal of sirolimus.

S Afr Med J 2012; 102: 924-926

Padayachy LC, Fieggen AG, Figaji AA.

The frequency of brain ischemic/hypoxic events in children with severe traumatic brain injury

Child's Nerv Syst 2012; 28(11): 1911-8

Padayachy L, Rohlwink UK, Zwane E, Fieggen AG, Peter JC, Figaji AA.

The frequency of brain ischemic/hypoxic events in children with severe traumatic brain injury.

Child's Nerv Syst 2012 28(11):1911-8.

Padayachy L, Figaji A, Fieggen G, Peter J.

The use of intraoperative ultrasound in paediatric neurosurgery: a valuable tool for improving safety and decreasing complications *Child's Nerv Syst* 2012; 28: 1623

Rohlwink UK, Padayachy LC, Fieggen AG, Figaji AA.

The relationship between intracranial pressure and brain oxygenation in children with severe traumatic brain injury. *Neurosurgery* 2012; 70 (5): 1220-1230

Roytowski D, Padayachy L, Semple P.

Intracranial pressure monitoring as an early predictor of third ventriculostomy outcome.

World Neurosurgery 2012 epub <http://www.mdlinx/surgery/news-article.cfm/4488548>

Seggie JL, Fieggen G, Greenburg S, Kathard H, Henley L.

Centenary of the UCT Faculty of Health Sciences.

S Afr Med J 2012; 102 (6): 388

Zar HJ, Eley B, Nicol MP, Figaji A, Hawkridge A

Advances in childhood tuberculosis- contributions from the University of Cape Town.

S Afr Med J 2012; 102: 518-521

Presentations at Conferences

International

Professor Fieggen was elected as Interim President of the newly formed Continental Association of African neurosurgical Societies (CAANS), to hold office until the first CAANS congress in 2014. He was honoured to be invited to be invited as the Sir Victor Horsley Lecturer at the Society of British Neurological Surgeons, Leeds UK (September 2012) and the Bruce Hendrick Visiting Professor at The Hospital for Sick Children and University of Toronto Division of Neurosurgery, Toronto ON (October 2012). Prior to participating in the 76th Annual Meeting of the American Academy of Neurological Surgeons in Cape Cod, he spent a week as Visiting Professor at Boston Children's Hospital and Brigham and Women's Hospital, Harvard University Division of Neurosurgery, Boston MA (October 2012). He gave invited presentations at the 1st African Epilepsy Conference in Nairobi, Kenya, the 40th Annual Meeting of the International Society for Pediatric Neurosurgery in Sydney, Australia, the biennial conference of the European Society for Pediatric Neurosurgery in Amsterdam, Netherlands and taught on the ESPN Course in Genoa, Italy and the AO Spine Course.

Associate Professor Figaji was invited to participate in the ESPN meeting in Amsterdam and the ISPN meeting in Sydney, and taught on the ISPN Course in Hong Kong, China. He presented at the Educational Course of the International Society for Intraoperative Neurophysiology (Verona) and continued to establish his reputation in the area of neurocritical care with invitations to speak at the 9th European Neurocritical care Symposium (Istanbul) Nairobi and the Critical Care 4 Africa meeting at Sun City.

Associate Professor Taylor and Dr David Le Feuvre presented cases at the ABC/WIN meeting in Val d'Isere, France and the national Neurointerventional Peer-review meeting in Cape Town while Professor Taylor continues to serve on the international faculty of the Pierre Lasjaunias Neurovascular Educational Team (PLANET) course, the University of Toronto-based course that serves as the benchmark in the field.

National

The Division was well-represented at the SA Neurosurgery Congress in Somerset West, with presentations by Patrick Semple, David Roytowski, Nico Enslin and Tiago Morgado. Professor Semple convened the Integra Pituitary Symposium for registrars and served on the faculty of the Cappabianca Endoscopic Pituitary Surgery Course. David Welsh presented at the SA Spine Society and Tony Figaji at SIOP Africa and the Pan African Paediatric Surgery congress in Cape Town.

Members of the Division presented at the Annual Research Days of the Department of Surgery and the School of Child and Adolescent Health, as well as the Grand Rounds of Groote Schuur Hospital and the UCT Students Surgical Society.

Research Grants

Generous grants from the Mauerberger Foundation Fund, Wellcome Trust, the MRC, Integra Foundation, Baroque Medical, Boston Scientific, Karl Storz and the Department of Surgery are gratefully acknowledged. The CIDRI grant from the Wellcome Trust supported a study of biomarkers of brain injury in tuberculous meningitis (2010-2012).

Editorial activities

Members of the department serve on the editorial boards *Neurosurgery* (Peter, Fieggen), *Child's Nervous System*, *Journal of Paediatric Neurosciences* and *World Neurosurgery* (Fieggen), *Interventional Neuroradiology* (Taylor) and *European Spine Journal* (Welsh).

Fieggen and Figaji were appointed Section Editors of the ISPN online textbook *The Guide to Pediatric Neurosurgery*, contributed chapters to the benchmark *Principles and Practice of Pediatric Neurosurgery* (3rd edition) and Figaji also served as Section Editor for the *Handbook of Paediatrics* (7th edition).

Teaching

Undergraduate

Dr le Feuvre was appointed convener of the undergraduate curriculum in Neurosurgery, which is taught as a combined Clinical Neurosciences course with Neurology. Annual lectures are given to students in Physiotherapy, Occupational Therapy and Nursing and medical students are taught in the following areas:

- MBChB III: Videoconferencing on Spina Bifida and lectures on congenital anomalies and hydrocephalus
- MBChB V: four-week Neurosciences block
 - 6 tutorials on specific topics, with material on Vula
 - weekly teaching ward round
 - two mornings spent in ward/ theatre
- MBChB VI: weekly tutorial on Paediatric Neurosurgery as part of Paediatric Surgery

Postgraduate

The two-year curriculum of topics supervised by Emeritus Professor JC Peter continued; a monthly Journal Club was co-ordinated by Dr Padayachy. Dr Welsh continues to serve as co-convener of the annual UCT Cadaver-based Spinal Approaches Course.

Professional activities

Graham Fieggen and Patrick Semple continued to serve on the Council of the *College of Neurosurgeons of South Africa* for the triennium 2008-2011, with Semple serving as President of the College and also a Senator of the Colleges of Medicine of South Africa.

Allan Taylor continued to serve as Secretary of the *Society of Neurosurgeons of South Africa* for 2008-2010 and Norman Fisher-Jeffes (part-time Senior Lecturer) completed his term as Past President of the Society.

David Welsh continued to serve as Treasurer and Membership Secretary of the *South African Spine Society*.

Roger Melvill (part-time Senior Lecturer) served as Vice-President of the *World Society for Stereotactic and Functional Neurosurgery* (WSSFN).

Anthony Figaji was appointed to the Executive Board of the International Neurotrauma Society and was invited to join the Pediatric Traumatic Brain Injury Consortium.

Press

Sally Rothemeyer made a number of appearances on national radio, talking about traumatic brain Injury and fielding questions from the public and the Division collaborated with ComaCARE to mark International Brain Awareness Week.