PLEXUS

NEWSLETTER OF THE INTERNATIONAL FEDERATION OF ASSOCIATIONS OF ANATOMISTS

January 2012

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Editorial

Happy New Year and welcome to this edition of Plexus. As well as information from member societies and details of future conferences, this edition includes a short article by Professor Mark Stringer asking "W(h)ither Clinical Anatomy" that he presented at a recent ANZACA conference. We hope that this will give you food for thought! We be interested in your feedback and would be keen to receive other commentaries on topics relating to the future of research and teaching of Anatomy.

The IFAA Executive met at the end of December 2011 in Cardiff. As was mentioned in the last edition of Plexus the Federative International Committee for Humanities and Ethics (FICHEM) have been discussing what is good practice in relation to body bequests. FICHEM's recommendations of good practice for the donation and study of human bodies and tissue was approved by the IFAA Executive and is featured in this edition. Although 2014 seems a long way away at the moment I would encourage you to start planning your trip to the next IFAA meeting in Beijing in August 2014 (www.csas.org.cn/ifaa2014) which promises to be an exciting event.

With warm wishes

The Editor

In this issue...

News from the IFAA

RECOMMENDATIONS OF GOOD PRACTICE FOR THE DONATION AND STUDY OF HUMAN BODIES AND TISSUES FOR ANATOMICAL EXAMINATION

The study of human cadavers is essential for teaching, advanced training and research in medical and anatomical sciences. Institutions[1] rely on the donation of bodies by the general public, and are immensely grateful to donors. However, it is imperative that institutions follow procedures of the highest ethical standards in order to give donors full confidence in their decision to donate. Transparency regarding the use of human material and institutional procedures increases public trust and in turn increases public support of body donation.

1. Informed consent from donors must be obtained in writing before any bequest can be accepted[2]. Consent forms should take into account the following:
   - Donors must be entirely free in their decision to donate, this excludes donation by minors and prisoners condemned to death.
   - Although not essential, good practice is encouraged by having the next of kin also sign the form.
   - Whether the donor consents to their medical records being accessed.

2. There should be no commercialisation in relation to bequests of human remains for anatomical education and research. This applies to the bequest process itself, where the decision to donate should be free from financial considerations, and also to the uses to which the remains are put following bequest. If bodies, body parts, or plastinated specimens are to be supplied to other institutions for educational or research purposes this may not yield commercial gain. However, charging for real costs incurred, including the cost of maintaining a body donation program and preparation and transport costs, is considered appropriate. Payment for human material *per se* is not acceptable.

2. There needs to be an urgent move towards the establishment of guidelines regulating the transport of human bodies, or body parts, within and between countries.

3. Specimens must be treated with respect at all times. This includes, but is not limited to, storing and displaying human and non-human animal parts separately.

4. The normal practice is to retain donor anonymity. Any exceptions to this should be formally agreed to beforehand by the bequestee and, if appropriate, the family.

5. Limits need to be placed on the extent to which images, or other artefacts produced from donations are placed in the public domain, including in social media, both to respect the privacy of the donor (and their surviving relatives) and to prevent arousing morbid curiosity. No individual should be identifiable in images.

6. A clear and rigorous legal framework should be established on a national and/or state level. This legal framework should detail:
   - The procedures to be followed in accepting bequests of human remains for anatomical examination, including who is responsible for human remains after death.
   - The formal recognition of institutions which may accept bequests, which in some jurisdictions may involve licensing.
   - The safe and secure storage of human remains within institutions.
   - The length of time such remains will be retained by the institution.
   - The procedures to be followed in disposing of remains once the anatomical examination is complete and they are no longer required for anatomical education and research.

7. Institutional procedures should be formally established by an oversight committee, which shall review the body donation program at regular intervals. Such procedures should include the following:
   - Copies of the bequest should be retained both by the donor and by the institution for whom the bequest is intended.
   - Records should be kept for a minimum of twenty years from the date of disposal to

ensure that human material can be identified as originating from a specific donor.
- Good conservation procedures should be employed throughout the entire period during which the human remains are retained to ensure that the most effective use is made of any bequest received.
- Efficient tracking procedures should ensure that the identity and location of all body parts from an individual donor are known at all times.
- Facilities where cadavers are used must be appropriate for the storage of human remains and secured from entry by unauthorized personnel.

9. There needs to be transparency between the institution and potential donors and their relatives at every stage, from the receipt of an initial enquiry to the final disposal of the remains. The clear communication of information should include but not necessarily be limited to the production of an information leaflet (hard copy and/or digital), which could also help publicise anatomical bequests and increase the supply of donors. This should set out the following:

    - The procedures relating to registering bequests, acceptance criteria, the procedures to be followed after death (including under what circumstances a bequest might be declined), and the procedures relating to disposal of the human remains. Sufficient grounds for rejection could include, but need not be limited to:
        - the physical condition of the body
        - the virological or microbiological status of the donor in life
        - the existence of other diseases (for example neurological pathology) that might expose staff or students handling the body to unacceptable risks
        - body weight over a specified limit
        - the possible over-supply of donations at that institution at that time
        - place of death outside the designated area from which bodies are obtained.
    - The range of uses of donated bodies at that institution.
    - Possible costs, if any, that might be incurred by the bequestee's family in making a bequest, and the costs to be met by the institution accepting the bequest.
    - Whether the donor's anonymity will be preserved and whether their medical history accessed.
    - Whether the body or body parts might be supplied to another institution.
    - The maximum length of time the body will be retained, including any legally sanctioned possibility of indefinite retention of body parts. The relatives of the donor should be given the option of being informed in due course of the date when the remains will be disposed of.
    - Donors should be strongly encouraged to discuss their intentions with their relatives to ensure that their relatives are familiar with their wishes and that as far as possible those wishes will be carried out after death.

10. Special lectures/tutorials in ethics relating to the bequest of human remains should be made available to all students studying anatomy. This is to encourage the development of appropriate sensitivities in relation to the conduct and respect that is expected of those handling human remains used for purposes of anatomical education and research.

11. Institutions should be encouraged to hold Services of Thanksgiving or Commemoration for those who have donated their bodies for medical education and research, to which can be invited relatives of the deceased, along with staff and students.

[1.] The term "institution" is intended to refer throughout to a university, medical school or anatomy department as appropriate.
[2.] This excludes the use of unclaimed bodies.

W(h)ither Clinical Anatomy?

Mark D Stringer
Department of Anatomy, Otago School of Medical Sciences
University of Otago, Dunedin, New Zealand

In many universities, clinical anatomy has become marginalised and is no longer regarded as a research led discipline. This process has paralleled the reduction in anatomy teaching hours in the medical undergraduate curriculum. In Australasian medical schools, it is estimated that there has been an 80% reduction in anatomy teaching hours since the introduction of problem-based medical graduate programmes (*ANZ J Surg* 2010:80:212). Much of this reduction in anatomy content was appropriate and necessary but research in clinical anatomy has suffered as anatomy departments have inevitably contracted. In Australasian universities, there are now only three named departments of anatomy; in another nine the department has been combined with pathology, radiology etc. More worryingly, there are now four institutions where there is just an anatomy 'laboratory' and three where anatomy is simply a 'facility'.

Clinical anatomy is also struggling in the publications race. Although the impact factors of *Clinical Anatomy* and *Surgical and Radiologic Anatomy* continue to improve thanks to the efforts of their editorial boards (IF 1.35 and 0.83 in Journal Citation Reports®, respectively), these journals rank only thirteenth and fifteenth out of 19 in the 'Anatomy and Morphology' category. Even the *Journal of Anatomy*, which discourages the submission of articles on clinical anatomy, has an impact factor of only 2.41. This is in a different league to the neuroscience and molecular biology journals. While this exposes the deficiencies of impact factors, it nevertheless gives an indication of how the scientific community ranks clinical anatomy research. On a brighter note, *Anatomical Sciences Education* (IF 2.98) is now ranked first among 33 scientific education journals. At least research in anatomy education appears to be alive and well!

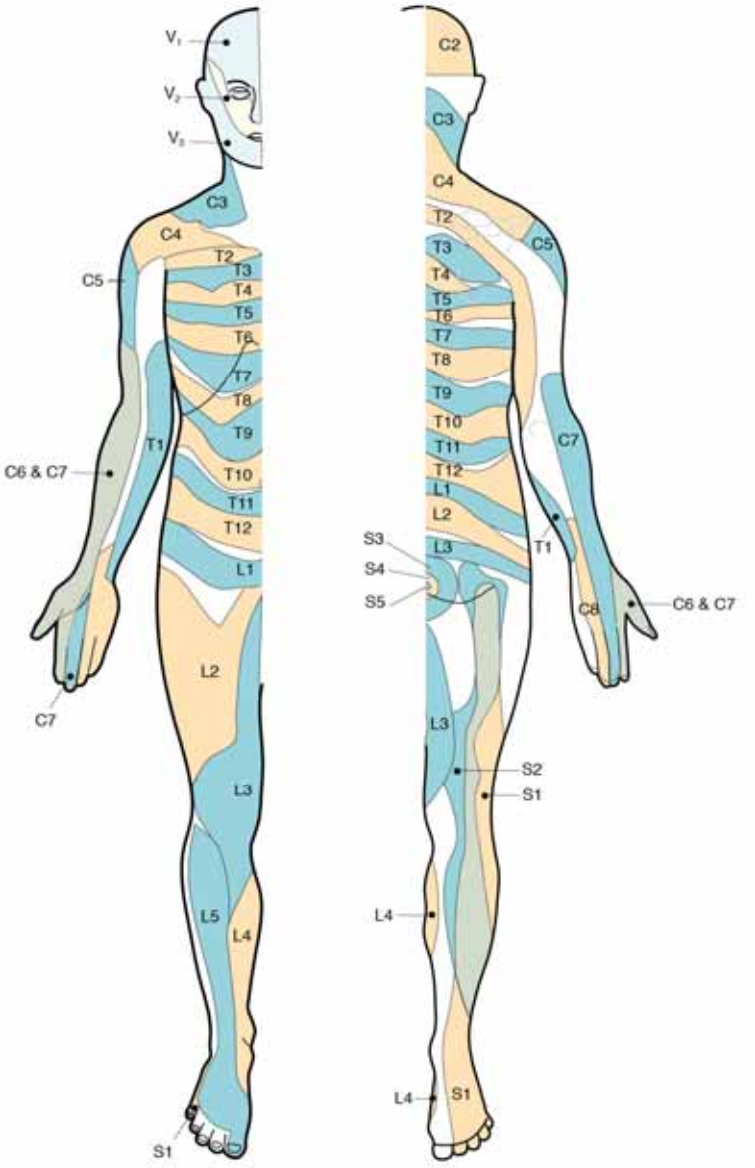
Clinical Anatomy must become more research focused if it is to thrive. This is not a new message (*Clin Anat* 2002;15:228). The discipline has access to a wealth of research opportunities and investigative techniques. Gross and microscopic anatomy can be studied in living individuals and cadavers using techniques such as imaging (radiography, ultrasound, CT and MRI), microscopy, and plastination to name but a few. There are also opportunities for clinical studies and research into educational, historical and ethical aspects of anatomy, including body donation. It is essential that we reject the uncritical acceptance of anatomical dogma and resist the critics who maintain that "it's all been done before". Clinical anatomy must be evidence-based and this demands studies with robust methodology. Rewarding examples of this approach in the author's research include an evidence-based analysis of human dermatomes (*Clin Anat* 2008;21:363) (Figure), studies redefining human surface anatomy (*Surg Radiol Anat* 2011;33 Suppl1:S34), and investigations of the ophthalmic (*Clin Exp Ophthalmol* 2010; 38: 502) and vertebral veins (*Clin Anat* 2011 in press). These studies highlight that, in some areas at least, conventional anatomical wisdom is seriously flawed and in urgent need of revision.

Clinical anatomy education is challenging but a fertile area for research. The big questions of what, when and how to teach clinical anatomy remain contentious. As regards 'what' the content of the syllabus must be tailored appropriately. For example, in most medical schools the majority of medical students will become general practitioners rather than surgeons or radiologists - the clinical anatomy they are taught must be appropriate for this level. The information must be accurate, up to date and

clinically relevant to maximise its utility. It is no good students learning nomenclature that appeals to the purist but is at odds with the clinical environment. As for 'when', there is a compelling argument for greater vertical integration of clinical anatomy, at least in medical education, with short refresher sessions incorporated into the study of radiology, pathology, surgery and medicine. Multiple studies have shown that senior medical students and junior doctors consider that their knowledge of anatomy is inadequate and that they would value revision courses (*Clin Anat* 1999;12:55; *Clin Anat* 2008;21:718). Finally, the 'how'. There are numerous teaching innovations such as electronic resources, body painting, and ultrasound but each must be underpinned by evidence of efficacy.

Clinical anatomy has enormous strengths in its breadth and diversity, attracting research students from a wide range of backgrounds, not just health professionals and science students. As clinical anatomists, we also have the ability to collaborate widely with other disciplines: clinical medicine and surgery, other basic sciences, education, forensics, ethics, humanities (history and art), etc. Research outcomes in clinical anatomy often have a clear translational benefit. We should capitalise on these strengths and develop new research collaborations. For example, our group has recently completed a study with the Accident Compensation Corporation of New Zealand investigating the national spectrum of iatrogenic nerve injury (*Int J Clin Pract* in press).

To sum up, clinical anatomy must be accurate, relevant, and tailored to the needs of the particular student if it is to retain its deserved place in professional and scientific education. To this end, it must be research informed. Clinical anatomists are in a prime position to engage in collaborative research with a wide range of disciplines and organisations, thereby raising the profile and importance of the subject. Clinical anatomy needs a fresh vision: it must become more evidence-based, research-informed and fit for purpose.



The evidence-based human dermatome map

This represents the most consistent tactile dermatomal areas for each spinal dorsal nerve root found in most individuals. Dermatomes are NOT autonomous zones of cutaneous sensory innervation since, except in the midline, where overlap is minimal, adjacent dermatomes overlap to a large and variable extent. Only the overlap between C6 and C7 and between S1 and S2 have been highlighted due to their clinical importance. Blank areas represent territories of highly variable innervation. Adapted from Lee MWL, McPhee RW, Stringer MD. An evidence-based approach to human dermatomes. *Clin Anat* 2008;21:363-373.

Professor Emeritus John (Jack) Cameron Allan
M.B.B.Ch, Ch. M., M.D., F.R.C.S (Edin)

South African Anatomist and Icon

Professor Emeritus Jack Allan died on the 7th January 2012 at the age of 93. This tribute is a celebration of his life and the extraordinary contribution which he made to South African anatomy.

Jack or JCA as he was fondly known to many of us, devoted his life to the training of medical and allied health sciences students in the Faculty of Health Sciences at the University of the Witwatersrand (Wits) in Johannesburg, South Africa. The training he offered was in two disciplines – that of anatomy and also in surgery and surgical skills. There are few academics who have the unique ability to train students in both anatomy and surgery. Wits was, thus, privileged to have been in this distinctive situation through the incomparable service of Jack Allan. Reminiscent of the great surgeon-anatomist, John Hunter, Jack's first love was the discipline of anatomy, and in particular applied and clinical anatomy.

It is rare to find a person who has devoted over 65 years to the practice of medicine and some sixty-eight years to the training of students and who still came to work enthusiastically every day to teach and to write in his discipline up until the time of his death!!

Professor Allan's first appointment at Wits was as an undergraduate demonstrator in anatomy to Medical, Dental and Physiotherapy students from 1940 to 1942. On receiving his MBBCh (in 1943) he was appointed to the position of postgraduate demonstrator in anatomy. He had thus taught for over 70 years. From 1954 to approximately 1959 he traveled overseas to gain experience. This he did at the Postgraduate Medical School at Hammersmith Hospital in London as a registrar and lecturer in Surgery, and as a registrar at St Mark's Hospital.

On his return to South Africa, Professor Jack Allan settled into a position in the Department of Anatomy at Wits, in the discipline which has fascinated him for most of his life. At the same time, he was a part-time surgeon in the De-

partment of Surgery. What made Jack an exceptional teacher of anatomy, was the insight he gained from the surgical perspective. This has most certainly been to the benefit of the students at Wits, where applied and clinical anatomy flourished as a result of Jack's efforts.

Jack Allan possessed all the characteristics of a great surgeon, dedicated anatomist and devoted teacher. As a surgeon he saw the importance of the discipline of anatomy for medical and allied medical health students. He always attempted to make evident to students how anatomy, together with physiology, is the fundamental foundation of medical science and critical to most postgraduate clinical specialties. To Jack, the cadaver was not just a dead human body. It was the means for understanding the complexities of the human body, the way in which nerves reach their destinies, muscles contract to cause peristalsis and how cells, mutating in unknown ways, cause the pain and suffering of disease.

As the ultimate teacher, Professor Allan simplified the understanding of the complicated subject of anatomy by co-authoring a number of textbooks for undergraduate and postgraduate students which are currently in use. These books include dissection manuals, a text of osteology which greatly assists the young doctor in a clinical examination, and a textbook of embryology.

Not only was Jack Allan a teacher, but he was a "teacher of teachers". Many of the staff who hold positions in the Faculty of Health Sciences at this Medical School and scores of others both locally and abroad have been taught and inspired by Jack Allan. Some of these staff have undertaken their postgraduate degrees under his supervision and many others have received guidance and assistance from him. Jack's knowledge of anatomy was legendry and was respected and held in high esteem not only at Wits, but throughout the country. This was evidenced by the fact that throughout his life he was called on to act as an external examiner in anatomy for postgraduate courses at other local Universities and assisted with the setting up of a number of local anatomy departments and curricula. In addition Jack Allan was also held in high esteem and had an acknowledged reputation in the field of forensic science.

Jack's death is not only a loss to the Wits Faculty of Health Sciences and the University, but also to the entire medical fraternity in South Africa. There are thousands who would call him teacher, hundreds who would call him mentor and many, many more who would call him "dear friend". We will remember him and his teachings with a great fondness.

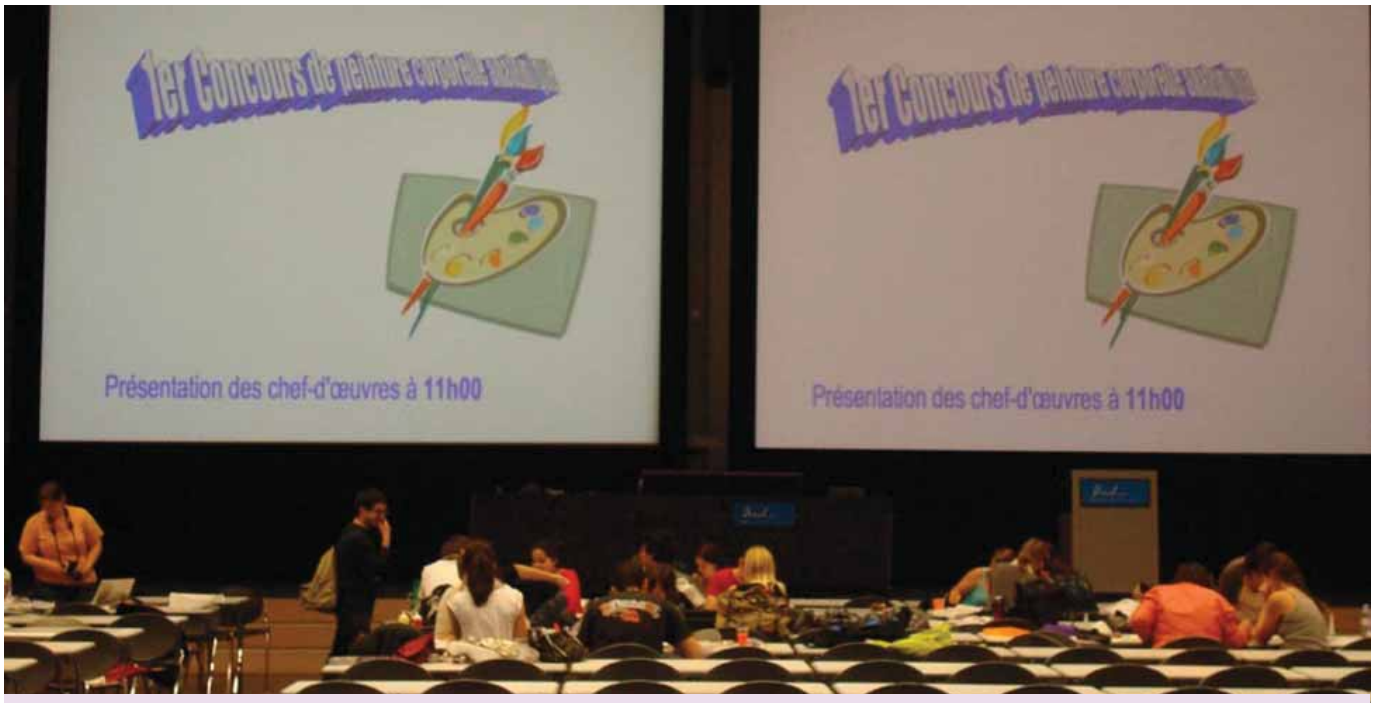
Beverley Kramer
University of the Witwatersrand

First anatomical body paint competition in Lausanne, Switzerland

In May 2011 the first body paint contest was held in Lausanne, Switzerland. About 70 first year medical students participated and were replacing scalpels and forceps with brushes and watercolor and were placing anatomical structures on forearm and hand. Obviously, these students had fun and a lot of imagination. The competition was organized at the end of the teaching module of the locomotor system. The responsible Professor of this module, Beat Riederer got the idea at an ANZACA meeting 2010 in Hobart (Tasmania) see Plexus January 2011, where Professor Claudia Diaz from James Cook University was talking about her experience with organizing body painting classes to learn human anatomy.

Some images of this first competition in Lausanne are presented below. The local press was also present and reported about the event in the local newspaper *24heures*. For those interested to see more artwork , you can look up the collection of pictures on www.24heures.ch/peinture-anatomique . You can also find more images of this event on the website of the medical student association http://www.aeml.ch/photos/51/ .

The second anatomical body paint competition will be held march 31, 2012 in the local museum, Musée de la main, where currently an exposition is showing the different facets of the skin http://www.verdan.ch . This competition will be open to all medical students and paintings will be put on the whole body. Currently we are looking for sponsors.



The competition was held in the auditorium Erna Hamburger, at the University of Lausanne, where usually lectures for the 600 medical students are held

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Students present their artwork.

The winning hand

Each student presented and commented the painting. On the left, a zipper that opens up the skin to reveal the anatomical structures, either in supination or pronation. To the right the complex organization of the muscles of the forearm are shown.

2nd Hanno Boon Dissection Masterclass

The first Hanno Boon Dissection Masterclass was held in memory of the late Prof Johannes "Hanno" Boon in the Department of Anatomy, University of Pretoria. He was a co-author of the current edition (6th edition) of the McMinn's Clinical Atlas of Human Anatomy before his untimely death in December 2004. The aim of the masterclass was to prepare excellent quality dissections for the atlas. Young, up-and-coming anatomists were invited to participate in the masterclass and hone their dissection skills under the guidance of the more senior prosectors. Both international and local anatomists dissected with their younger counterparts and everyone learned from each other. It was a hugely successful endeavour and many of the dissections that came from the 1st masterclass can be seen in the current atlas.

**The participants of the 2nd Hanno Boon Dissection Masterclass.
Back two rows: The students from Warwick University, UK.
Front row (from left to right): George Salter, Maira du Plessis, Alisa Tucker, Paul Dansie, Marios Loukas, Vicky Cottrell, Albert van Schoor, Rich Tunstall, Peter Abrahams, and Shane Tubbs.**

The 2nd Dissection Masterclass was held 20-28 July 2011 at Saint George's University, Grenada, West Indies to prepare dissections for the 7th and latest edition of McMinn's Clinical Atlas of Human Anatomy. The masterclass was hosted by Prof. Marios Loukas and the Department of Anatomical Sciences, Saint George's University, West Indies on the beautiful island of Grenada. The masterclas was also attended by Prof. Peter Abrahams (UK), Prof. George Salter (USA), Prof. Shane Tubbs (USA), Alisa Tucker (UK), Paul Dansie, (UK), Rich Tunstall (UK), Vicky Cottrell (UK), as well as two invited members of the Anatomical Society of Southern Africa (ASSA); Albert van Schoor (University of Pretoria) and Maira du Plessis (University of the Witwatersrand). Twenty three medical students from Warwick University were also present to attend the masterclass and dissect specimens.

As with the first masterclass, this one proved to be equally as successful. Not only was dissections of the highest quality produced and photographed for the new atlas, but it also gave the more senior anatomists an opportunity to pass on some of their expertise to an excellent group of medical students from Warwick University, UK. It was an unforgettable experience and based only what we saw during the masterclass, I'm confident that the 7th edition will contain some of the finest dissections yet!

Albert van Schoor

University of Pretoria

South Africa

News from Member Societies

AMERICAN ASSOCIATION OF ANATOMISTS

AAA Young Investigator Awards Going to Reiter, Radley, Reddien and Guttman

AAA's Young Investigator Awards combine three long-standing AAA awards—Bensley, Herrick, and Mossman—with the recently established Morphological Sciences Award, all recognizing investigators in the early stages of their careers who have made important contributions to biomedical science through their research in cell/molecular biology, developmental biology, comparative neuroanatomy, or the morphological sciences.

This year's Young Investigator Awards Committee was chaired by David Bilder (Univ. of California/Berkeley) and included Iain Cheeseman (Whitehead Institute), Andrew J. Ewald (Johns Hopkins Univ. School of Medicine), Konrad Hochedlinger (Massachusetts General Hospital), Michael J. Piper (The Univ. of Queensland), Adrian Salic (Harvard Medical School), Katja Schenke-Layland (Fraunhofer Institute), and Alexis M Stranahan (Medical College of Georgia).

Recipients of all four awards will present lectures in AAA's Young Investigator Awards Symposium, scheduled for Sunday, April 22, 5-7 p.m., at the AAA Annual Meeting/ EB 2012 in San Diego.

Jeremy Reiter Wins Bensley Award

Jeremy F. Reiter will receive the 2012 R.R. Bensley Award in Cell Biology and present an award lecture entitled "*Tectonics Form a Transition Zone Complex of Ciliopathy Proteins that Regulate Ciliary Composition*" at the AAA Annual Meeting during EB 2012.

The award to Reiter recognizes him for his elegant analysis of basic mechanisms of cilia structure and function, including defining key roles for a human disease-related gene in cilia assembly, analyzing the role of cilia during Hedgehog signaling in normal and cancer cells, and applying beautiful imaging-based analysis to central organismal questions.

Calling Reiter a "fearless, pioneering, interdisciplinary scientist," nominator Graeme Davis notes that his contributions include "the first demonstration that cancer cells can be ciliated and the first demonstration that cancer cells can be dependent on cilia." Thus, Davis says, "his recent work on the Hedgehog signaling pathway and the function of cilia has opened an exciting new research area and positions him as a leader in the field."

Reiter, now an associate professor in the Department of Biochemistry and Biophysics and the Cardiovascular Research Institute at UCSF, received his B.A. in molecular biochemistry and biophysics from Yale College, and his Ph.D. in developmental biology and M.D. from UCSF. After postdoctoral research at Berkeley with William C. Skarnes, he was a UCSF Fellow in the Developmental and Stem Cell Biology Program for three years prior to beginning his current position in 2006.

Among his other honors, Reiter received the March of Dimes Basil O'Connor Research Award (2004-2006), a Burroughs Wellcome Fund Career Award in the Biomedical Sciences (2005-2010), and the Presidential Early Career Award for Scientists and Engineers (2009).

AAA's Bensley Award is presented annually for "distinguished contribution to the advancement of anatomy, through discovery, ingenuity, and publications in the field of cell biology."

Jason Radley Honored with Herrick Award

AAA's 2012 C.J. Herrick Award in Neuroanatomy goes to Jason J. Radley, who will present an award lecture on "*Evidence for a Limbic Cortical HPA-Inhibitory Network and Its Role in Chronic Stress-Induced HPA Axis Hyperactivity*" at the AAA Annual Meeting at EB 2012.

The award recognizes Radley for his novel insights into the mechanisms underlying neural plasticity in response to stress, significance of which is underscored by the number of high quality articles he has published.

According to nominator Paul Sawchenko, Radley is "poised to make significant independent contributions to our understanding of the role of limbic mechanisms in stress adaptation, and their relevance to neuropsychiatric disorders." Sawchenko notes that "his performance overall was solidly among the best of the postdoctoral fellows I have supervised over nearly 40 years as a faculty member at the Salk Institute."

Radley received his B.A. in physics from Miami University and his Ph.D. in neuroscience from Princeton University. After completing neuroscience postdocs at Mt. Sinai School of Medicine and the Salk Institute for Biological Studies, Radley served as a senior research associate at Salk from early 2009 to early 2011, when he moved into his current position as assistant professor in the Department of Psychology at the University of Iowa.

In addition to the AAA award, his other honors include a NARSAD Young Investigator Award, (2006-2008 and 2008-2010), an ADAA Junior Faculty Research Grant Award (2006-2007), and a NIDA Postdoctoral National Research Service Award (2001-03).

AAA's Herrick Award is given annually "to recognize young investigators who have made important contributions to the field of comparative neuroanatomy and have demonstrated remarkable promise of future accomplishments."

Morphological Sciences Award to Julian Guttman

Julian A. Guttman will receive AAA's Morphological Sciences Award and present an award lecture on "*Knocking E. Coli Off of Their Pedestals: Understanding the Strategies Microbes Exploit to Generate Morphological Structure during their Disease Processes*" at the AAA Annual Meeting during EB 2012.

The award to Guttman recognizes him as an emerging leader in resolving the molecular basis of host–pathogen interactions, a field with profound potential to limit the burden of human disease, through his innovative combination of morphological techniques both *in vitro* and in intact animal model systems.

Stating that Guttman is "innovative, independent, ambitious, and resourceful," nominator A. Wayne Vogl refers to him as "'cell biologist/anatomist' using morphological techniques to explore questions of microbial pathogenesis both *in vitro* and in intact animal model systems."

Guttman received his B.S. in biology from the University of Western Ontario, his M.Sc. in anatomy at the University of British Columbia, and his Ph.D. in anatomy and cell biology, also from UBC. Following a postdoc with Brett Finlay at UBC, he joined the Department of Biological Sciences at Simon Fraser University as an assistant professor in 2007.

Guttman joined AAA as a student in 2000, was a Student/Postdoctoral Member on the AAA Board from 2005-2007, and currently serves on the ACYA and the Membership Committee. He received AAA's Presley-Zeiss Young Investigator Award (2000; 2002), Postdoctoral Fellow Poster Presentation Award (2006), Postdoctoral Fellow Platform Presentation Award (2007), and the Keith & Marion Moore Young Anatomist Publication Award (2008). Among his other honors, Guttman won the Canadian Institutes of Health Research (CIHR) Doctoral Research Award (2002), the Laura G. Jash Memorial Prize (2003), and the Canadian Association of Gastroenterology CIHR AstraZeneca Research Initiative Award (2004), and the CHIR New Investigator Award (2009).

AAA's Morphological Sciences Award was established in 2008 to recognize investigators in the early stages of their careers who have made important contributions to biomedical science through research in the morphological sciences, as broadly defined, and have demonstrated remarkable promise of future accomplishments.

Mossman Award to Peter Reddien

AAA's 2012 Harland Winfield Mossman Award in Developmental Biology goes to Peter W. Reddien, who will present an award lecture entitled "*The Cellular and Molecular Basis for Regeneration in Planarians*" at the AAA Annual Meeting at EB 2012..

The award recognizes Reddien for his seminal contributions to the field of tissue regeneration by studying its underlying molecular and cellular mechanisms. Using planaria as a model system, Reddien has demonstrated the pluripotent stem cell-like nature of the regenerative source tissue and defined key pathways involved in regeneration.

According to nominator David Page, Reddien is an exceptionally clear thinker with a great breadth of knowledge, and…his model system will continue to bear fruit throughout his career as well as provide a gateway to the study of regenerative biology and epigenetics in general." Moreover, Page says,
"his remarkable clarity of thought is articulated in his talks."

Reddien did his undergraduate work in molecular biology at the University of Texas, Austin, then completed his Ph.D. in biology at the Massachusetts Institute of Technology. After being an HHMI Postdoctoral Fellow in H.R. Horvitz's lab at MIT and a postdoc in developmental biology in the laboratory of A. Sánchez Alvarado at the University of Utah, he joined the Whitehead Institute for Biomedical Research and served as assistant professor at MIT from 2005-2009, becoming an associate professor in 2010.

Among his honors, Reddien received an NSF graduate fellowship (1997-2000), a Helen Hay Whitney Foundation postdoctoral fellowship (2003-2005), the Searle Scholar Award (2006-2009), the W. M. Keck Foundation Distinguished Young Scholar Award (2008), and is an HHMI Early Career Scientist (2009).

AAA's Mossman Award is presented annually "to recognize young investigators who have made important contributions to the field of developmental biology and have demonstrated remarkable promise of future accomplishments."

ANZACA 2011
DUNEDIN, NEW ZEALAND

ANZACA 2011 "New Insights -Implications for clinical practice". The 8th annual conference of the Australian and New Zealand Association of Clinical Anatomists (ANZACA) was held in Dunedin, Otago, New Zealand in early December 2011. The meeting was opened with a traditional Maori welcome including rousing kapa haka (see attached photo) which set the scene for an exciting conference.

Around 80 delegates from Australasia as well as an increasing complement from other continents attended. Over the two-day meeting, 26 oral and 38 poster presentations were given on topics ranging from evaluation of i-applications for education through to CT imaging of the normal coccyx. Abstracts from the conference will be published in Clinical Anatomy. Keynote speakers included Prof. Roger Soames (University of Dundee, UK), Asst. Prof. Carla Stecco (University of Padua, Italy) and Prof. Mark Stringer (University of Otago).

A highlight of the programme this year was the introduction of 1 minute oral poster summaries by each of the poster presenters. Both entertaining and informative this acted as an enticement for further discussions during the breaks. The conference dinner was held in the atrium of the Otago Museum.

Prizes were awarded to the following University of Otago students/staff members: Jason Woon - Best Oral Presentation; Ines Becker - Runner-up Best Oral Presentation; Matt Pollard - Best Poster (Education); Shengguo Chen - Best Poster (Research).

We look forward to seeing you at the combined ANZACA and AIAS meeting in Sydney, mid-December 2012

SPANISH ANATOMICAL SOCIETY

" History of Human Anatomy at the Complutense University Library "

During the XXV Congress of the Spanish Anatomical Society (SAE) held in Madrid in the Complutense University on 15-17 September 2011, the Library of the Faculty of Medicine has presented a "virtual" exhibition entitled "History of Human Anatomy at the Complutense University Library" (http://www.ucm.es/BUCM/med/41702.php).

Mr. Juan Carlos Domínguez Marrínez, Ms Manuela Crego Castaño and Mr. Oscar García Mateos, university librarians, have been responsible for this exhibition under the coordination of Prof. Luis Alfonso Arráez-Aybar (PhD, MD) commissioned by the SAE.

The aim of the project was to discover the rich heritage on anatomy textbooks existing in the Medicine Library funds and thanks to the projects "Dioscorides Digital Library" and Google are being digitized.

The exhibition is a selection of the leading anatomist and their major works and is organized according to chronological order, into 6 sections (between brackets the number of works embodied so far).

- ANATOMY BEFORE VESALIUS "CLASSICAL AND MEDIEVAL ANATOMY" (15)
- VESALIUS: "ANATOMICAL REVOLUTION" (8)
- ANATOMY AFTER VESALIUS. SIXTEENTH CENTURY (42)
- ANATOMY IN THE SEVENTEENTH CENTURY (30)
- ANATOMY IN THE EIGHTEENTH CENTURY (31)
- ANATOMY IN THE NINETEENTH CENTURY AND EARLY TWENTIETH CENTURY (47)

In each work (public and free of copyright) as well as to collect and review the full bibliographic information, it is possible the full-text access to the digital work when it was available.

From left to right. Porf. Arráez, Prof. Bueno (SAE President), Ms Crego and Mr. Domínguez, beside the poster exhibiton.

PAN-AMERICAN ASSOCIATION OF ANATOMY

IBERIAN LATIN AMERICAN SYMPOSIUM OF TERMINOLOGY (SILAT) ANATOMICAL, HISTOLOGICAL AND EMBRYOLOGICAL

The Pan American Association of Anatomy, through the SILAT, collaborates with the IFAA to unify the anatomical terms internationally. In this context, there have already been six SILAT, in the past two years, in different cities in Latin America.

The SILAT VI of Anatomy, Histology and Embryology was held from 13 to 16 April 2011, at the Palace of Medicine of the UNAM, in Mexico City. It was chaired by Dr. Sebastián Manuel Martínez Arteaga under secretary Dr. Ángeles Castellano and the treasury of Dr. Liana Luz Gutiérrez Espinoza. Managers of anatomy were Drs. Patricia Herrera Saint-Leu and Ignacio Hernández Carrillo. Those of histology, Drs. Adriana Becerril Montes and Martha Ustarroz Cano. The embryology, Drs. Mónica Aburto Arceniega and Isabel García Peláez.

Within the academic program the inaugural lecture was given by Prof. Dr. Rolando Cruz Gutierrez (Costa Rica) who explained the historical background of the Pan American Association of Anatomy, the SILAT, the Pan American Academy of Anatomy and the International Federation of Associations of Anatomists.

Then Prof. Drs. Alberto Rodríguez Torres (Chile) and José Carlos Prates (Brazil) showed the progress of anatomical terminology in the Spanish and Portuguese regions of America. Later Prof. Dr. Mariano del Sol (Chile), president of the Pan American Association Anatomy, spoke about the importance of proper utilization of morphological terminology in scientific publications.

Finally Prof. Dr. Ricardo Losardo (Argentina) explained the scientific and educational medical program called SILAT that begins its third year of life.

The conclusions of SILAT IV (Brazil) and the SILAT V (Chile) were read by their
respective presidents, Professors Drs. Nadir Eunice Valverde Barbato de Prates and Alberto Rodríguez Torres.

During three days of intensive work a large audience undertook workshops on terminology anatomy, histology and embryology. On the last day, Prof. Drs. Patricia Herrera Saint-Leu, Adriana Becerril Montes and Mónica Aburto Arceniega summarized the work done and its achievements.

Forty posters were presented from various Latin American countries. The Pan American Academy of Anatomy distinguished the best in each theme. There was an interesting symposium about Anatomy in Mexico: past, present and future, by the Prof. Drs. Miguel A. Herrera Enriquez and Ismael Herrera Vazquez, president and Secretary of the Mexican Society of Anatomy, respectively.

The authorities of the Mexican Society of Anatomy have recognized all living ex-presidents and the current president of the Pan American Association of Anatomy with a membership of honor: Sergey Federoff (Canada, 1975-1978), Alberto Rodríguez Torres (Chile, 1987-1990), Rolando Cruz Gutiérrez (Costa Rica, 1992-1995 and 2007- 2010), David Loyo José Guerra (Venezuela, 1995-1998); José Carlos Prates (Brazil, 1998- 2000), Robert D. Yates (USA, 2000-2002), Mauricio Moscovici (Brazil, 2002-2004), Ricardo J. Losardo (Argentina, 2004-2007) and Mariano del Sol Calderón (Chile, 2010-2013).

There was an administrative session of the Pan American Association of Anatomy, where it was resolved that the next SILAT would be held in February 2012 in San Paulo (Brazil) chaired by Prof. Dr. Richard Halti Cabral jointly with the International Symposium Morphological Sciences. It was also approved to undertake a SILAT in conjunction with the next Pan American Congress of Anatomy (2013, Mexico) that will be in organized by Prof. Dr. Manuel Arteaga Martínez. The VI SILAT was organized by the Pan American Association of Anatomy, the Mexican Society of Anatomy, the Mexican Society of Histology and the UNAM's Faculty of Medicine

and had the support of the Pan American Academy of Anatomy.

There was also a pre-symposium called Humanistic Leadership in organizations: Science and Art that took place on 12 April with 10 hours duration. It was lead by Prof. Dr. Ricardo Jorge Losardo, with the collaboration of Giselle Chamorro and Fernando Pereira. They taught how to lead a group of people to achieve a favorable result.

The social and cultural program included visits to the Museum of Anthropology and History of México, the historic Teotihuacán, the UNAM University City and the downtown historic Mexico city.

The closing session was very cordial and fraternal and was coordinated by Drs. Mariano del Sol and Manuel Arteaga Martinez. It took place in the Cortijo Rancho el Quemado, at Papalotla in State of Mexico.

Prof. Dr. Sebastían Manuel Arteaga Martínez
President SILAT VI
Prof. Dr. Mariano del Sol Calderón
President PanAmerican Association of Anatomy

Professor Germán Molina Albornoz (Peru); Rolando Cruz Gutiérrez (Costa Rica); José Carlos Prates (Brazil); Alberto Rodríguez Torres (Chile) and Ricardo Jorge Losardo (Argentine) at the Palace of Medicine of the UNAM, in Mexico City.

Symposium of the All-Russian Scientific Society of Anatomists, Histologists and Embryologists

On October 5-6, 2011, Khanty-Mansiysk State Medical Academy hosted a Symposium of the All-Russian Scientific Society of Anatomists, Histologists and Embryologists entitled «*Yugra-Embryo-2011. Regularities of embryo-fetal morphogenesis in Humans and Vertebrates*», the third symposium of this kind conducted in Khanty-Mansiysk (the two previous symposia were *Yugra-Embryo-2004* and *Yugra-Embryo-2006*).

The regional Government's Department of Health, The Department of Education and Youth Policy, and the Association of Medical Professionals of Khanty-Mansi Autonomous Okrug – Yugra provided support for this event. Sponsors included the "GEOTAR-Media" publishing group, BioVitrum, Stormoff Group of Companies, OPTEK, West Medica "Medika Prodakt", AstraZeneka, Roche, and Biomedical Systems.

Khanty-Mansiysk is one of the most dynamic and vibrant small cities in Russia. Located in the middle of West Siberia, it is the capital city of an autonomous region that has two names: *Khanty-Mansi Autonomous Okrug*, after the names of the two native nations of the Khanty and the Mansi, and *Yugra*, after a historical name of this territory. An oil-boom town, it is gaining in importance as a center for education, science, business, sports, and national culture.

The participants represented medical schools and research laboratories from Moscow, Tver, Astrakhan, Tyumen, Omsk, Orenburg, Tomsk, Yekaterinburg, Smolensk, Perm, Novosibirsk, Khanty-Mansiysk, and Surgut. They attended plenary sessions and panels discussing the following topics: "Placenta during gestational stages: The problems of perinatology and IVF"; "The morphogenesis of or-

gans in the urinary and reproductive systems in the framework of embryogenesis, postnatal ontogenesis, and experiments"; "Structural and functional changes in internal organs produced by Opisthorchis invasion and by experiment"; "Anthropogenesis: Embryonic morphogenesis of the brain and blood circulatory system"; "Structural and functional changes in internal organs in experimental and pathological conditions"; "The pressing issues of regenerative medicine". In addition there was a poster session, two workshops devoted to the "Modern microscopic techniques in biology and medicine" and "Methods of molecular biology as applied to diagnostics and treatment of cancers", and a training event on the "Image analysis systems in biology and medicine".

A meeting of the Embryological Commission of the Russian Ministry of Health and Social Services Nomenclature Standing Committee also took place in the framework of the symposium.

The symposium demonstrated that Russian morphological schools had become more active in researching human and animal development (namely the schools of Moscow, Khanty-Mansiysk, Tyumen, Omsk, Novosibirsk, Perm, Astrakhan, Yekaterinburg, Chelyabinsk, Orenburg, and others). The participants find it desirable to conduct embryological symposia every two or three years either as separate events or within the frame of the congresses of the All-Russian Scientific Society of Anatomists, Histologists and Embryologists, and the congresses of the International Morphological Association.

Professor V.L. Yanin, Doctor of Medicine,
Khanty-Mansiysk State Medical Academy
yanin_v@mail.ru

ANATOMICAL SOCIETY OF SOUTHERN AFRICA

Anatomy at UNAM, School of Medicine

The back of house of the Department of Anatomy with the logo of the School of Medicine, a door to the delivery area on the left, and the access point of the water purification plant on the right.

University of Namibia boasts the country's first medical school with the inaugural lecture in human anatomy that was presented on 8 February 2010. It was during this time that the construction of Phase I commenced in Windhoek, the capital of Namibia. This was signalled by a ground breaking ceremony on 10 March 2010 whilst lectures continued at UNAM Main Campus. Phase I of the construction project was completed at the end of April 2011 with the opening of both the Life Sciences I and Skills Laboratory buildings. The former contains the Department of Anatomy and the Department of Physiological Chemistry. The establishment of the National School of Medicine plays an essential role in the attainment of health and social well-being of all Namibians. It thus forms part of Namibia's Vision 2030 that aims for the transformation of the country's political and economic landscape. The anatomy curriculum is outcome-based, clinically orientated and includes all the components of anatomy i.e., microscopic, embryological, gross and clinical anatomy. The design of the facilities and equipment was directed towards user friendliness for faculty and students.

The Department of Anatomy was officially established in 2010 with the addition of Prof. W.

Vorster as Head of the Department. The department was however initially merged with that of the Department of Physiological Chemistry and Pharmacology due to the lack of academic staff. Additional academic and non-academic personnel joined the School of Medicine through the course of 2010.

The main entrance to Life Sciences I which houses the Anatomy Department.

Head of Department: Prof. Willie Vorster B.Sc. University of Stellenbosch; B.Sc. (Hons.) University of Stellenbosch; M.Sc. University of Stellenbosch; Ph.D. University of Stellenbosch; T.D.P.E. University of Stellenbosch

Lecturer: Dr. Milly Morkel B.Sc. (Hons.) University of Western Cape; MBChB University of Stellenbosch; D.O.H. University of Stellenbosch

Lecturer: Dr. Quenton Wessels N.Dipl. Medical Technology (Tshwane University of Technology); B.Sc. (Medical Sciences) University of Pretoria; B.Sc. (Hons.) University of Pretoria; MSc University of Pretoria; Ph.D. University of Pretoria

Technical Assistant: Mr. Peter Usiku N.Dipl. (Medical Technology) Cape Peninsula University of Technology; B.Tech. (Medical Technology) Cape Peninsula University of Technology

During the 39th Annual Conference of the Anatomical Society of Southern Africa (ASSA) the Department of Anatomy, UNAM was voted in as the newest member of the Society and cho-

The new dissection laboratory at the Department of Anatomy, University of Namibia.

Prof. Willie Vorster (in the centre) demonstrating anatomy to the new medical students.

sen to host the 40th Annual Conference from the 14th to the 18th of April 2012. The planning committee consists of Prof. Willie Vorster, Prof. Christian Jacobson, Dr. Marcus Goraseb, Dr. Quenton Wessels, and Dr. Milly Morkel.

Members of international anatomical societies are encouraged to visit the newest member of ASSA during the 2012 conference. Early bird registration closes on 31 January and more details can be found at http://www.assa2012.co.za/.

Quenton Wessels
University of Namibia

News from the Division of Forensic Medicine and Pathology at Wits

The Division of Forensic Medicine and Pathology at the University of the Witwatersrand has been working with the Faculty of Health Sciences to develop and initiate postgraduate research. This has involved the initiation of a new Bachelor of Health Sciences with Honours degree in *Forensic Science.* In June 2011 the programme was approved at the Senate meeting of the University and the course will therefore run for the first time next year (2012). The Honours course in *"Forensic Sciences"* aims to be a broadly based forensic sciences degree, where students will be exposed to different fields of forensic science and learn how they operate. The Masters programme was initiated in 2010.

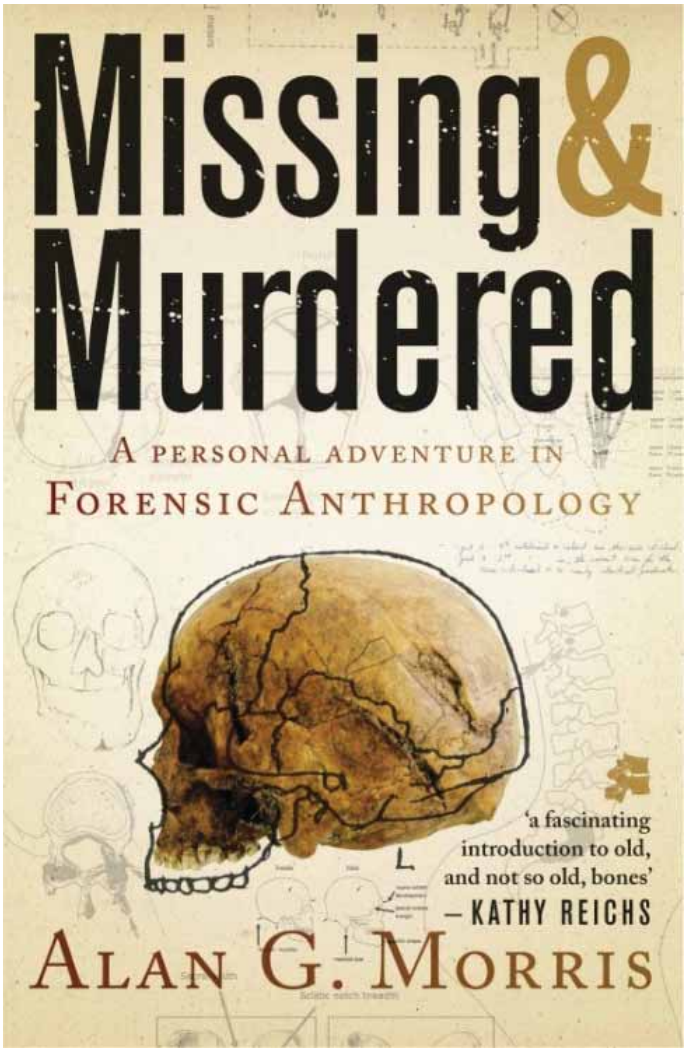
Prior to 2009 the Division of Forensic Medicine and Pathology had limited research outputs; however, the Division has been working hard at improving and expanding the teaching and research-related activities and outputs. The Division has, since June 2010, registered 6 M.Sc. (Med) students. The range of research projects includes forensic entomology, forensic psychology, toxicology and forensic anthropology. In 2012, we anticipate an additional 4 to 5 M.Sc. (Med) students as well as Honours students and are very excited.

M.Sc. (Med) students processing skeletal remains for anthropological analysis. *(Bottom Photo*) Front row from left to right: Claire Lewis, Lee-Anne Stafne and Roxanne Thornton; back row from left to right: Jonas Mbayu and Lawrence Hill.

Guinevere Gordon
University of the Witwatersrand

ASSA member, Prof Alan G Morris publishes a book on forensic anthropology

Alan G. Morris is Professor in the Department of Human Biology at the University of Cape Town. He has a PhD in anatomy from the University of the Witwatersrand and has published extensively on the origin of anatomically modern humans, and the Later Stone Age, Iron Age and Historic populations of Malawi, Namibia and South Africa. In more recent years he has extended his skeletal biology knowledge to the field of forensic anthropology and has published on the history of race classification and the history of physical anthropology in South Africa. He is a council member of the Van Riebeeck Society for the Publication of Southern African Historical Documents, an associate editor of the *South African Journal of Science,* an elected member of the Academy of Science of South Africa and a member of the Anatomical Society of Southern Africa.



Missing and Murdered, published by Random House/Struik, is a popular science account of how anatomy is applied to the real world of forensic science. It uncovers the fascinating world of forensic anthropology and how information from bones can solve mysteries both modern and ancient. The book explains the practice of forensic anthropology and the skills base of skeletal biology, while at the same time debunking the '*CSI* effect' (the phenomenon of popular television raising crime victims' real-world expectations of forensic science, especially crime-scene investigation and DNA testing). From muti murders, criminal cases and the Missing Persons Task Team to the study of archaeological skeletons, *Missing & Murdered* will definitely of interest to all anatomists.

Alan G. Morris
University of Cape Town

Future Scientific Congresses

The 18th Conference of the International Federations of Associations of Anatomists will be held in Bejing in 2014

ANATOMISCHE GESELLSCHAFT (GERMANY)
107th Annual Meeting and Leopoldina-Symposium - March 22-26, 2012

107th Annual Meeting
Frankfurt am Main, Germany

Main Topics
Topic 1: Rhythms and Oscillations in Living Tissues: Networks - Cells - Genes
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Free Oral Communications
Poster Presentation

See you in Frankfurt!
Join us in Frankfurt at the
Annual Meeting of the Anatomische Gesellschaft 2012
Submit your Abstract today
Abstract-Submission
Deadline: January, 9th 2012
Only abstracts of registered participants will be considered
Registration

Dear Professor,

On behalf of the Symposium Organizing Committees, it gives us great pleasure to invite you and all the teachers and students of your Department to participate in the coming XXII International Symposium on Morphological Sciences to be held in São Paulo, Brazil from February 12 to 16, 2012. The central theme of this edition is "Morphology – From the Lab to the Bedside" with the aim of exploring the important applications of this biological field for nowadays health care and science development.

At this time, we would like to update you about the scientific programme and to inform you that we have just made an agreement with "Medimond International Proceedings" in order to produce an ISI-indexed publication, containing the presented lectures and all approved abstracts.

Receive our best wishes.

Organizing Committee of the XXII ISMS

2012 CONFERENCE OF THE AUSTRALIAN AND NEW ZEALAND ASSOCIATION OF CLINICAL ANATOMY (ANZACA)

Dear Colleagues and Friends,

On behalf of the Organising Committee, you are warmly invited to participate in the 2012 annual meeting of ANZACA hosted by the Department of Anatomy at the University of New South Wales, Sydney. This is a joint meeting with the Australian Institute of Anatomical Sciences. The conference will be held from 9-11 December 2012 at the Crowne Plaza Hotel at Coogee Beach, Sydney, Australia, and has as its central theme '***Advancing Clinical Anatomy Research and Education***'.

Join us at a meeting that promises time to be informed and challenged by what each of us is doing in anatomy, both in research and education.

Warm greetings

Dr Nalini Pather & Patrick De Permentier

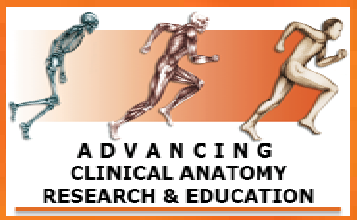
Co-Chairs: Organising Committee

2012 Joint Meeting of ANZACA & AIAS

Email queries to

N.Pather@unsw.edu.au ***or***

P.Depermentier@unsw.edu.au



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CLINICAL ANATOMY

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ON THE COVER: **Drawing session from an art and anatomy workshop for medical students at the University of Texas Health Science Center at San Antonio and art students at the University of Texas at San Antonio.** A current trend in medical education is to integrate aspects of the humanities into the medical school curriculum. In this issue of ASE, Dr. Charlean Moore and her colleagues describe an art and anatomy workshop that uses drawing exercises to increase observational skills, to foster the development of humanistic sensitivities, and to emphasize the emotional aspects of dealing with mortality (Photograph by Penelope Borchers).

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