



Australian and New Zealand FORENSIC SCIENCE SOCIETY



2009
Allan
Hodda
Award

Report Prepared for ANZFSS National Council

| By Sheree Hughes-Stamm



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1. Executive Summary

- The 2009 Allan Hodda Memorial Award was used to partly fund travels to:
 - Melbourne, Australia
 - Victorian Institute of Forensic Medicine
 - Victorian Police (R&D Section)
 - ISABS International Conference. Split, Croatia (Poster presentation)
 - International Commission for Missing Persons (ICMP). Sarejavo & Tuzla, Bosnia and Herzegovina
 - University of Copenhagen, Denmark.
 - University of North Texas, USA.

- Outcomes:
 - Witnessed the importance of integrating forensic anthropology and DNA identification units in their collective approach to identification of skeletal remains.
 - Establishment of possible mentoring relationships with senior anthropologists within Australia, Croatia and Texas, USA. Short, intense internships are currently being discussed at these facilities in order to gain wider forensic casework experience.
 - Discussed current research with leading forensic scientists and graduate students. These included research focusing on the development of various methods of improving DNA profiling success of highly degraded samples. Valuable scientific advice regarding my PhD research was also received.
 - Established professional relationships and future collaborative projects are being explored.
 - Gained exposure to a novel method of SNP detection and analysis of highly degraded DNA samples. A collaborative research project has been initiated between the University of North Texas, and private biotechnology company and Bond University as part of my PhD research.

- Benefits:
 - Exposure to DVI and modern skeletal casework facilities.
 - Offers of assistance in gaining vital skeletal casework experience (anthropology & DNA analyses) to develop my career within the field of forensic science.
 - Inter-agency collaboration has been established for future research and possible funding opportunities.
 - Interaction with peers at an international conference and various overseas forensic facilities has assisted in raising the profile of forensic research and practitioners within Australia.

- With ongoing support and training, the Queensland Health Forensic Science Services and Queensland Police Service may have a secondary forensic anthropologist available for consultation if required.
- Financial:
 - The award (\$5000) was used to fund airfares and contribute towards accommodation. All other funds required for these travels were sourced from various grants and schemes provided for staff and students of Bond University.

2. Itinerary & Outcomes

Melbourne, AUSTRALIA (28th - 29th May)

Victorian Institute of Forensic Medicine (VIFM)

- Met with Dr. Soren Blau, resident Forensic Anthropologist to discuss:
 - the duties and expectations of anthropologists in each Australian state.
 - the role of an anthropologist within a DVI response team (recent Victorian bushfires).
 - plans for training and mentoring young and early career anthropologists within Australia.
- Assisted with some current casework (exhumed remains).

Outcomes:

- Improved understanding of the role of forensic anthropologists within Australia and the various affiliations with which they belong.
- The establishment of a potential mentoring relationship.
- The offer of assistance (where possible) with gaining more practical/casework experience in order to further develop my existing forensic anthropology skills.
- Invited to attend the Biological Sciences SAG meeting in Sydney (8th-9th July); recently attended.

Victorian Police (DNA Section, R&D)

- Meeting with Dr. Roland van Oorshot and Dr. Runa Daniels.
- Discussed PhD research in detail and other possible collaborative projects investigating the improvement of DNA typing methods for highly degraded samples.
- Tour of laboratory facilities.

Outcomes:

- Offer of valuable scientific advice and assistance with various laboratory resources.
- The opportunity to complete some bench-work in the Victorian Police R&D laboratory.
- Dr. van Oorshot expressed keen interest in my research and therefore may be asked to become a co-supervisor of my PhD.

Split, CROATIA (1-5th June)

6th International Society of Applied Biological Sciences (ISABS) Conference; Human Genome Project Based Applications in Forensic Science, Anthropology and Individualized Medicine.

- **Poster Presentation - Assessment of DNA Degradation and the Genotyping Success of Highly Degraded Samples.**
- Talks covered the most recent developments in the field of forensic genetics and Anthropology.
- Scientific debate over certain current techniques and published papers (LCN).
- Opportunity to meet and interact with leading scientists in the field of forensic genetics (particularly degraded and LCN DNA).
- Invited to visit University of Split (Department of Forensic Medicine - DNA and Anthropology laboratories) Tour of facilities and discussion of techniques with staff and PhD students.
- Word-of-mouth advertising of the 2010 ANZFSS Symposium in Sydney (keen interest expressed by many participants).

Recommendations for Plenary or Invited Speakers for 2010 ANZFSS Symposium

- Dr. Michael Coble (AFDIL, USA)
 - Advancement in the Identification of American war remains
- Dr. Jose Lorente (Granada, Spain) and Dr. Ed Huffiense (Bode)
 - Fighting human & child trafficking via DNA methods
- Dr. Bruce Budowle (University of North Texas - formerly FBI)
 - Validity of using trace DNA (LCN) in forensic casework

Sarejavo & Tuzla, BOSNIA and HERZEGOVINA (6th - 10th June)

International Centre for Missing Persons (ICMP).

Visit to Forensic Science facilities:

Identification Project Mortuary

DNA Laboratories

Re-association Mortuary (Anthropology)

- Invitation to visit ICMP by Dr. Thomas Parsons (Director of Sciences) at 2008 ANZFSS Symposium, Melbourne.
- Discussed improved methods of DNA extraction from bone and teeth with DNA laboratory manager.
- Established professional relationship with the archaeology and anthropology project manager.

Outcomes

- Gained an appreciation of the many complications and difficulties involved in the identification of human remains as a result of military conflict/genocide and exhumation of mass graves.
- It was evident that the close and functional working relationship between the anthropology and DNA laboratories is vital for a successful human identification effort.
- Possibility of involvement in the exhumation and of a mass grave (period of 2-4 weeks internship/work experience) to gain field recovery experience.

Copenhagen, DENMARK (11th - 12th June)

Department of Forensic Medicine

University of Copenhagen

- Invited by Dr. Nikolaj Friis Hansen (Forensic Pathologist - met at 2008 ANZFSS Symposium, Melbourne)
- Visit to Anthropology Department
 - Spent one day examining a variety of skeletons ranging from the Bronze age through to modern populations
- Visit to DNA laboratory (Director: Prof. Neils Morling)
 - Discussed using SNP analysis for the genotyping of degraded DNA.

Outcome

- Offered the opportunity to carry out bench-work in DNA laboratory using equipment and modern platforms for SNP analysis not available at Bond University.

Texas, USA (15th - 18th June)

Center for Human Identification

University of North Texas

- Met and discussed PhD research with leaders in the field of forensic genetics and degraded DNA (Missing persons unit).
- Tour of DNA and anthropology laboratories.
- Discussed PhD research with senior staff which was met with much interest.
- Provided with individual education and discussion on the most recent developments and debate in the field of LCN DNA.
- Due to unforeseen circumstances the cutting-edge equipment used for SNP/STR analysis was unavailable for training, however initial orientation and preparation for future operation was achieved.

Outcomes:

- Gained an appreciation of the importance of combining anthropological and molecular analyses when investigating skeletal remains cases.
- Offer to return for a period of 1-3 months to carry out substantial research (benchwork) using the Center's equipment, access to staff expertise and novel molecular techniques.
- Offer to return for a 1-2 week intensive internship in the anthropology lab gaining vital experience working up historic and current skeletal cases with senior staff.

3. Benefits

a. To Recipient (Sheree Hughes-Stamm)

- Establishment of professional relationships with many leading forensic scientists.
- Provision of scientific advice regarding current doctoral research.
- Exposure to DVI and modern skeletal casework facilities/remains.
- Offers of assistance in gaining vital skeletal casework experience (anthropology & DNA analyses) to develop my career within the field of forensic science.
- Due to gaining a wide exposure to casework skeletal material (across three continents) my abilities and confidence as both a forensic anthropologist and Senior Teaching Fellow has increased.

b. To Bond University

- An increased awareness within the international forensic community of the forensic research and courses currently offered at Bond University which may lead to increased student enrolment/exchanges.
- Inter-agency collaboration has been established for future research and possible funding opportunities.
- Students within the forensic science course gain from an improvement in my teaching due to the experiences and skills obtained during these travels.

c. To Forensic Science Community

- Interaction with peers at an international conference and overseas forensic facilities, has assisted in raising the profile of forensic research and practitioners within Australia.
- More international contributors to the 2010 ANZFSS symposium may result due to substantial word-of-mouth advertising during travels.
- Research partners may in future provide ANZFSS QLD branch with excellent guest speakers.
- ANZFSS will be acknowledged on all publications which stem from opportunities provided as a result of this travel award.
- An oral presentation summarising the itinerary and outcomes of these travels will be prepared for the 2010 ANZFSS Symposium, Sydney.
- With ongoing support and training, the Queensland Health Forensic Science Services and Queensland Police Service may have a secondary forensic anthropologist available for consultation if required.

4. Financial Summary

Copy of Receipts attached

Airfares	\$ 4054	
Accommodation (Croatia)	<u>\$ 946</u>	(Partial Contribution)
TOTAL	<u>\$ 5000</u>	



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Booking Reference	WFBSN0070409	Date Printed	07 Apr 2009
Passenger Name	HUGHESSTAMM/SHEREEMS		
Total Amount	\$1,604.00		
	One thousand six hundred and four dollars only		
Being For	Payment for Ms Hughesstamm Accommodation in Melbourne, Croatia and deposit on Airfare		
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Being For	FINAL PAYMENT OF AIRFARES INCL ALL TAXES		
Payment Details			
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5. Acknowledgements

- National ANZFSS for the provision of the award.
- Bond University Research & Consultancy Services (BURCS) for the access to funds via the Higher Degree Research Student Support Scheme.
- Prof. Greg Gass, Deputy Dean of Health Sciences, Bond University, for the provision of additional funds for staff training.
- Supervisor Prof. Angela van Daal for her contacts and support.
- Dr. Thomas Parsons (Director of ICMP)
- Dr. Renee Kosalka (Project Manager Archaeology & Anthropology, ICMP)
- Dr. Neils Morling and Dr. Nikolaj Friis Hansen (University of Copenhagen)
- Staff of Center for Human Identification, Texas
 - Dr. Bruce Budowle
 - Dr. Artie Eisenberg
 - Dr. John Planz
 - Mark Ingraham and Dr. Gill-King