

SPECIAL STUDIES PROGRAM REPORT

Name: Richard Logan
School/Area: Dentistry
Faculty: Health Sciences
Status: Associate Professor
Period of Absence: 22/1/2011 – 22/7/2011
Number of days outside Adelaide: 182 days
Principle Activity: Pursuit of research

Places/Institutions visited:

The Netherlands

- Academisch Centrum Tandheelkunde Amsterdam (ACTA) Department of Periodontology
- Academic Medical Centre, Department of Translational Physiology, University of Amsterdam
- Waterland Hospital, Purmerend, Oncology Trials Office

Belgium

- EORTC Quality of Life Spring meeting, Brussels

Sweden

- University of Gothenburg, Dental School, Department of Oral Medicine

Greece

- Mucositis Clinical Guidelines Revision meeting as part of the Multinational Association for Supportive Care in Cancer Symposium

United Kingdom

- Barts and the London School of Medicine and Dentistry
- Department of Oral Pathology, KCL Dental Institute Guy's Hospital

 approved
15/8/11

SUMMARY:

In keeping with the proposed outcomes of my SSP application the main objective of my SSP was in the *pursuit of research* specifically focussed on the development of new opportunities for international collaborative research related to my work relating to oral toxicities associated with cancer treatment. I have established new collaborations as well as having had the opportunity to co-write various publications during my leave. I have also attended meetings/conferences specifically related to my research interests which has enabled me to meet with more people in my field as well as other related areas. In addition, the SSP enabled me to have the time to *review and develop teaching* materials/lectures for undergraduate oral pathology for inclusion in the revised curriculum for the BDS program. Finally the SSP provided me opportunities for *professional development* in my dental speciality of oral pathology by interaction with to internationally recognised specialists in the field.

This SSP has provided opportunities that should further increase not only my international profile but also that of the School of Dentistry and Faculty of Health Sciences through new research possibilities and collaboration.

SPECIAL STUDIES PROGRAM REPORT:

As indicated in my original application for my SSP, the main objective of my leave was in the Pursuit of Research. In addition, further objectives were the Improvement of Teaching as well as Professional Practice.

I have fulfilled all proposed outcomes.

For the majority of my leave I was based mainly in Amsterdam at the Academisch Centrum Tandheelkunde Amsterdam (ACTA) Department of Periodontology, where I undertook the following activities:

- Pilot study investigating the effects of Lapatinib on the alveolar bone, this work is ongoing
- Assisted final year dental students in an elective project writing a review oral side effects of targeted therapies in cancer patients
- Commenced work on a book chapter on the use of experimental models in gastrointestinal mucositis research
- I visited the Academic Medical Centre, University of Amsterdam and met with Dr Dan Milstein, a physiologist in the Department of Translational Physiology and discussed the use of intravital sidestream dark-field (SDF) imaging to measure microvessel density and potential for its use in investigations into oral mucosal toxicity and healing following cancer treatment
- I visited Waterland Hospital, Purmerend and met with Christine Boers-Doets, Specialist Research Nurse and Research Coordinator in the Oncology Trials Office. She is undertaking a study entitled "A Phase III Randomized Double-blind Cross-over trial of supersaturated calcium-phosphate rinse (Caphosol®) versus NaCl 0.9% in the relief of Oral Mucositis in renal cell carcinoma, hepatocellular carcinoma, and gastrointestinal stromal tumor patients receiving targeted therapy". As part of this, we have arranged to collaborate on the analysis of histological and immunohistochemical changes that occur in the oral mucosa in patients receiving targeted treatment as well as a review of oral mucosal toxicity in these patients. Patients will have oral mucosal biopsies done in the Netherlands which will be sent to Adelaide after processing for examination
- Review of clinical guidelines for the management of oral and gastrointestinal mucositis. The leader of the Growth factors and Cytokines section for this review was Dr Judith Raber-Durlacher who is based in Amsterdam at ACTA. I was co-section head of this section, so being in Amsterdam, we were able to easily collaborate on this project. A significant amount of work was required prior to the MASCC meeting in Athens where the reviews were presented. This work involved reviewing papers for publication, allocating papers to reviewers in the section and then collating results from the review

I also had the opportunity to visit colleagues in Sweden and the United Kingdom where I undertook the following activities:

- I visited Dr Inger Von Bültzingslöwen at the University of Goteborg, Department of Oral Medicine with regard to taking part in a multicentre international trial (ORA-STEM) investigating oral toxicity in patients undergoing stem cell transplantation. I also met with Dr Mike Brennan, Carolinas Medical Center (USA) who is also involved in setting up this trial internationally who was visiting

Gothenburg at the same time. I spent time in the Department of Oral Medicine looking at how this trial was being set up with a view to establishing an Australia centre for the trial in Adelaide; I am now meeting with relevant people in Adelaide with the aim of setting this up as soon as possible.

- In London I spent time at Barts and The London School of Medicine and Dentistry and met with the Dean, Professor Farida Fortune and other staff involved in teaching oral pathology and oral medicine. I discussed teaching and research in oral pathology as well as the use of online technology in provision of teaching materials and assessment.
- I also visited the Department of Oral Pathology, KCL Dental Institute Guy's Hospital and met with Oral and Maxillofacial Pathologists, Professor Peter Morgan and Professor Eddie Odell and discussed issues relating to curriculum development and assessment. Potential collaboration was discussed with regard to the development of online assessment materials.

Conferences/Meetings attended:

17/2/2011

ACTA Department of Periodontology Meeting,
"The periodontal inflamed surface area as inflammatory burden in diabetes and rheumatoid arthritis"

28/2/2011 – 1/3/2011

European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Spring meeting, Brussels, Belgium. I participated in the following sessions:

- Oral Health
- Head and Neck

21/6/2011

Mucositis Clinical Guidelines Review meeting (as part of the Multinational Association for Supportive Care in Cancer Symposium) Athens, Greece

Publications:

Sonoi, N, Soga Y, Maeda H, Ichimura K, Yoshino T, Aoyama K, Fujii N, Maeda Y, Tanamoto M, Logan R, Raber-Durlacher J "Histological and immunohistochemical features of gingival enlargement in a patient with AML" Submitted to Quintessence International

Boers-Doets CB, Epstein JB, Raber-Durlacher JE, Ouwerkerk J, Logan RM, Lacouture ME, Gilderblom H "Oral adverse events associated with Tyrosine Kinase and mammalian Target of Rapamycin inhibitors in renal cell carcinoma: a structure literature review" Submitted to The Oncologist (accepted pending minor revision)

Logan RM "Common oral pathologies – an update for dentists" ADA News Bulletin, June 2011

Other papers in preparation:

Arends ABP, Wiersma D, Logan RM, Raber-Durlacher JE "Oral adverse effects of targeted cancer treatment – an update for dental practitioners"

Logan RM, Raber-Durlacher JE "Bone changes in the mandible in the DA rat following administration of lapatinib."

A further publication will result from the Mucositis Clinical Guidelines review meeting relating to the role of growth factors and cytokines in the management of oral and gastrointestinal mucositis.

Implications for my teaching and research:

The SSP has provided many opportunities for the development of new international collaborative research opportunities as detailed above. The two main projects are the ongoing work in with Dr Raber-Durlacher and Christine Boers-Doet in Amsterdam examining oral toxicity associated with targeted treatment and setting up the Australian centre for the ORA-STEM project with Dr Inger Von Bültzingslöwen and Dr Mike Brennan. Discussion with relevant colleagues in Adelaide to establish this has already begun.

In addition, the time spent during my 6 months away has allowed me to completely review and update all oral pathology teaching materials/lectures for the 2nd to 5th years of the BDS program, including the development, organisation and planning of online resources.

These revisions were necessary given the ongoing development of the revised BDS curriculum and will enable me to provide a better experience for the BDS students with the aim of enhancing their learning in general and oral pathology.

Professional practice:

Finally the interaction with oral pathologists, particularly in London has been important for my own personal practice in the specialty. I was able to participate in reviewing and discussing cases during my visit. This interaction is important as in South Australia I am the only practicing oral pathologist in the state.

In conclusion, this SSP was a useful and valuable experience which has allowed me to further develop my international profile and create new opportunities for international collaborative research which will benefit the School of Dentistry as well as the Faculty of Health Sciences.