



NCPO Signs Agreement with Japanese Education Group

The NCPO's internationally recognised expertise in prosthetics and orthotics education was further endorsed when it signed an agreement to upgrade the qualifications of Japanese students. The agreement established a formal link with the prominent Jikei Group, which owns 27 Japanese tertiary institutions.

La Trobe University Vice-Chancellor, Professor Michael Osborne and Jikei's Chairman Dr. Kunihiko Ukifune signed the agreement. Also in attendance were other senior members from both institutions, with the NCPO represented by NCPO Head Mr. Rod Cooper and the ISPO ANMS represented by chairman Ms. Margaret Hodge.

Under the agreement, the NCPO will upgrade the qualifications of graduates from the Prosthetics and Orthotics College of the Kobe College of Medical Welfare (a major Jikei tertiary institution) to the level of the La Trobe University Bachelor of Prosthetics and Orthotics degree. Currently, these students undertake three years of study in Japan



Jikei Chairman Dr. Kunihiko Ukifune (left) and La Trobe University Vice-Chancellor Professor Michael Osborne shake hands to symbolize the agreement.

to obtain a College Certificate qualification in P&O. The upgrade program will allow students to have their Certificate study directly attributed towards La Trobe's B.P&O degree. To obtain the upgrade, Japanese students will be required to successfully complete a combination of NCPO prosthetics and orthotics subjects totalling 130 credit points.

Mr Rod Cooper said the new program had enormous potential benefits for La Trobe University. These included increased international recognition of La Trobe's P&O program, exposure of local students to international P&O practices and the financial contribution of these additional fee paying students. Four students from Kobe College wish

to start the program in 2004. The long-term goal is to enrol four to six students per annum.

Further information: Mr. Rod Cooper +61 3 9479 5862 or La Trobe University Public Affairs Office +61 39479 2316.

Graduation Ceremony



Prosthetics and Orthotics graduates fling their caps in elation, celebrating completion of their P&O degree with NCPO Senior Lecturer, Mr Les Barnes (left).

Most of this year's prosthetics and orthotics students graduated at the La Trobe University Faculty of Health Sciences Graduation Ceremony on Friday 10th October. Fourteen P&O undergraduates who completed their studies in July received their testamurs during the ceremony. Two additional students graduated in absentia, one of whom was a conversion student. All graduates were awarded the B.P&O degree. When combined with those who graduated in April the total number of graduates for 2003 was 25.

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Curriculum Corner

Detail about the P&O curriculum can be found in the 'Course outline and subject descriptions' section on the NCPO homepage: <http://www.latrobe.edu.au/ncpo/>

POR21CPB Patient Evaluation

Students undertake this subject in first semester of second year. The subject aims are to introduce skills relating to prosthetic and orthotic patient assessment. Theoretical concepts are complimented by practical sessions with emphasis placed upon assessment of musculoskeletal and neuromuscular disorders.

Feedback from previous years revealed that students often found it difficult to apply the material taught and also combine their skills into a compact patient assessment procedure. To address this problem, the curriculum focused on using the T.O.T.A.R.P.S. assessment method in an attempt to present a logical, systematic approach to client evaluations.

T.O.T.A.R.P.S. covers the main areas of a thorough evaluation in a step by step process, with later tests only being conducted on areas that are not cleared in earlier, general functional tests.

Talk – gathering of important patient details and establishment of patient rapport.

Observation – general observation of posture and gait and use of clearance tests to determine areas requiring further detailed assessment.

Touch – palpation and inspection of affected areas.

Active testing – observation and recording of active ROM.

Resisted testing – grading and recording of muscle strength using the Oxford scale.

Passive testing – observation and recording of passive ROM and joint end feels.

Special testing – further detailed individual tests e.g. neurological testing, joint stability.

The format appeared to succeed in providing a starting point from which students could undertake their assessment, and very positive feedback was received from the students.

It is expected that students will become more proficient in performing patient evaluations as their clinical experience increases. As result, every student may not continue to apply the entire TOTARPS method; however it is felt that they will have developed a solid base from which to undertake their patient evaluations. Feedback from clinicians on student patient evaluation skills following second year placements at the end of this year would be most welcome, to further evaluate the TOTARPS assessment method as our chosen educational option.

Further information on second year curriculum may be obtained from the Second Year Coordinator, Mrs. Kaisha Gurry, phone: (03) 9479 5864 or email: k.gurry@latrobe.edu.au.



ISPO Australia Annual Scientific Meeting

ispo2003, the Annual Scientific Meeting of ISPO Australia will be hosted by the NCPO at La Trobe University from November 27-29, 2003.



The keynote speaker at the conference will be Professor Charles "Chuck" Radcliffe (left) who will present a keynote address titled "Biomechanics of Lower Extremity Socket Fitting."

Professor Radcliffe has been involved in research in the field of lower extremity prosthetics since 1948. Among the

many pioneering contributions he has made to prosthetics are the Patellar tendon bearing (PTB) socket, the quadrilateral socket, the SACH foot and 4-bar linkage knee designs. Professor Radcliffe will also present a special pre-conference workshop on "Fitting and Alignment of a Four-Bar Prosthetic Knee with Pneumatic Swing Control" on November 26th, and a scientific paper during the conference on "Biomechanics of Knee Stability Control with Four-Bar Prosthetic Knees".

For more information about the meeting, visit the conference website:

<http://www.ispo.org/ispo2003>

Prize Winners for 2002

La Trobe University's Annual Presentation of Awards and Prizes Ceremony, for the 2003 year, was held on the 5th of August. Deputy Chancellor, Mrs. Sylvia Walton, AO, presented the awards. NCPO staff and representatives of the Australian P&O profession congratulated the prize winners, who received the following prosthetics and orthotics awards:

The award for the most outstanding first year student, donated by the Australian Orthotic Prosthetic Association Inc (AOPA) Victorian Section, was presented to Ms Emily Graham. Mr. Christopher Wallis received the Australian Orthopaedic Association Prize, awarded to the most outstanding second year student. The International Society for Prosthetics and Orthotics (ISPO) Prize, awarded to the most outstanding third year student, was presented to Mr. David Dzienciol. Joint winners of the Robert Gardner Memorial Prize, for the students who achieved the best result in the third-year Independent Study Project subject, were Mr. David Dzienciol and Ms Tania Hallett. The Hans Georg Nader Prize, for the prosthetics and orthotics honours student who achieved the highest overall result in the honours year, was presented to Mr. Benjamin Kettle. Ms Katrina McGrath received the E.H.Armstrong Prize for Services to Lower Limb Amputees, which is awarded to recognise contributions to the



Outstanding NCPO students for 2002 receive their awards (from left): Mr. Ben Kettle, Mr. David Dzienciol, Ms Tania Hallett, Mr Chris Wallis and Ms Emily Graham (Ms Katrina McGrath absent).

care and management of lower limb amputees through an undergraduate, honours or postgraduate research project.

NCPO staff are grateful to donors for providing these valuable prizes that reward outstanding achievement. Such achievement is the result of hard work and dedication by the students concerned, and congratulations are due to all prize winners. Well done!

AOPA Extends Contract for Joint Position

The NCPO is pleased to announce that, following an initial six month trial period, the Australian Orthotic Prosthetic Association Inc (AOPA) has agreed to continue the AOPA / NCPO Lectureship for a further 12 months. The position will be funded at 0.4 EFT by the AOPA with Kaisha Gurry fulfilling the role of Executive Officer for the AOPA, and at 0.4 EFT by the NCPO with Kaisha filling the roles of Lecturer and Clinical Education Coordinator.

A furnished office and associated equipment is provided by the NCPO, allowing a full time contact point for all AOPA business as well as access to the University's resources to assist the AOPA to meet the administrative and strategic goals of the Association. The establishment of this position has proven advantageous for both organisations, allowing flexible time allocations and a more immediate response to issues in both roles.

It is hoped that the Lectureship position will continue to strengthen relationships between the NCPO and the AOPA.

With the addition of the AOPA office to the NCPO, the NCPO continues to maintain a close working relationship with relevant associations and organisations within the P&O industry. The NCPO also provides office space and equipment to the ISPO Australia. Through ongoing support of our peak professional bodies, it is hoped that the NCPO can continue to

contribute to raising the awareness and increasing the effectiveness of these professional bodies.

Current NCPO staff representation:

AOPA National Council

Executive Officer	Kaisha Gurry
NCPO representative	Rod Cooper
Elected Member	Michael Gurry

ISPO Australia

Chairman	Margaret Hodge
Secretary	Wes Pryor
Chair, Scientific & Education Committee	Tim Bach

ISPO Australia 2003 Convening Committee

Convenor	Tim Bach
Committee members	Les Barnes
	Michael Dillon
	Wes Pryor
	Kaisha Gurry
	Steve Hockey
	Rita van Breda

P&O Clinical Education

The quiet time of the year for clinical facilities is nearing to an end. Second year students are preparing to undertake their three week clinical placements at facilities in Melbourne, Geelong, Ballarat, Bendigo, Whyalla, Queensland, NSW and Tasmania during November and December.

The 2004 fourth year students have been allocated their facilities for two eight-week placements during March to June. It was a difficult task with a large cohort of students and a decreasing number of placements available. As in previous years, students will be traveling around the country and overseas.

A big thank you to Princess Alexandra Hospital, Brisbane and Orthotics and Prosthetics South Australia, for offering fourth year supplementary placements during the past two months.

Another thank you to those clinicians who attended for the fourth year Clinical Exams in July, especially the following clinicians and facilities who donated their time: Mark Graf, Melbourne Health and Gavin Burchall, Royal Children's Hospital (full day) and Liz Parris, Alfred Hospital and David Wilson-Brown, Caulfield General Medical Centre (an afternoon each).

First year students completed their week placement in June and July, traveling to facilities in Sydney, Brisbane, Whyalla and throughout Victoria. Thank you to all facilities for promptly returning the assessment forms.

The October Clinical Supervisor's meeting minutes are included with this newsletter for all clinical facilities. Please take the time to review these minutes as a number of important items were discussed.

Finally, a note of congratulations to Chris McCann, Manager Whyalla Hospital and Health Services Inc., who successfully obtained a grant to provide a travel bursary for student clinical placements. The bursary covers the cost of an airfare to Whyalla. The NCPO is now able to offer students travel bursaries to NSW courtesy of NSW Health, Tasmania courtesy of the University Department of Rural Health, Tasmania and facilities in Tasmania.

Further information about P&O Clinical Education can be obtained from the Coordinator, Kaisha Gurry, phone: (03) 9479 5864 or e-mail: K.Gurry@latrobe.edu.au

Thank you to all Volunteer Patients for donating your time for student practice.

Our students benefit from meeting real people who require P&O services, hearing your stories and learning about the physical challenges you face every day. NCPO graduates are better clinicians as result of your input.

Thank you!



NCPO Appreciates Contributions

The NCPO is extremely pleased to receive significant offers of contributions to the department. These have included: components for use in the teaching program, teaching expertise for theoretical and technical demonstrations, awards for outstanding students, time to act as clinical examiners, and the invaluable support of facilities in providing clinical placements and clinical supervision.

University funding of the NCPO consists of a limited allocation of recurrent funds, most of which is used to purchase consumable materials and for volunteer patient transport. Although NCPO staff make every effort to reduce teaching costs, practical subjects within the P&O program are inherently expensive. As a result, offers of donated time and expertise from clinicians greatly enhance our ability to deliver a comprehensive program to our students.

Component donations allow students to be exposed to recent technologies that would not otherwise be possible within the constraints of our materials budget. NCPO staff are careful to ensure that they does not exclusively promote particular product brands to our students. We utilize donated components to compliment theoretical concepts and attempt to expose students to as many product options as possible. When product suppliers provide lectures to our students, they are required to deliver general theoretical knowledge related to their product applications. Where possible, we try to offer suppliers of related products a similar opportunity to speak to our students.

Can you make a contribution to the NCPO?

Contributions to the NCPO are gratefully received. However, parties offering donations must understand that their offer will only be accepted if it is consistent with the departments' educational objectives.

Contributions to the NCPO may involve:

- Donation of componentry (including used items)
- Registration to offer clinical placements
- Donation of expertise for clinical examinations, theoretical lectures or practical teaching
- Support of NCPO research activity
- Promotion of the NCPO Volunteer Patient Program.

The NCPO remains committed to delivering the highest quality of education to our students and greatly appreciates the support provided by the prosthetic and orthotic profession.

To offer or gain further information regarding contributions to the NCPO, please contact Mr. Rod Cooper, Head of the NCPO on phone (03) 9479 5862 or email: Rod.Cooper@latrobe.edu.au



2003 NCPO Student Research Symposium

Members of the prosthetics and orthotics profession joined School of Human Biosciences staff, NCPO staff and students at the Student Research Symposium, held on October 27th in the Szental Lecture Theatre, Bundoorra Campus. Twenty-eight third year students presented their Independent Study Projects (ISP) and the three Honours students presented their research projects in a full and varied program. Information about ISP and Honours projects is provided below.

At the Symposium, which has become a regular 'mini-conference' event, students reported on experiments they had conducted or products they had developed. Topics ranged from amputee rehabilitation and prosthetics management, including prosthetics componentry, to halo-thoracic orthoses, lower limb orthotics and sports applications. Lunch and evening nibbles were kindly donated by Reis Orthopaedics. The Symposium was a resounding success, a suitable culmination of many hours of effort from NCPO students and staff.

Independent Study Projects

ISP students work in pairs, with an NCPO staff member as a supervisor and occasional collaboration with external facilities. Because these projects are the first introduction to applied research for most students, ISP experiments are small in size, and relatively simple in design. The focus of all ISP work is on the students learning to do research, rather than on the research outcomes, and most students experience the whole research process. In first semester they are required to submit a research proposal similar to those required for grant applications. After projects and student pairs are assigned in second semester, students must gain ethics committee approval before undertaking subject recruitment and commencing procedures.

All students learn new techniques in data collection, processing and analysis. Some use sophisticated gait analysis equipment, while others gain skill in writing questionnaires and conducting qualitative analysis. Students also develop important skills in communication, team work, self-management and independent learning, which should benefit their future careers. In spite of

the focus of ISPs on student learning, each year many projects produce interesting and novel results that may add to the prosthetics and orthotics knowledge base.

Honours Research Projects

Honours projects are larger and more complex than those undertaken in the ISP subject, as students work almost full-time on their projects for one academic year. Each student works individually, with an NCPO staff member as supervisor and may also have a co-supervisor. Honours projects are intended to address a gap in the literature and should produce useful research outcomes in addition to student learning. The research process is similar to that described in ISP above.

As well as gaining research experience, Honours students develop strong self-management skills, superior written and verbal communication skills and considerable ability to seek, find and interpret the scientific literature. Such skills should enable them to make future contributions to the evidence base for prosthetic and orthotic practice, through small quality improvement projects or more substantial experiments.

A small proportion of Honours students, and occasional bachelor degree students, choose to undertake higher degree studies in which their analytical and research abilities are further developed. Recognition of prosthetics and orthotics as a profession is dependent on the graduation of prosthetists and orthotists with higher degrees. Because of this, the NCPO values highly the Honours program, and greatly appreciates the support individual practitioners and facilities have given Honours students in collaboration, subject recruitment and materials, funding and prize donation.

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Participants enjoy an evening drink following the Student Research Symposium, courtesy of Reis Orthopaedics.

NCPO Installs New Fume Extraction Systems



Figure 1. Bench extraction system.

Due to concerns about exposing staff and students to excessive resin, glue and solvent fumes, the NCPO and the Department of Podiatry invited the La Trobe University Occupational Health and Safety Unit to evaluate our workshops.

The result was a recommendation to improve the fume extraction in the Health Sciences Clinic. The University's Building and Grounds Division then asked their consulting engineers to devise a solution to the problem. After fine-tuning the design, and making allowances to fit the budget, three extraction solutions were implemented.

The first of these is a bench system to extract fumes from gluing of orthoses and footwear (Fig. 1). This unit runs along the bench with continuous extraction points at a low level where students are working. This system is complemented by an air supply system that forces air into the room at the same rate it is extracted. The fan and filter units for this system are mounted on the roof (Fig. 2).



Figure 2. Fan and filter units on roof.

The second system is a series of hoods above our ovens to extract heat and fumes from all of our moulding processes (Fig. 3). Additional extraction fans were also installed in this room above our vertical fabrication jigs. These employ heavy duty industrial ceiling mounted extraction fans.



Figure 3. Extraction hoods above ovens.

The third system consists of two pairs of laminating booths for the P & O laboratories (Fig. 4). These were based on a scientific fume cupboard, with unnecessary functions removed to reduce costs. Two back-to-back booths have a clear wall separating them, and a clear sash door. The fan speed is linked to the sash position, so that as the user lowers the sash, the fan slows down. Again, the fans and ducting for these units are roof mounted (Fig. 5). NCPO staff designed, made and fitted the booths with laminating jigs (Fig. 6). These allow three students to laminate at one time in each booth. Each jig has a separately filtered vacuum supply. They use quick connect coupling to allow cast rotation without losing vacuum. They are also removable for maintenance. Each booth is equipped with compressed air and three RCD protected electrical outlets.

The tall exhaust stacks are necessary to ensure the fume outlets are at least five metres from any air intakes, which is a regulatory requirement.



Figure 5. Fans, ducting and exhaust stacks on roof.

The project was designed by Bassett Kuttner Collins, consulting engineers, and supervised by the LTU Buildings and Grounds division. The cost of the project was just over \$200,000. If you would like more information on this project, please contact NCPO Technical Officer Steve Hockey on phone: 03) 9479 5747.



Figure 4. Laminating booths.



Figure 6. Laminating jigs.

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