



FGC News



From the FGC Director

I will begin my update on a sombre note. It is with great sadness that I share with you the untimely passing of our inaugural FGC administrative assistant Simone Crawford. Simone's life was cut short after a relatively short battle with Cancer. She was pivotal in the establishment of the FGC and provided me with great support in the first few months of the centre. Upon hearing the news, the response from FGC staff and students was unanimous: they all commented on how kind and helpful Simone was and how she made the transition of the first cohort of students into the FGC a smooth process. Simone will be missed by all FGC staff and students and I will particularly miss Simone's smiling face and wicked sense of humour.



On a happier note, there's been lots happening in the FGC with people coming and going and lots of changes at the FGC. I'm very pleased to welcome Ms Marianne Graham as our Centre Manager. I'd also like to thank all the support that Sharron Sharrock has provided prior to Marianne's appointment. Sharron has moved on to "bigger and better things" due to the CSU administration restructure. We wish her well in her new role. We also say goodbye to Dr Mahsa Majzoobi who has moved to a position with NSW DPI. While we are sad to lose Mahsa, this is actually a great outcome for the centre as it is our goal for all of our staff and students to move into industry roles. The other good news is that Mahsa will still remain an important part of the FGC as a supervisor of a number of the cereal quality projects.

It has also been great to welcome two Endeavour Fellows, Dr Kishor Mazumder and Dr Mohammad Gulzarul Aziz who are both visiting from Bangladesh. We are really happy to host Endeavour scholars in our centre as it provides us with new skills and ideas as well as the opportunity to build new linkages with international research organisations. Both fellows will work on health aspects of pulses, an area that is very important to the FGC. I also had the honour of joining these Fellows at an Endeavour function in Canberra. This

provided me with an opportunity to learn more about the Endeavour program and meet other visiting fellows.

As you will see in this edition of our newsletter there are a number of stories about FGC staff and students getting "out and about". Connecting with industry partners and other stakeholders is a high priority for the FGC and we enjoy the feedback that we receive on our research programs.

Please enjoy the latest edition of the FGC Newsletter.

Warm regards,

Chris

Research Update Meeting with Sunrice

By Daniel Skylas

In early May Functional Grains Centre researchers met with our industry partners from Sunrice at their corporate office in Sydney. The FGC was represented by Professor Chris Blanchard, Dr Zhong Kai Zhou, Dr Daniel Skylas and PhD student Sabrina Wang. The objective of this meeting was primarily to touch base with Sunrice and provide an update on the research being carried out on rice grains. Professor Chris Blanchard kicked things off with an excellent overview of the FGC's rice related projects and all the students and researchers involved. Sabrina Wang and Dr Zhong Kai Zhou followed on with excellent in-depth presentations based on their research, outlining the progress made and future directions. The presentations were well received by Sunrice, generating some interesting discussions in this area and highlighting their interest and commitment to the success of these projects. After the meeting with Sunrice, the group had a farewell lunch for Sabrina who will be travelling back to China to for a few months to visit her family.

Visit to Pakistan for Pulse Project

By Ata-Ur Rehman

Dr Ata-Ur Rehman recently visited Pakistan on a scoping study for ACIAR to investigate the possibility of increasing the productivity and profitability of pulse production in cereal based cropping systems in Pakistan. Meetings were held in



the cities of Islamabad, Lahore, Faisalabad and Multan with the VCs of various universities, the Secretary of Agriculture and the Director Generals of several Institutes. Staff directly involved with pulse growing activities and the farmers of the pulse growing areas were also included in the meetings. Dr Rehman also held a number of meetings with the food processing companies in an attempt to engage the private sector to discuss and develop value-add opportunities for lentil, chickpea and groundnut oil at a national level.



Dr Ata Rehman - Meeting with potential collaborators in Pakistan

Working Visit to Yanco Agricultural Institute

By Michelle Toutounji

The Yanco Agricultural Institute (YAI) is a major research institute in the Murrumbidgee Irrigation Area with a key focus on high-yielding and sustainable irrigated farming systems. It is primarily used for research into rice. Research and development teams are employed by the Department of Primary Industries (DPI) Agricultural and DPI Biosecurity.

Recently, I visited YAI for a few short weeks to work on some cooking trial experiments on rice. During my time I was



Yuki and Margrit preparing rice dishes for lunch

lucky to have the full support of the Chemistry Laboratory Team, comprised of Dr Rachele Ward, Dr Prakesh Oli and my co-supervisor Dr Laura Pallas (Cereal Chemists); Margrit and Kylie (Technical Officers); and Leanne and Yuki (Technical Assistants). Besides being very helpful with any questions I had about the lab, the team at Yanco also welcomed me to their weekly tradition of cooking and sharing a rice meal (see pictures).

The rice cooking trials will hopefully shed light on the effect that cooking time and cooking methods have on the quality attributes of specific varieties. As my PhD project is all about the drivers of rice digestibility, it is hoped that the data will also help standardise the cooking methodology implemented prior to future *in vitro* digestion trials.

With promising data to take back to Wagga and more questions raised than answered, I'm sure it's not the last I've seen of Yanco and its lovely people.

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Dr Prakesh Oli

Federation University Biomedical Science Careers Night

By Drew Portman

On the 20th of May I was asked to talk at the 2016 Federation University Biomedical Science careers night. The careers night is run annually and features guest speakers from a variety of medical as well as research backgrounds. This year the line-up of speakers included Dr Bruce Stewart a colorectal surgeon from the Ballarat Base Hospital. Dr Diane Gibney, a veterinarian surgeon, Jason Kelly a senior pathology scientist from St John of Gods hospital, and yours truly, Drew Portman soon-to-be expert in lentils, pulses, and all things legume. Each speaker provided a brief history of their lives as well as a unique insight into their field of work. This provides students with great networking opportunities and also allows them to work toward shaping their future careers. I spent 6 years living with undergraduates at Bella Guerin Hall and also worked as a sessional lab demonstrator in my honours year. Speaking at this event was no "light thing" for me. Never has a group of people influenced my life so much as undergrad students



have. They do not have the cynicism that is acquired through a longer life and most of them believe anything is possible and that's great! A lot of students enter University with the intentions of following a very defined pathway, myself included. I think what is important for students is that sometimes you don't get the opportunities that you initially desire, but other equally good opportunities do arise. It's a matter of applying and taking the best option available, then becoming passionate about that pathway. The night gave me the opportunity to talk about CSU and the FGC and how I never would have believed I could have become involved with such an exciting field of research.

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Drew Portman speaking at the Federation University Careers Night

'On the Pulse' Symposium

By Professor Anthony Saliba

Prof Saliba attended the 'On the Pulse' workshop as an invited speaker and expert in the area of consumer insights. His work was somewhat different to other presenters and represents a unique capability that the FGC has developed. Prof Saliba presented his work on grains, pulses and other foods across the last decade. Broadly, he demonstrated that although there are large cultural differences, there is a slow convergence between Asian and Australian views around food choice. The movement is toward a more health conscious consumer and while taste is still paramount, it plays a moderating role rather than a dominant one. Prof Saliba outlined a strong future for pulses in Australia, with the key aspects being education around preparation and promulgation of health benefits. He cautioned against the 'hidden' use of pulses in food processing, and instead espoused that pulses or any component extracted from pulses should be prominently and proudly marked on the product. A good example is 'not nuts', where a pulse is proudly pictured on the front label. Prof Saliba has been invited to speak at the Australian Grains Industry Conference (AGIC) on 27 July 2016.

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Science and Agriculture Enrichment Day 2016

By Esther Callcott

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This year I had the pleasure of being a presenter at the 2016 Science and Agriculture Enrichment Day. This is a day where the Graham Centre for Agricultural Innovation offers high school students a chance to observe and explore current works being done by professional agricultural and animal scientists. My presentation was highlighting to students the potential health benefits of rice. The presentation covered Australia's position in the global rice trade and highlighted some of the scientific technical aspects that goes into rice research such as cell culture based assay development. The students observed rat stem cells under the microscope and discovered the anatomy of fat cells (adipocytes). This was an excellent opportunity for me to learn how to present technical information in a simpler form for the students to understand. The day was a lovely experience and I enjoyed meeting the teachers and students. I hope programs like these inspire future generations to undertake careers in the agricultural and animal sciences.

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Permanent Residence Visa

By Siong Tan

I graduated from CSU School of Agricultural and Wine Sciences a few years back. When I was doing my PhD as an international student, people tend to ask me a few (annoyingly delightful) questions such as "How is your research going?", "When are you submitting your thesis?", and my favourite one "Are you going for Permanent Residency visa (PR) after your study?". That particular question was always followed by a comment from the very same person, "It is very easy for you to get PR, right?". Well, yes and no. It is not difficult as Professor Google has all the information regarding the application. However, it is not easy either as the potential applicants need to fulfil a few crucial requirements. Generally for Self-Sponsored PR visa, the crucial elements include relevant academic qualification and working experience, English language proficiency at a competent level, and a satisfactory medical record. Of course one will also need a bit of luck, money and a lot of determination.

The Department of Immigration and Border Protection (DIBP) has a Consolidated Sponsored Occupations List (CSOL). As the name suggests, it is a list of occupations wanted by the DIBP. I came to Australia to do a PhD research without knowing about that list. Food scientist is not on the list but Agricultural Scientist is. My PhD research project related to canola protein research. Luckily enough, it is a cross between food and agricultural study which is how I managed to fit in to the criteria. To fulfil the academic requirement, I had to have my PhD work assessed by the relevant authority.



Work experience after study is important. DIBP requires 1 year of full time paid work of at least 20 hours per week in the area related to my academic qualification area. International PhD students who have their first student visa granted after 5/11/2011 are eligible to stay for four years after graduation. Unfortunately, my first student visa was prior to that date and according to the old rule, I had only 18 months of post-study temporary work visa after my study. It was a seriously stressful period to find a job, work for a year, and get the PR application into the system all within 18 months. My luck came to fruition though as I started to work for the Functional Grains Centre (FGC) as a post-doc in canola research a few months after I was granted a post study temporary work visa. I managed to accumulate enough working experience, after which I was provided an employer-sponsored temporary work visa. For that, I appreciate the opportunity to be a part of the FGC and work in a project that I am proficient at. Once I accumulated enough experience, I sent in the required documents and proof to the relevant authority for assessment.

The English language proficiency test that I took 2 years back was still valid for my PR application, so no hassles there. The International English Language Test System (IELTS) is perceived by many as hard to beat. I thought it was an enjoyable experience. The exam day was more like a linguistic day camp, except that everyone looked incredibly serious for some reasons. The test consists of four components - reading, writing, listening, and speaking. I did not really pay attention to it but the result was more than satisfactory. I am glad that I did not spend too much time on the preparation, only two weeks of work prior to the exam was needed to get used to the test format.

The preparation of required documents for the PR application was very time consuming. Fortunately I have applied for a few other Australian visas before, so I had most of the documents ready by the time I was eligible for the application. Police criminal record check and medical check-up were the most thrilling experiences that I had since I got chased by a kangaroo at the CSU campus long time ago. The process involved a lot of emailing, filling in form after form, and attending appointment after appointment. Once everything's in hand, I then expressed my interest for PR application to the DIBP. That is the final hurdle and it is a points based system. I was awarded points depending on my level of achievement academically and English language proficiency, age, etc. To my surprise, I managed to get well above the average score. I considered that Expression of Interest to be a meaningful birthday present to myself.

The invitation for PR application came through within a month. Without further ado, I lodged the PR application. DIBP granted my PR last April. Guess what, that's my 7th Australian visa! Oddly enough, exactly the same day 10 years ago I was granted my first visa to do my placement here. My PR application was just a short process, but the whole preparation took a few years. I must have read a few million pages of documents along the way. Determination is probably the

most crucial bit of the whole process. It is a different story of course had I assigned an immigration agent to deal with all the paper work.

I appreciate the mentoring from the FGC director Prof Chris Blanchard and my other supervisors such as Li Day and CSIRO site manager Thu McCann. I still have a lot to learn though but at least I now have 5 more years to do so. Oh did you not know that PR is actually not a 'permanent' visa? It is a do-whatever-you-like-in-the-next-5-years visa but also comes with an expiry date. However, all-in-all I am very happy with the result.

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Siong Tan

Career Moves

By Mahsa Majzoobi

After working with Professor Chris Blanchard for 6 months on "Next generation healthy rice" I applied for and was offered a new position as "Cereal Chemist" in the NSW Department of Primary Industry (DPI), Wagga Wagga whilst also remaining as a teacher for "Food processing" at CSU. I am hoping to develop a network within the industry and start new projects in the DPI mostly on cereal processing and chemistry. I believe that the collaboration between FGC and DPI is very successful with great outcomes for both sides as well as industry. I would like to thank Chris for his great support and I'd also like to thank the academic staff at CSU, FGC students and other staff who have taught me a lot and helped create wonderful memories.

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New Centre Manager

By Marianne Graham

In April, I joined the FGC as Centre Manager. I grew up in Wagga, then relocated to Melbourne for many years but have now recently returned to my home town. As Centre Manager, my role is to manage the administration and financ-



es of the FGC, organising Chris' calendar and meetings, as well as organising events, assisting students and post-docs; increasing our marketing presence and providing many other support roles. I have held many corporate roles in business and I have a degree in Business Marketing from the University of Technology, Sydney.

I have previously worked in the wholesale energy industry, banking and start-up businesses. One of my early career roles was as a Marketing Associate at the University of Tasmania in Launceston where I developed a Marketing Plan for the Tasmanian Oyster Industry under a 2 year industry scholarship, so this is not my first foray into the world of Universities and associated Research Centres.

I have a diverse and experienced background and I hope to bring my many skills to the table here at the FGC. If you have any queries, comments or questions about the FGC please feel free to contact me at either magraham@csu.edu.au or fgc@csu.edu.au and I will be delighted to help you out



Chris and Marianne at the Wagga Gold Cup races

Visitors

By Dr Mohammad Aziz

I am a visiting research scientist from Bangladesh and joined the FGC in April 2016 for six months. My research visit has been sponsored by an Endeavour Fellowship; one of the internationally competitive, prestigious and merit-based scholarships awarded by the Australian Government. I knew about CSU from one of my colleagues who visited CSU, sponsored by the same fellowship last year. Both the reputation of the FGC and my previous research experience were the factors that motivated me to choose to visit FGC. I completed my Ph.D. in Applied Enzymology in Austria and I had the scope to work with Food Powder Technology in Malaysia as a post-doc for two years. My past research exposure, as previously mentioned, are allied to the FGC's current focus, and this enabled me to come to the FGC with a project on the 'exploration of healthy pulse flour in relation to the functional properties of its bioactive peptides'. I have already planned my research and started laboratory work and I do hope that I will be able to add some relevant publications and articles to FGC's on-going success within this short fellowship period. It's apparent to me, that the FGC

has been created and run by a very dynamic and visionary personality, Prof. Chris Blanchard, who has sown seeds in me to pursue many ideas for future international collaboration with FGC. Although I was not in a position to predict any outcome of the fellowship before travelling, I have now become more ambitious. As an academic of a renowned national university in Bangladesh, Bangladesh Agricultural University (BAU), I hope I will be able to manifest the idea of creating a similar research centre to the FGC at my institute in BAU.

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By Dr Kishor Mazumder

I am a visiting research fellow from the University of Science and Technology Chittagong, Bangladesh (USTC). In April 2016, after being awarded an Endeavour Fellowship from the Australian Government, I joined the School of Biomedical Sciences as a Visiting Research Associate Professor at Charles Sturt University (CSU) for six months. I completed my PhD, from Osaka University, Japan, in natural products chemistry. My primary research interests involve drug discovery and development from natural sources and research into the health benefits of natural products. I have certainly found that the academic staff at CSU are doing some exciting research in my areas of interest and Dr. Philip Kerr is kindly hosting me at CSU under the Endeavour Fellowship Scheme.

Soon after I settled into the School, I discovered that the Functional Grains Centre (FGC) at CSU, under the dynamic leadership of Prof Christopher Blanchard, is doing excellent grain research in a range of important areas, including identification of novel bioactive compounds that have the potential to generate new functional food products. I have become very interested in this area and was lucky enough to be accepted into Prof. Blanchard's research group. I have been given an opportunity to work with Australian cultivars of lupins, a grain type that is gaining significant repute in terms of potential human health benefits. Recently, I have devoted myself to exploring the best cultivar with respect to physicochemical, functional and bioactivity properties. I hope to generate some fruitful outcomes through my research within this short fellowship period. In addition, I am highly interested to continue my research on functional grains through international collaboration between FGC at CSU and USTC.

The Endeavour Awards Professional Development Workshop 2016

By Dr Kishor Mazumder

Attending the Endeavour Awards Professional Development Workshop 2016 in Canberra on 25 May was an awesome and wonderfully memorable event. The venue was the National Museum of Australia. I, together Dr Mohammad Gulzarul Aziz of Bangladesh, attended the workshop as an Endeavour post-



doctoral fellow at Charles Sturt University. Professor Christopher Blanchard, Director, ARC ITTC for Functional Grains, School of Biomedical Sciences was with us as a distinguished guest of the event.

The Endeavour team started the workshop with warm reception of Endeavour scholars and fellows from around the world. The featured speaker of the workshop was Hall of Fame presenter Lisa McInnes-Smith who displayed an extraordinary capacity to inspire scholars and fellows to make tangible shifts in behaviour. Her highly interactive presentation gave us an unforgettable experience where we were inspired to think of, and see the current world in a positive way. She also inspired us to change our view in such a way that we can behave and perform like a true leader. After the workshop there was a beautiful reception party with lots of fun and interaction. We are really thankful to the Australian Government to offer us such a prestigious fellowship and provide opportunities to undertake cutting edge research at the FGC and Charles Sturt University. We have already found that CSU is a fantastic place



Dr Mohammad Aziz, Prof Chris Blanchard and Kishor Mazumder



Dr Mohammad Aziz, Prof Chris Blanchard and Dr Mazumder at Endeavour Reception in Canberra

of education and research. All faculty members and staff are so helpful and cordial. We are enjoying every moment here at CSU.

Last but not the least, the journey to and from Canberra was so pleasant and joyful. We would like to express our sincere gratitude to Prof Chris for his care and company.

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Functional Grain Centre partners and collaborators



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