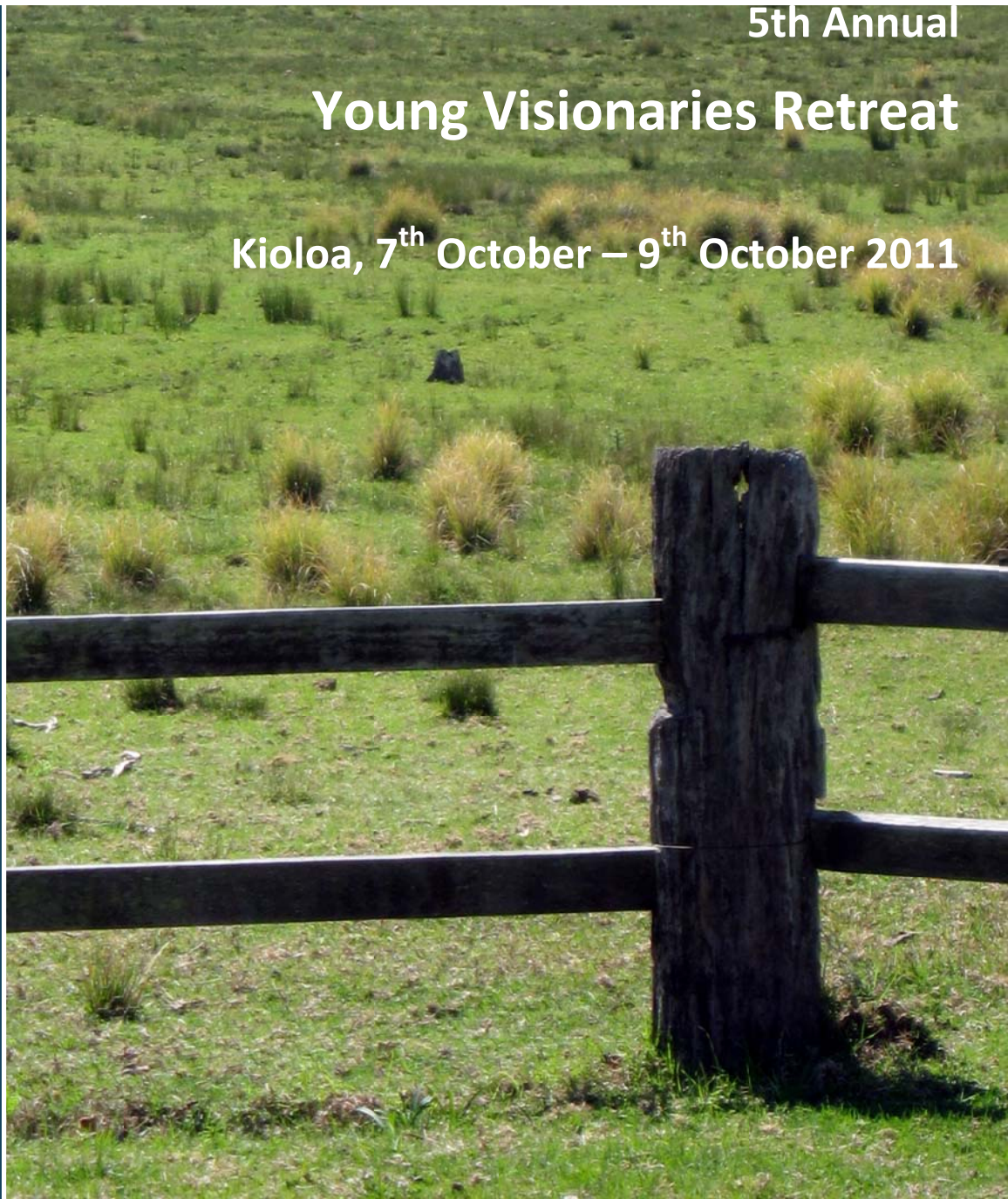




5th Annual

Young Visionaries Retreat

Kioloa, 7th October – 9th October 2011





INTRODUCTION

The Young Visionaries (YVs) of the ARC Centre of Excellence in Vision Science have been holding a retreat at the ANU Kioloa Campus since 2007. The YVs encompasses the post-doctoral fellows, graduate students and research assistants of the Centre, and was formed to promote collaboration and communication between students and early-career researchers across and within the Centre's operational locations.

Various outreach and other activities have been instigated by the Young Visionaries, such as the Vision Day program of school visits, participation in National Science Week and networking opportunities at venues such as national conferences. These initiatives and many others have been generously supported by funds from the Centre.

One of the YVs major activities has been the retreat at Kioloa. This event is held annually with the joint aims of facilitating networking and the provision of educational opportunities that would not be available elsewhere. At previous retreats this has led to themes such as Communication and Collaboration, Career Paths in Academia and Funding your Research. This year we have decided to focus on Career Development. We have lined up some dynamic and highly motivational speakers, and hope that this year's retreat will mirror the success of those in previous years.

OUTGOING COMMITTEE MESSAGE: Richard Moore

The Young Visionaries program has provided students and ECRs within the Centre for Vision Science access to funding, outreach opportunities, education, and support since 2007 thanks to the tireless work and dedication of a few YV's. At the 2010 YV retreat, it was decided for the first time to form a committee, comprising YVs from the four Centre nodes, to organise the activities and events that make up the YV program, and to coordinate work on a number of important projects designed to enhance the YV experience for all members.

As the first outgoing committee, we are very pleased with the changes that have been implemented over the past year and the growth of the YV program. To summarise:

- ⌘ An Admin Support Officer was hired specifically to assist with the administration of the YV program, and to work on the implementation of a number of YV projects in coordination with the committee.

- ⤴ A YV information pack was produced that contains important information on the YV program, which is to be distributed to all new members.
- ⤴ The YV “Vision Day” outreach program travelled interstate for the first time to the Sydney node, and was a great success.
- ⤴ The inaugural “101” course was held on physiology in conjunction with the 2011 YV retreat. The 101 series is designed to educate all YVs on some of the various important approaches and techniques for vision science that are used within the Centre.

In addition to these achievements, the YVs also had an important presence at the 2011 ACEVS Centre retreat at Murramarang and the ACEVS satellite meeting at the 2011 ANS conference in Auckland, as well as travelling to a number of schools within the Canberra area with the Vision Day program, and of course organising and holding another very successful YV retreat at Kioloa.

We are very happy with the participation of all YVs in Centre events over the past year and we look forward to the continued growth of the program in years to come. With this in mind we would like to introduce the incoming YV committee members who were nominated at the 2011 YV retreat.

- ⤴ Arnab Ahmed (USyd)
- ⤴ Kartik Saxena (ANU)
- ⤴ Samuel Baker (UQ)

We would like to join all YVs in congratulating the new committee members and we look forward to working with the new committee to ensure that 2012 is another productive and exciting year for the YVs!

As always, if you have any queries, please consult the YV information pack or contact your local committee member.

Outgoing YV committee (2010-2011):

- ⤴ Sander Pietersen (USyd)
- ⤴ Rizsa Albarracin (ANU)
- ⤴ Richard Moore (UQ)

5th Annual Young Visionaries Retreat

Report 2011



Participants

Amandu Du (Honours), Arnab Ahmed, Chloe Raderschall (Honours), Corinne Carle (Post-doc), Dean Garnett (Honours), Eliza Middleton (PhD), Erika Becker (PhD), Felix Weltzien (PhD), Gavin Taylor (PhD), James Heffernan (Honours), Kartik Saxena (Masters), Kenny Cheong (PhD), Kumiko Percival (Post-doc), Marcin Falkowski (PhD), Macroni Barbosa (Post-doc), Matt Rutar (Post-doc), Natalia Zeator (PhD), Richard Moore (PhD), Rizza Albarracin (PhD), Ryan Maloney (PhD), Sam Baker (PhD), Saner Pietersen (Post-doc), Selina Solomon (PhD), Shaun New (PhD)

Guest presenters

Ms Katie Gemmel

Dr Samuel Solomon

Dr Rosanne Yetemian

Dr Siobhan McCarthy



DAY 1: '101' Physiology Series

This year we introduced the '101' series which was set up to give YVs a broader understanding of all aspects of vision science. Physiology '101' was a half day event designed to give young visionaries a better understanding of the broad experimental techniques used in the study of vision. Young visionaries come from diverse backgrounds: robotic engineers, molecular biologists, psychophysicists, behavioural scientists, anatomists and physiologists to name a few. This year Paul Martin and his lab, Kenny Cheong and Sander Pietersen, gave informal presentations on the basics of electro physiology, from ion movements to the generation of action potentials, to encoding of information in action potential trains.



The talks were presented in context of the actual experimental work done by the lab. It was great to finally understand what they actually do. The informal and casual setting promoted keen interest and interaction among the group. One visionary commented "It was a comfortable platform for learning basic science". The 101 series was well received and we hope that it will continue in future retreats to come.

DAY 2: Alternative Career Pathways

Most energies in the laboratory milieu are directed towards experimentation and analysis, meaning discussions of what to do “on the other side” are too often overlooked for YVs. The broad aim of the second day of the retreat was to address this deficit with a focus upon career development, both within and outside academia.

SEMINAR: Ms Katie Gemmel

Technology Careers Information Session: Identifying Career Goals

The day began with a stimulating and interactive careers workshop presented by Ms. Kate Gemmell from the ANU Careers Centre (www.anu.edu.au/careers). Kate provided attendees with an opportunity to consider carefully what attributes attendees would value most from their jobs, post-PhD. This was followed by practical advice on searching and applying for jobs, including a note on how to assess what you have to offer on the labour market (a “skills audit”), and identify which skills might need further development. Kate also provided some cold hard facts and figures on graduate employment outcomes, which demonstrated the value employers place on previous work experience. Because many of these issues are not dealt with in any official sense in the laboratory setting, many of the retreat attendees found the workshop activities particularly useful and promoted further consideration and discussion of (realistic) personal career goals and ideals.

Ryan Maloney



CAREERS SESSION: Dr Rosanne Yetemian

The YVs were fortunate this year to have a visit from Dr. Rosanne Yetemian from Los Angeles, California. Following on nicely from Kate's presentation earlier that day, Rosanne described her role and experiences working in research and development for Abbott Medical Optics (AMO; www.amo-inc.com). Following some time spent working as a research assistant and her PhD at the University of Southern California, Rosanne went on to work as a regulatory affairs specialist in medical devices at AMO. She described the classifications of medical devices and outlined some of the government regulations in place in the US and Australia for the testing and approval of medical devices before they are released for sale to consumers. Examples, for which Rosanne had been involved in the development of at AMO, were artificial multifocal intraocular lenses, used in the treatment of cataracts. Rosanne went on to provide some practical advice, drawing upon her own experience, in finding one's ideal job. She recommended attending careers fairs, even if not currently job seeking. They provide an idea of what jobs are out there, and what employers look for in job applicants. At the very least, one might even score some free pens or other promotional material! When it comes to improving one's resume, always seek the advice of experts, highlight key words, and create a 'Linked-In' profile (www.linkedin.com) - since some companies are more likely to hire applicants who can be found on Linked-In. Job interviews should always be practiced, and the answers to potential questions explored in advance. If you are not offered the position, always contact the employers and (politely) ask for feedback highlighting why. Most of all, stand out and emphasise the things that make you special. In the private sector, PhDs tend to have a certain (undeserved?) grandeur attached to them - so make the most of it! Rosanne's clear and intuitive presentation led to many interested questions from the audience, and Rosanne's enthusiasm for her work was obvious. The retreat attendees were equally enthusiastic in being given such a privileged view of Rosanne's innovative line of work.



Ryan Maloney



CAREERS SESSION: Dr Siobhan McCarthy

The next speaker in the career-themed stream was former Young Visionary Dr. Siobhan McCarthy of Narrabundah College in Kingston, ACT

(www.narrabundahc.act.edu.au/).

Through her involvement in visits to schools through the Vision Day program supported by ACEVS,



Siobhan realised she might enjoy the interactive nature of full-time secondary teaching to the constant toil of research. Siobhan introduced the pathways involved in becoming a teacher (for graduates), and the impressive opportunities available for PhDs and former researchers in school teaching. Some attendees were surprised to learn that many secondary teachers, including several at Narrabundah college, held PhDs. Teachers with science backgrounds, and especially PhDs, are highly sought after, particularly at posh private schools. She revealed the staggering fact that nowhere in the English-speaking world are there enough teachers of science and mathematics to meet community demand. Siobhan showed that, as it turns out, being a teacher is “not too bad” and can indeed be a fun and very rewarding (if oftentimes exhausting!) career. After thoughtfully answering the attendees’ many questions, Siobhan reminded them that being a good teacher and mentor to even just a single student can make a real and lasting difference.

Ryan Maloney

CAMPFIRE

With the official aspects of the day behind them, the YVs could turn their attention to the sumptuous dinner provided. The constant rain that day had made any hopes of an old-fashioned campfire, complete with billy tea, unlikely. YV Sam Baker however, his spirits not to be dampened, persisted in gathering whatever dry pieces of firewood he could find. With the assistance of some commercial firefighters purchased earlier that day,



Sam’s perseverance (at times bordering on pyromania) paid off, and before long the glowing flames of a spectacular campfire drew in the soggy camp attendees. Warmed by Sam’s fire, the YVs raised their voices together in a few cheerful bush ballads, or shared chilling tales of haunted laboratories, long into the night.

Ryan Maloney

DAY 3: Career Development

GRANTS WRITING SESSION: Dr Sam Solomon

How to write successful grants applications

We were fortunate this year to have Dr. Samuel Solomon from University of Sydney host a workshop on grant writing. Samuel spoke of the importance of "selling yourselves" as investigators and of emphasising your ability to deliver results, in addition to getting across the importance of the research itself.

In preparation for the grant writing activity to follow, Samuel showed us some sections of grant applications written by members of the Centre. He discussed their merits and what could have been improved. He also showed us some exemplary grant applications from scientists outside the Centre, discussing what had worked in their favour.

After the talk, the YVs split into four groups to write their own grant application for an imaginary project. This process led to plenty of discussion about each others' research, trying to find a common theme where all members of the group could contribute and have relevant experience for the project. This helped everyone get to know each other better as well as resulting in some innovative inter-disciplinary project ideas. As we'd been advised by Samuel that the past experience of the investigators was key to a good grant application, there was plenty of healthy introspection. Having us gathered together once more as one group, Samuel then marked each grant application according to the official ARC criteria, which neatly concluded this workshop and provided direct feedback to all involved.

Marcin Falkowski

SPEAKING WITH CONFIDENCE: Dr Rosanne Yetemian

Following on from the grant writing workshop, the Young Visionaries enjoyed a second workshop entitled "Speaking with Confidence" presented by Dr Rosanne Yetemian. The workshop was first introduced by an entertaining performance by Rizsa Albarracin demonstrating how to speak *without* confidence, followed by a brief lecture on the different types of presentations and how to approach each style. These ranged from 3-5 min "off-the cuff" presentations to more formal 60 min lecture style presentations.





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The second part of the workshop then involved an interactive session which saw the Young Visionaries divided into groups and asked to prepare a 5 min group presentation on their fictitious research topic. The topics ranged from biomimetic polarization sensors to electro-physiology to the proposed healing properties of fairy dust in the retina. Apart from providing some light entertainment, this session also provided a great opportunity for many of the new YV's to gain practical experience at presenting, as well as the opportunity to learn some new tricks from the more senior members. *Samuel Baker*

THE INAUGRAL EYEBALL

This was the last major event of the retreat, and this year being the inaugural year of the event, everyone was eagerly looking forward to it. The night started out in a great way as we were welcomed to a delectable and vast food spread, thanks to our chef, and plenty of drinks to go around so nobody was complaining. It was a fancy dress party themed: "If I wasn't a scientist I would be a...." and it was fascinating to see everyone participating enthusiastically by dressing up in their chosen alternative profession/lifestyle. The dining hall was adorned with colourful decorations: balloons, streamers and eyeball painted ping pong balls scattered on every table.



The 'Fine' dining and socialisation was followed promptly by a whole night (and large part of the next morning) of fun and festivities where YVs from different nodes came together and connected on a more personal level. A ping pong table was set up and the decorative eye balls were put to good use. Everyone actively participated in the merriment and the party slowly moved outdoors around the campfire as the night progressed. The catchy dance numbers wafting from the speakers could be heard till around 4am next morning.

The eye ball was the brain child of our very own Shaun New and he did a fantastic job of selecting the name, choosing a theme and making all necessary arrangements to make this event a huge success. I believe that the success of this year's event would pave the way for it becoming an integral part of the retreat in the forthcoming years.

Kartik Saxena

Speakers Reflection:

Dr Rosanne Yetemian

I had the privilege of presenting to a group of very talented and bright vision scientists on alternative careers for individuals with doctorate degrees at this year's ACEVS student retreat at the Kioloa Coastal Campus. During the presentation, I provided information on the company where I am currently employed, Abbott Medical Optics Inc. (AMO), our ophthalmic devices, as well as a brief history of medical devices in general and the field of Regulatory Affairs as a profession. I also gave a few points of advice for the students as they near the end of their graduate careers. To provide the students with a better understanding of some of the medical devices manufactured by AMO, as well as the cataract surgical procedure, I also provided a brief 10 minute video of a live recording from an actual cataract surgery.

My experience working in the biotech industry has exposed me to various divisions within a medical device company; almost all of which would be applicable for scientists with doctorate degrees. These divisions include Research and Development, Legal, Manufacturing, Quality Assurance, Regulatory Affairs, Clinical Research, and Sales and Marketing. In my current position at AMO, I divide my time between Regulatory Affairs as well as Research and Development. My presentation included information on how Research and Development differs from the research conducted in academia, and the importance of Regulatory Affairs in the medical device industry. I also discussed some of the various regulatory agencies, including the US Food and Drug Administration, Health Canada, and the Australian Department of Health and Aging. Regulatory Affairs is a crucial division of a company and is responsible for ensuring that the products such as medical devices, pharmaceuticals, biologics, and even food comply with internationally recognized standards and meet regional regulatory guidelines and expectations for patient/consumer safety and product effectiveness.

The last part of my talk included a few slides on additional resources for students interested in learning more about Regulatory Affairs and the biotechnology industry in the US as well as in Australia. Agencies such as AusBiotech and AusMedtech are excellent resources for Australian scientists looking to make a career move into the biotech industry.



On the second day of the retreat, I was also asked to present on effective communication skills where my co-presenter Rizsa Albarracin and I went through a module designed to introduce various types of public speaking to the students. The lesson was interactive and



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we were able to involve almost every student through public speaking, designing a PowerPoint presentation, and delivering information confidently. What I wanted the students to gain from this lesson was that speaking effectively is not only important when giving a scientific presentation, but is also essential to any interaction with industry professionals, government officials, and other scientists.

My experience presenting to the Young Visionaries was truly memorable. I feel privileged to have had the opportunity to meet such an amazing, hospitable, bright and respectful group of students. I wish them all the best as they complete their doctorate degrees and look forward to their future successes, whatever career path they choose.

Dr Sam Solomon

Rizsa Albarracin had asked me to come down to Kioloa to lead a workshop on writing grants. Not quite sure where to start or end, I gave some perspective from my grant wins and losses, emphasising the strategic nature of grant writing, the fundamental role of track record, and the importance of getting the point of the grant across in the first two sentences.



Three young visionaries had provided sample grants before the retreat, and we discussed them as a group; the ideas behind these grants were all very good, but in discussing these concrete examples I think we were able to draw out some of the key points of grantsmanship.

After morning tea we split into groups and tried to put into practice some of the things we'd been talking about, writing the first page of a small enabling grant. I then reviewed these with the entire group. It was clear that despite what we had talked about, and the weight applied to track record, that none of the groups had spent more than a minute or two putting together a section on track record. Instead, as is natural and as we all tend to do, they were engrossed in the scientific aspects of the proposal. I think the importance of writing to the assessment criteria came through clearly on reviewing the proposals. Also the importance of bringing the reader in to the grant immediately, and keeping them there.

All in all I think we got something out of these few hours. If nothing else I hope it demystified good grant writing by focussing on concrete things that can be done.

RETREAT STATISTICS

The total number of Young Visionaries in attendance at this year's retreat was 24. This is the highest attendance of YVs since the retreat started in 2007.

One of the concerns raised in previous years has been that of low attendance by YVs from nodes outside Canberra. We are pleased to note that participation from Sydney increased significantly this year while Brisbane YV numbers were stable (Fig. 1).

Unfortunately we have not yet managed to involve any YVs from the Perth node. This presents a challenge for next year's retreat organisers, but is of importance given the physical isolation of this node.

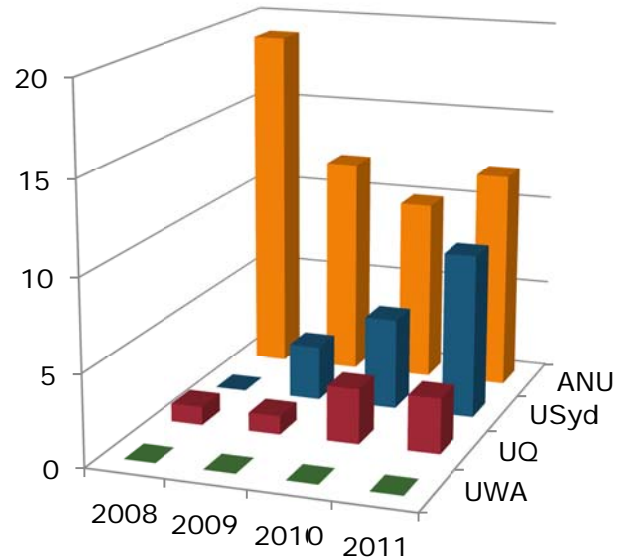


FIGURE 1 Young Visionary retreat participation by node and year

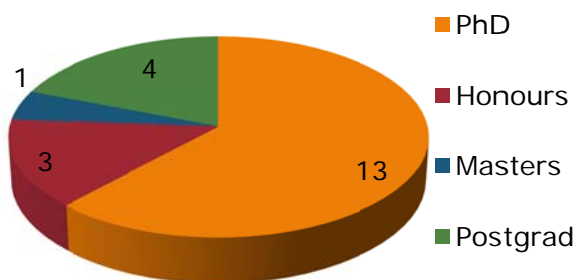


FIGURE 2 2011 participation by Young Visionary classification

The attendance of Honours students was the highest in five years even with the problematic time of year.

Attendance of Post Doctoral Fellows increased from 2010 (Fig. 2), although finding a way of motivating a higher proportion of Post Docs to attend remains a priority.

PhD students remain the largest group at this year's retreat.



RETREAT EVALUATIONS OVERVIEW

The Young Visionaries attending the retreat were asked to write a short evaluation at the end of the weekend. The following is a summary of their responses.

Highlights and Favourite Sessions

- Eyeball: fun, good social interaction (x8)
- Physiology 101: informal setting with useful information (x3)
- Campfire Good for social interaction (x4)
- Interaction with other node students (x2)
- Grants Writing was informative, interactive and practical (x6)
- Grants Writing allowed new things to be brought to the attention of students, given more things to consider when writing (x4)
- Speaking with Confidence excellent, fun and interactive while allowing weaknesses to be acknowledged
- Speaking with Confidence workshop was excellent, fun and interactive
- Careers Writing Workshop was informative and helpful (x2)
- Good to hear about Siobhan progressing from PhD student to teacher (x2)
- Siobhan McCarthy was entertaining and insightful, providing most enjoyable of all sessions (x2)
- Rosanne Yetemian demonstrated the need to remain competitive in the international world
- Interesting and useful industry back up plans shown
- Both Rosanne and Siobhan provided insight into potential professions and showed students that there is a career outside research (x2)

Ideas for Future Retreats

- More practical sessions like ones in 2011, that can be applied to work/PhD's
- Another Eyeball
- Different activities or provide sessions to choose from
- Quick survey to get seminar topic ideas
- Held later in the year to assure better weather
- More activities provided like board games, cards etc
- Invited lecturers that are not part of ACEVS to encourage interdisciplinary collaborations, partnerships and connections (outside of the centre), and to also give students more information to think outside of their specific project.
- Ice breaking activities on the first day
- Need for promotion of the YVs and their Outreach programs amongst both CIs and less involved YVs

