



## ECU MELANOMA RESEARCH GROUP

### 2014/2015 NEWSLETTER

Thank you all so much for your ongoing support – 2014/2015 has been an exhilarating, busy and rewarding year. We have, thanks to you, raised the awareness of melanoma and have provided clinicians with much needed research support that will drive changes in the management of patients with melanoma.

The ECU Melanoma Research Group has been successful in securing some additional funding for our research from the Cancer Council of WA as well as Merck Sharpe & Dohme, which has allowed us to keep our fantastic staff members who make such a vital contribution to our research.

We have been fortunate to appoint a new researcher, Dr Carlos Aya Bonilla from Queensland to join our team. Dr Aya Bonilla will focus on identifying changes in the genetics of circulating tumour cells during disease progression, amongst other projects.

Additionally, we have a new PhD student and Master of Science student, so it has been a busy and successful start to 2015.

Our research group has published our findings in the prestigious *Journal of Investigative Dermatology*, and you can read more about this later in the newsletter.

We are now seeking your support for a very ambitious and exciting Rotary Club fundraising drive for melanoma. The Rotary Club of Bay View Claremont launched their special melanoma research project in April.

In conjunction with other western suburbs Rotary Clubs, the project aims to raise \$135,000 for a state of the art machine that will enable 1000 patients to be tested annually and assist ground breaking research at ECU.

The PCR machine allows identification of rare copies of mutated tumour DNA in the blood, providing fast and accurate monitoring of patients to identify disease spread and recurrence as early as possible. Results to date show that we can identify disease relapse earlier than detection of clinical disease relapse by PET scan.

Please get behind this very worthwhile fundraising drive. If you would like to support this effort please donate by visiting us at [www.ecu.edu.au/giving-to-ecu/supporting-our-communities/living-well-living-sustainably/melanoma-research](http://www.ecu.edu.au/giving-to-ecu/supporting-our-communities/living-well-living-sustainably/melanoma-research). We would deeply appreciate your support.

For more information about the research and the Rotary appeal, please visit the 'Rotary for Melanoma Research' website [www.rotaryformelanoma.com.au](http://www.rotaryformelanoma.com.au)

Best wishes,  
**Professor Mel Ziman**



## ECU Inspiring Minds Scholarship recipient – Pauline Zaenker



“Being supported by the ECU Inspiring Minds scholarship has helped my PhD research tremendously. I have been able to focus on my research without the pressure of having to organise an extra income.

My study is advancing fast and I have reached my initial target of collecting blood samples from 300 people with early stage melanoma and healthy volunteers for a microarray experiment for which I have just received the data.

I am currently analysing the data to choose an optimal biomarker panel for the early diagnosis of melanoma. I will soon test the markers in a new cohort of samples to validate their sensitivity and specificity.”

## ECU Community Campus Dash 2014

The ECU Community Campus Dash was held in 2014 and offered participants the chance to run, jog or walk through the streets of Joondalup City Centre at distances of either 2 km, 5km or 10kms.

Money raised from the ECU Community Campus Dash went to the ECU Melanoma Research Group for our research to develop an early-warning blood test to detect melanoma.

Former ECU Vice-Chancellor Professor Kerry Cox said the ECU Community Campus Dash was a great way to promote fitness in the community.

“The link between regular exercise and good health is well established. By participating in the ECU Community Campus Dash, not only did people improve their own health, they helped to support research which could lead to better health outcomes for all through the early detection of melanoma” he said.



## Grants and Scholarships Won

- Professor Mel Ziman received \$71,519 from the Cancer Council of WA to develop a blood test to detect patient response to treatment for late stage melanoma patients, allowing patients to be switched to more effective therapy earlier, reducing the need for invasive biopsies.

“Patient monitoring through easily accessible blood samples is the key to improving survival rates for melanoma sufferers. If melanoma relapse can be caught earlier, patient survival time may be improved.” Professor Ziman said.

Professor Ziman will work with Dr Elin Gray, Post Doctoral Fellow in the ECU Melanoma Research Group and Professor Michael Millward from Sir Charles Gairdner Hospital (SGCH) on the project.

- Dr Muhammad Adnan Khattak has been awarded an adjunct Associate Professorship at ECU for his collaboration with the ECU Melanoma Research Group. Dr Khattak, in collaboration with Professor Mel Ziman,

Dr Elin Gray and Professor Michael Millward (SCGH), was awarded \$35,000 by the Cancer Council of WA to develop a method to predict how well a patient will respond to drugs which target their immune system. The group also received a grant of \$73,000 from the drug company Merck, Sharpe & Dohme for this research.

Dr Khattak said the drugs used are expensive and have negative side effects,

so there is a need to identify a way to target the drugs only to the patients that can benefit from them.

- Aaron Beasley and Tim Rankin from the ECU Melanoma Research Group were both awarded \$3000 Cancer Council of WA student research scholarships to study melanoma. Their supervisor was Dr Elin Gray.



# National Science Week

Professor Mel Ziman presented a public lecture at the State Library in 2014 about the research undertaken by the ECU Melanoma Research Group, focusing on the progress made in developing blood biomarkers for diagnosis and prognosis of melanoma.

Detecting melanoma before it spreads is vital for sun-loving Australians so that we can beat the spread of this deadly form of skin cancer. Currently an invasive skin biopsy is the only way to confirm the presence of melanoma, and once melanoma has spread it is difficult to treat. Metastatic melanoma is responsible for 80% deaths from skin cancer in Australia.

Thanks to your support, we are on our way to developing a method of identifying melanoma in its early stages



with a quick and relatively painless blood test, which could be used to screen at risk patients and catch cancer before it spreads. Moreover, with your help we are improving our techniques to detect melanoma spread, treatment efficacy and disease relapse.

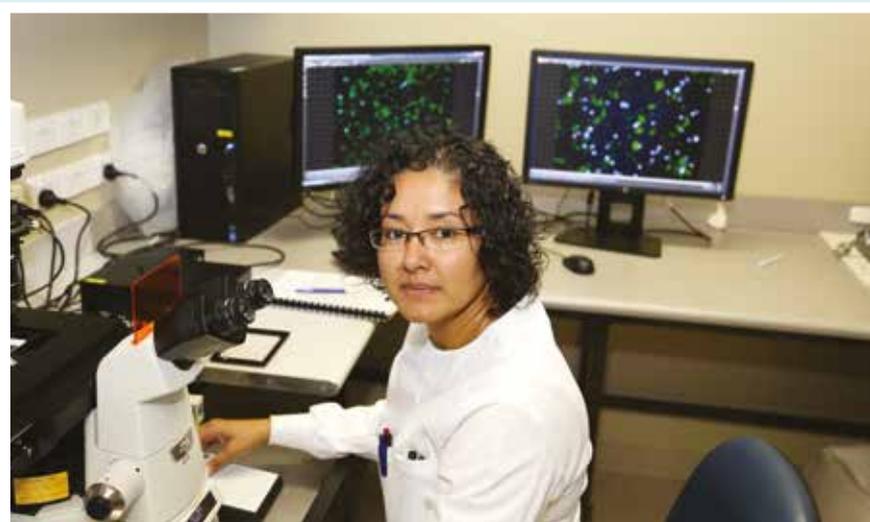
## Melanoma Matters – Key Conference in Perth

Dr Elin Grey, Post Doctoral Research Fellow in the School of Medical Sciences at ECU, and an SKMRC grant recipient presented at the 2nd National Melanoma Conference held in Perth on 10-11 October 2014. This significant scientific and medical research conference included presentations from lead international and Australian researchers and physicians.

Dr Gray presented her research on '*Circulating Tumour Cell Subpopulations in Melanoma Patients: Prognostic Value, Cellular Heterogeneity and Treatment Response Dynamics*' – along with Professor Charles Balch, Professor of Surgery at John Hopkins Medical Institution who is one of the world's most renowned melanoma specialists.

Professor Michael Millward, Professor of Clinical Cancer Research at UWA; Dr Mark Lee, Deputy Director at WA Melanoma Advisory Service and Professor Peter Leedman, Medical Director at Scott Kirkbride Medical Research Centre also presented their research.

Furthermore, various poster presentations by staff and students from the ECU Melanoma Research Group led by Professor Mel Ziman showcased their latest research findings. ECU PhD student, Leslie Calapre was awarded best poster presentation award – our congratulations to Leslie!



## Freckle Checkle Community Event



The ECU Melanoma Research Group, together with MIX 94.5 and Skin Check WA, hosted a charity event on 2 May 2015 to promote skin cancer awareness, in particular early detection of melanoma.

Doctors from Skin Check WA donated their fees for the day to Melanoma WA (awareness and patient support) and to the ECU Melanoma Research Group.

ECU melanoma researchers were there to lend our support on the day.

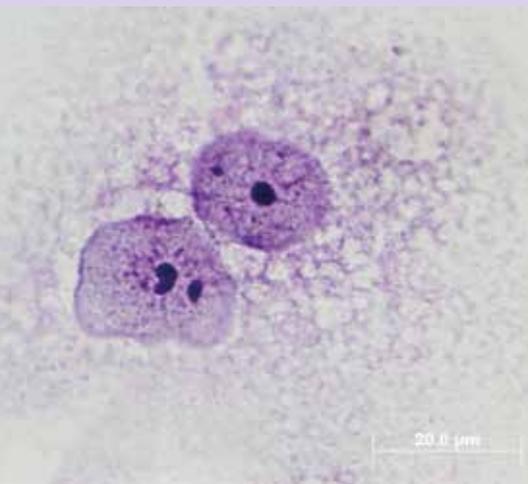
## COMMITTEE WORK

- Professor Mel Ziman was invited to be on the scientific advisory board of the Cancer Council of WA and to present findings to the 2014 Parliamentary Standing Committee on Health – Skin Cancer in Australia.
- Dr Elin Gray is the convenor of ASMR (Australian Society for Medical Research).
- Professor Mel Ziman and Dr Elin Gray are both on National Health and Medical Research Council grant review panels.

# BECOMING MELANOMA AWARE CAN SAVE LIVES

## Can you tell the difference between a mole and melanoma?

Professor Mel Ziman ran information lunch time sessions for ECU staff last month across all three campuses to ensure that they know what to watch for and how much sun is safe. She also ran information sessions at Rotary Clubs across Perth.



## DID YOU KNOW?

- Two in three Australians will be diagnosed with skin cancer by the time they are 70?  
(Source: Cancer Council Australia)
- Almost one in five people living in Western Australia had their worst sunburn experience by their 10th birthday.  
(Source: WA Institute for Medical Research)

## Where have the team been presenting research findings?



- Professor Mel Ziman presented research 'Monitoring changes in circulating tumour cells as a prognostic indicator of survival and treatment response in patients with metastatic melanoma' at

Stanford University, Stanford, USA and at the Gordon Conference, Boston, USA.

- Dr Elin Gray presented a research paper entitled 'Multi-marker flow cytometric detection of circulating melanoma cells reveals RANK expression as predictive of poor outcome from targeted therapy' at the SMR Conference, Zurich, Switzerland.
- Professor Mel Ziman presented a research paper about 'Monitoring changes in circulating tumour cells a prognostic indicator of overall survival and treatment response in patients with metastatic melanoma' at the International Pigment Cell Conference, Singapore.

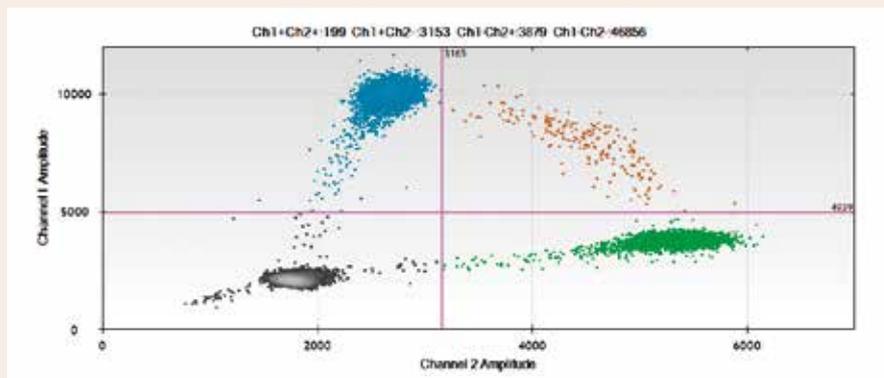
## Published papers in 2014/2015

D. Bartlett, G. Boyle, M. Ziman, S. Medic. Mechanisms Contributing to Differential Regulation of PAX3 Downstream Target Genes in Normal Human Epidermal Melanocytes versus Melanoma Cells. *PLoS One*. 2015 Apr 16;10(4)

J. Freeman, E. Gray, M. Ziman (2014) Circulating tumour cells as biomarkers in cancer. In *'Biomarkers in Disease: Methods, Discoveries and Applications'* Ed V. Preedy, Springer, UK

ES. Gray, A. Reid, S. Bowyer, L. Calapre, K. Siew, A. Pearce, S. Cowell, MH. Frank, M. Millward and M. Ziman (2015) Circulating melanoma cell subpopulations: Their heterogeneity and differential responses to treatment. *J Inv Dermatol*, in press.

A. Reid, M. Millward, K. Siew, M. Ziman, E. Gray (2015) Detection of BRAF-V600E and V600K in melanoma circulating tumour cells by droplet digital PCR. *Clin Biochem J*, in press.



## FIND OUT MORE

For more information about melanoma research please contact:

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For more information about fundraising events, and giving to melanoma research, either now or as a planned gift in your Will, please contact:

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[www.ecu.edu.au/giving-to-ecu](http://www.ecu.edu.au/giving-to-ecu)

100% of all funds go directly to the ECU Melanoma Research Group.