

CURRICULUM VITAE

Dr Amandeep Kaur

Postdoctoral research fellow

Cellular physiology lab

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Employment

2016 - Present	Postdoctoral research fellow, School of Medicine, University of New South Wales, Australia
2015 - Present	Science teacher, Matrix Education, Sydney
May - July 2016	Casual postdoctoral researcher, University of Sydney, Australia
2013 - 2016	Postgraduate teaching fellow, University of Sydney

Education

2013 - 2016	PhD in Chemistry, University of Sydney, Australia
Feb - Jun 2012	Research internship (MSc), Institute de Chimie de Clermont-Ferrand, France
2010 - 2012	MSc Chemistry (University Medal), VIT University, India
2007 - 2010	BSc Chemistry, Biotechnology, Microbiology, Osmania University, India

Publications

1. The lipids of the early endosomes: Making multi-modality work. Arumugam S., **Kaur A.**, *ChemBioChem*. 2017, DOI: 10.1002/cbic.201700046.
 2. Atomic scale modeling of iron-doped biphasic calcium phosphate bioceramics. Gomes S., **Kaur A.**, Grenèche J-M., Nedelec J-M., Renaudin G., *Acta Biomaterialia*. 2017, 50, 78-88.
 3. Fluorescent sensors for biological metal ions. **Kaur A.**, Lim Z., Yang K., New E.J., *In: Glass T (Ed.). Comprehensive Supramolecular Chemistry II, Elsevier, Amsterdam, Netherlands, 2016*.
 4. A ratiometric fluorescent sensor for the mitochondrial copper pool. Shen C., Kolanowski J. L., Tran C. M.-N., **Kaur A.**, Akerfeldt M. C., Rahme M. S., Hambley T. W., New E. J., *Metallomics*, 2016, 8, 915-919. Impact factor-3.5
 5. Studies of haematopoietic cell differentiation with a ratiometric and reversible sensor of mitochondrial oxidative capacity. **Kaur A.**, Jankowska K., Pilgrim C., Fraser S. T., New E. J., *Antioxidants and redox signaling*, 2016, 24(13), 667-679. *Invited article*. Impact factor-7.4
 6. Selective and reversible approaches towards imaging redox signalling using small molecule probes. Kolanowski J. L., **Kaur A.**, New E. J., *Antioxidants and redox signaling*, 2016, 24(13), 713-730. *Invited review*. Impact factor-7.4
 7. Reversible fluorescent probes of biological redox state. **Kaur A.**, Kolanowski J. L., New E. J., *Angewandte Chemie International Edition*, 2016, 55(5), 1602-1613. Impact factor-11.26
 8. Mitochondrially targeted redox probe reveals the variations in oxidative capacity of the haematopoietic cells. **Kaur A.**, Brigden K. W. L., Cashman T. F., Fraser S. T., New E. J., *Organic & Biomolecular Chemistry*, 2015, 13, 6686-6689 – *Highlighted as "Hot article" by reviewers*. Impact factor-3.56
 9. A FRET-based ratiometric redox probe for detecting oxidative stress by confocal microscopy, FLIM and flow cytometry. **Kaur A.**, Haghighatbin M. A., Hogan C. F., New E. J., *Chemical Communications*, 2015, 51, 10510-10513. Impact factor-6.83
 10. A novel flavin derivative reveals the impact of glucose on oxidative stress in adipocytes. Yeow J., **Kaur A.**, Anscomb M.D., New E. J., *Chemical Communications*, 2014, 50, 8181-8184. Impact factor-6.83
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11. X-ray absorption spectroscopy shining (synchrotron) light onto the insertion of Zn²⁺ in calcium phosphate ceramics and its influence on their behaviour under biological conditions. Gomes S., Kaur A., Grenèche J-M., Nedelec J-M., Renaudin G., *Journal of Materials Chemistry B* 2014, 2 (5), 536-545. Impact factor-6.62

Grants

Bosch Small Equipment Grant 2016 - Rotary Cell Culture System (RCCS-8DQ) for shared use in the Bosch Molecular Biology Facility

Other research outputs

- Commercialised the developed redox probes through StressMarq Biosciences Inc. Canada.
- Tested probes in different animal models in collaborations with Dr Stuart Fraser (Department of Physiology, USyd), Dr Anahit Penesyan (Dept. of Chemistry and Biomolecular Sciences, Macquarie University), and Dr Gawain McColl (Florey Institute of Neuroscience and Mental Health, UniMelb)

Awards

- Society of Free Radical Research Australasia student travel award, 7th joint meeting of the SFRRRA & J - 2015
- Le Fèvre postgraduate student lectureship, University of Sydney - 2015
- John A. Lamberton Research Scholarship, University of Sydney – 2014
- Agnes Campbell Postgraduate Prize, University of Sydney – 2013 - 2015
- Postgraduate research support scheme (PRSS), University of Sydney – 2013 - 2015
- University of Sydney World Scholars Scholarship, University of Sydney – 2013 - 2016
- University Gold Medal – VIT University – July 2012
- Academic Merit Scholarship– VIT University – May 2011

Conferences and participations

- Oral presentation – 7th Joint meeting of the Societies of Free Radical Research Australasia and Japan, Christchurch – December 2015
- Poster presentation – EMBL Australia PhD symposium, Bio21 Institute, Melbourne – November 2015
- Oral presentation – RACI Medicinal chemistry and chemical biology symposium, Sydney – September 2015
- Poster presentation – Gordon Research Conference – Ventura, California – March 2015
- Poster presentation – RACI National Congress – Adelaide, December 2014
- Poster presentation – 8th International conference on Hemeoxygenase, Bioiron and Oxidative stress – Sydney, October 2014
- Oral presentation – 27th International Carbohydrate Symposium – Bangalore, January 2014
- Oral presentation – RACI IC'13, Inorganic Chemistry Divisional Conference – Brisbane, December 2013
- Poster presentation – Preclinical workshop on molecular imaging, BMRI, Sydney, August 2013

Skills and strengths

- Confocal microscopy and multiphoton imaging
 - Flow cytometry and Fluorescence lifetime imaging microscopy (FLIM)
 - Seahorse mitochondrial stress test
 - Advanced imaging systems - Amnis Image stream and BD pathway
 - Cell culture (adipocytes, macrophages, pancreatic cancer, colorectal cancer cell lines and primary cells)
 - 3-D spheroid cultures
 - Organic synthesis and spectroscopy- NMR(¹H and ¹³C), FT-IR, U.V- Vis
 - Cyclic voltammetry and spectro-electrochemistry
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Other responsibilities

- Chair, Chemistry postgraduate symposium, University of Sydney-2015
- Discussion leader at the Gordon Research Seminar – Oxidative stress and disease, California-2015
- University of Sydney ambassador for RACI – Young Chemists Group, since 2014
- Conference organization – Chemistry postgraduate symposium-2015 and Focus on Microscopy-2014
- Supervised Honours and TSP students in the research group
- Treasurer, Sydney University Chemical Society 2014 -2015
- Fire warden, University of Sydney, 2013 - 2016

Memberships

- Society of Free Radical Research Australasia
- MRACI, Royal Australian Chemical Institute
- Sydney University Chemical Society (Honorary Treasurer)
- Young Chemist's Group, RACI NSW (Ambassador for University of Sydney)

References

Dr Elizabeth J. New (PhD supervisor)
Senior Lecturer
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Dr Stuart Fraser (Collaborator)
Senior Lecturer, Discipline of Physiology
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Dr Gawain McColl (Collaborator)
Head of Molecular Gerontology Laboratory
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