


The International Union of Basic and Clinical
Pharmacology Education Section

IUPHAR Pharmacology Education Project

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Drugs

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Pharmacology
Clinical effects
Indications
Administration
Adverse effects
Interactions
Monitoring

Chemicals that act on living systems and may be used in the diagnosis, treatment, or prevention of a disease

Do you use the Pharmacology Education Project (PEP) website (pictured above)? We need your feedback please! See page 10 for more details.

Welcome to the third IUPHAR Education Section newsletter! In this newsletter you'll find updates from our online meetings team and meet our editorial team. IUPHAR-Ed Councillor, Jenny Koenig, also provides her perspective on Equity, Diversity and Inclusion in Education.

One major piece of work that the Education Section is starting to look into is the development of a new website which will house projects and resources including the Pharmacology Education Project, Core Concepts of Pharmacology, Education webinars, events and more. We plan to consult you - the pharmacology education community, to determine what you would need and want from such a website and will reach out for input and feedback in the coming months.

We have been working on how we communicate with our growing community of educators. This newsletter is one output of that work, and we are in the process of updating the [Education Section pages on the IUPHAR website](#). More recently, we have set up a JISC email group to help disseminate key information from IUPHAR-Ed that will help drive our initiatives. Please reach out if you would like to join our mailing list. We welcome any new members.

Professor Clare Guilding, Chair IUPHAR Education Section

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UPDATES ON IUPHAR-ED INITIATIVES

SUMMARY OF CORE CONCEPT EDUCATION RESOURCE WORKSHOPS: ANNA-MARIE BABEY, JENNIFER KOENIG AND STEVEN TUCKER

As initially outlined in the March newsletter, the Online Meeting Team hosted 2 Core Concept Education Resource Workshops on 12th March, one from Australia on a set of 4 pharmacodynamic core concepts (drug targets, drug-target interactions, structure-activity relationships, mechanisms of drug action), and one from the UK on a set of 4 pharmacokinetic core concepts (volume of distribution, half-life, clearance, elimination). Each site had a primary host and team of facilitators to ensure that the sessions ran smoothly. The Australia-based workshop crew comprised Anna-Marie Babey, Gavin Dawe, Lynette Fernandes, Willmann Liang, and Carol Restini, while the UK-based session team was Jenny Koenig, Martin Hawes, Kelly Karpa, Janet Mifsud, and Steve Tucker.

Overwhelmingly, attendees enjoyed the activity and appreciated the opportunity for small group work to create, or at least initiate the creation of, an educational resource. They particularly welcomed the chance to interact with people from around the world with whom they might not otherwise interact.

Participation was predominantly from North America (USA, Canada, Mexico), Europe (UK, Netherlands, Hungary, Romania, Norway), and the Asia-Pacific region (Australia, Singapore, Hong Kong), but we were fortunate to have people from Egypt and Turkey to extend the representation. That said, there is certainly room for improvement, as there was no representation from South America, sub-Saharan Africa, or the Indian sub-continent. Attendance at each session was comparable, though markedly lower than the number of individuals who initially registered (transition from registration to attendance ~30%) but the ways in which people learned of the sessions differed markedly (Table 1).

Table 1: How did attendees hear about the event?

Source	Australasia time zone	Europe time zone
From local pharmacology society	~25%	~30%
Email notification	~30%	~50%
IUPHAR Education Section source (newsletter, website, or meeting)	~30%	--
Word of mouth	3 individuals	2 individuals

There was some confusion about the timing of the events, as it wasn't immediately apparent to some participants what the supplied time zone information indicated. Some individuals also struggled when the session details were sent out as a meeting invitation, which would have had their local time conversion embedded. Consequently, a decision was made to include a link to a world time conversion website in future event notices. Moving forward, it is anticipated that this approach will optimise our enrolments.

UPDATES ON IUPHAR-ED INITIATIVES

SUMMARY OF CORE CONCEPT EDUCATION RESOURCE WORKSHOPS: ANNA-MARIE BABEY, JENNIFER KOENIG AND STEVEN TUCKER

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Although the cohort in each event was relatively small, individuals who did choose to attend were actively engaged. Despite the group sizes, many attendees in the Australia-based session felt that the smaller number of people in each breakout room made them more productive – effectively there was no opportunity to be a passive observer. Overall, there were differences in the ways in which the participants in the two different workshops interacted, which might have been influenced in part by the differences in the time allocated for each: the UK-based session was scheduled for 2 hours, whereas the Australia-based session ran for 3 hours.

For the UK-based event, some of the breakout groups spent part of their allocated time discussing their current practice before they began their task. Members discussed similarities and differences across universities regarding the amount of teaching time allotted to various pharmacology core concepts, the variety of approaches we use when we teach, differing abbreviations used across the world, and the diversity of groups and professions to whom we teach pharmacology core concepts. Outcomes arising from this workshop included a storyboard schematic of an animation to demonstrate the relationship between elimination and other pharmacokinetic parameters, ways to challenge students to make predictions based on Interactive Clinical Pharmacology resources (<https://www.icp.org.nz/>), and both MCQ and short-answer questions to assess understanding of clearance.

By contrast, the participants in the Australia-based session on pharmacodynamics used part of their time in breakout rooms to bring themselves up to speed on the task with the help of their individual facilitator. Participants then spent most of their time brainstorming the creation of resources based on the topic for their group, namely writing MCQs or creating practical laboratory activities on drug targets or mechanisms of action. This approach might have been influenced by the “Tricks & Tips for Breakout Room Facilitators” document that was created to address the fact that some team members had less experience with this type of session. Consequently, facilitators for this workshop tended to be more task-oriented, and potentially less open to more philosophical discussions.

Considering the different approaches at the two sites, development of future events might benefit from understanding the primary motivations for attending (Table 2). Having a better understanding of the reason(s) for which people choose to attend, and better aligning the task to the time available, might help to address concerns from some participants that their group wasn't as productive as they had hoped.

Table 2: Participants' motivation for attending?

Reason	Australasia time zone	Europe time zone
Create teaching resources and gain new insights/ideas to inform practice	~75%	~50%
Networking and to establish community of practice	~50%	3 individuals
Curiosity	~30%	--
Looking for ideas for a similar event to be held by local pharmacology society	~25%	--

UPDATES ON IUPHAR-ED INITIATIVES

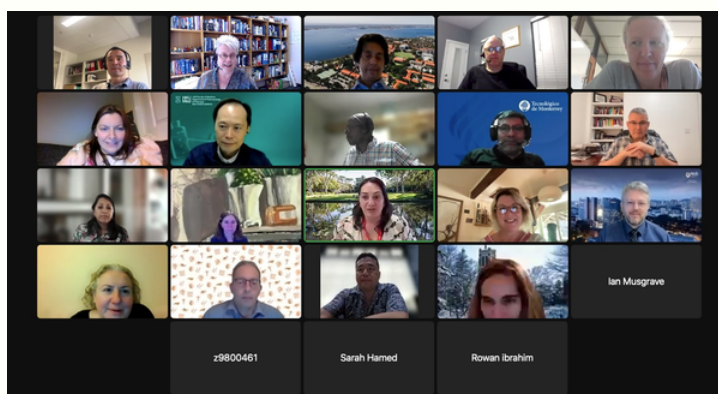
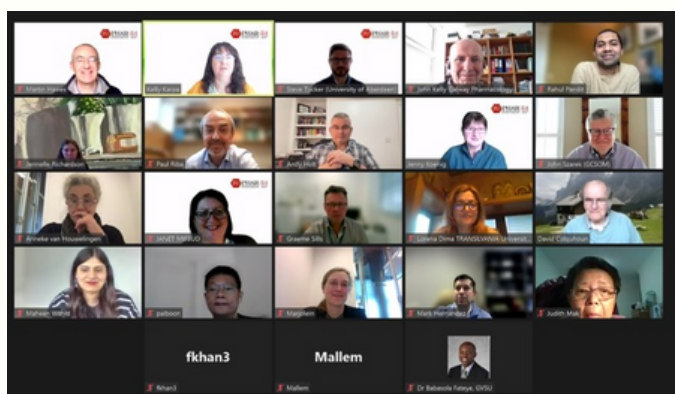
SUMMARY OF CORE CONCEPT EDUCATION RESOURCE WORKSHOPS: ANNA-MARIE BABEY, JENNIFER KOENIG AND STEVEN TUCKER

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Potential concerns about productivity might have been influenced by a key issue that arose in the workshops. Although as educators we often bemoan a lack of preparation on the part of our students, we do sometimes experience similar disconnects. Overwhelmingly, participants indicated that they didn't have time to do any pre-workshop reading. Although a workshop booklet had been created that included some best practice guidelines for the creation of each of the proposed tasks, many participants hadn't had a chance to review the content beforehand, which did mean that there was an element of doing things on the fly. As one group pointed out in the Australia-based workshop's group reporting session, it is easier to write the less robust MCQs because writing good ones takes more time. That said, there was overwhelming support for the workshop booklet, with a general perception that this will be a useful resource outside of these events, and a desire on the part of some attendees for it to be expanded.

Reflecting concerns about the lack of time for preparation, there was also a preference for an overview of the task and participants' responsibilities on the day. Some people even indicated that they had forgotten what they had signed up to do. For the session hosted from the UK, Martin Hawes anticipated this possibility by providing a brief overview of the Core Concepts of Pharmacology project led by Paul White, and highlighted the current work being done on student misconceptions. Martin had created a Padlet that permitted participants to share misconceptions from their students (PADLET <https://padlet.com/mhawes6/pk-core-concepts-student-misconceptions-wk0abnab0cw41aac>). This introduction was very well received and therefore, it would be beneficial for future interactive sessions to include dedicated time to address the logistics of the activities, as well as the goals of participation.

Overall, attendees found that participation and engagement was not hampered by the online format, particularly as it allowed them to interact with people they might not otherwise have encountered. There was an acknowledgement that, it "can't beat face to face", but there was still agreement that this was a very good alternative. Consequently, as an inaugural activity for the Online Meeting Team, the perception of the attendees was that this event was a success, and there was widespread support for additional workshops.



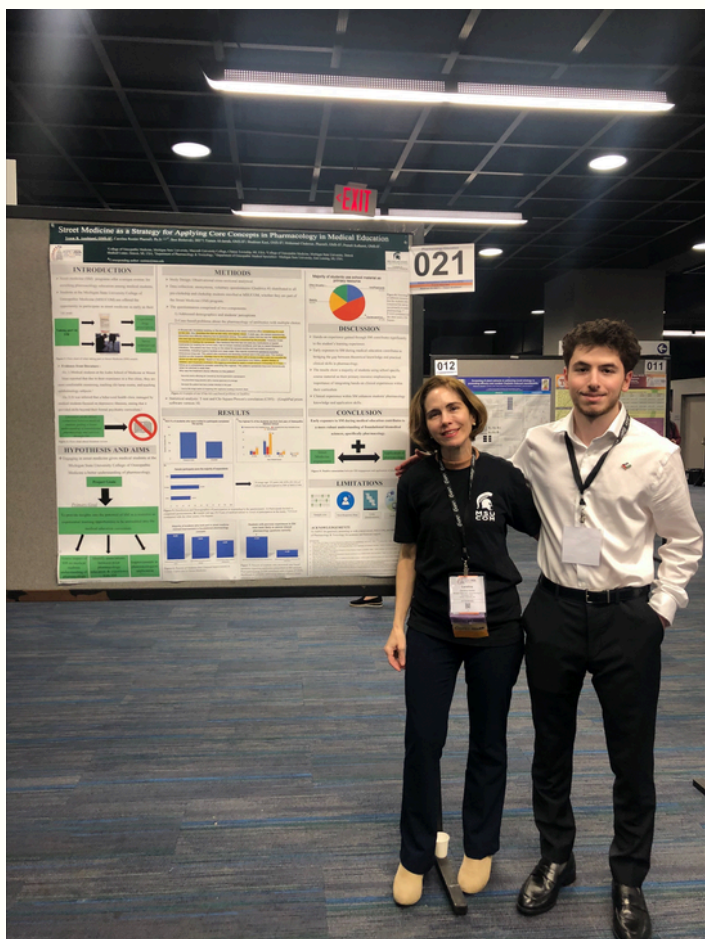
Participants from both the UK based (left) and the Australia based (right) Core Concept Education Resource Workshop.

AWARDS AND ACHIEVEMENTS



Congratulations to IUPHAR-Ed Councillor Associate Professor Carolina Restini from Michigan State University (USA) who was made a Fellow of the Academy of Pharmacology Educators from ASPET (American Society of Pharmacology for Experimental Therapeutics (FAAPE))!

Dr Carolina Restini graduated as a pharmacist (PharmD) and earned her doctoral (Ph.D.) degree and a postdoctoral fellowship in Pharmacology at the School of Medicine - University of São Paulo, Brazil. From 2008 to 2017, she was a Professor at a Brazilian university, teaching students medical, pharmacy, dentistry, and nutrition programs. She was a board member of the accredited Master's Program in Health and Education. In 2017, she became part of faculty at MSUCOM. She teaches Medical Pharmacology, integrating foundational biomedical and clinical sciences. Dr. Restini develops research projects and investigations considering the humanistic aspects of therapeutics. The outreach projects aiming to generate community-based services and research are closely related. Such projects bridge pharmacology teaching-learning scenarios to the patient's care.



Yezen Anabtawi (a 3rd-year medical student, mentored by Associate Professor Carol Restini) won 3rd place for his poster at the ASPET Division of Pharmacology Education. His project "Street Medicine as a Strategy for Applying Core Concepts in Pharmacology in Medical Education" aimed to investigate medical students' perception of applying Foundational Pharmacology concepts of antibiotics and drug resistance through community service, seeing patients at the Street Medicine program from Michigan State University, College of Osteopathic Medicine.

Associate Professor Carol Restini with medical student, Yezen Anabtawi, at the ASPET annual meeting in Arlington, VA, USA.

LINKS TO RECENTLY PUBLISHED PAPERS

Banos JE, Blanco-Reina E, Bellido-Estevez I, Bosch F, Cabello MR, Cambra-Badii I, et al. (2024). [Beyond lectures and practical courses: Teaching pharmacology using imaginative pedagogical tools](#). Pharmacol Res 202: 107130. DOI: 10.1016/j.phrs.2024.107130

Balmith M, Cordier W, Bhayat A, Basson C, Morule M, & Schellack N (2024). [An evaluation of knowledge and perception of pharmacology in undergraduate oral hygiene students and recent graduates at a single higher institution in Pretoria](#). Int J Dent Hyg. DOI: 10.1111/idh.12794

Fasinu PS, & Wilborn TW (2024). [Pharmacology education in the medical curriculum: Challenges and opportunities for improvement](#). Pharmacol Res Perspect 12: e1178. DOI: 10.1002/prp2.1178

Hawes M, & Werners A (2024). [The future of pharmacology education: The Veterinary Educators in Pharmacology Special Interest Group \(VEPSIG\)](#). Expert Rev Clin Pharmacol 17: 303-304. DOI: 10.1080/17512433.2024.2315309

Hawes M, & Werners A (2024). [The veterinary educators in pharmacology special interest group: A thriving community of practice](#). J Vet Pharmacol Ther 47: 154-155. DOI: 10.1111/jvp.13428

GLOBAL JOB ALERTS

➤➤➤ [See the full list of pharmacology jobs currently listed on ScienceCareers](#)

[Assistant / Associate / Full Professor in Drug Discovery/Pharmacology](#), Nanyang Technological University, Singapore. Closing date: Thursday 20th June.

[Assistant/Associate Professor](#), NYU Grossman School of Medicine: Biochemistry and Molecular Pharmacology. Closing date: Friday 5th July.

[Faculty Positions](#), Southern University of Science and Technology, School of Medicine, Shenzhen, Guangdong, China. Closing date: Sunday 14th July.

[Professor, Division Director](#), Translational and Clinical Pharmacology, Cincinnati Children's Hospital & Medical Center, Ohio. Closing date: Tuesday 23rd July.

[Faculty Position](#), Department of Pharmacy and Pharmaceutical Sciences, St. Jude Children's Research Hospital, Memphis, Tennessee. Closing date: Friday 11th October.

COUNCILLOR PERSPECTIVE: DR JENNY KOENIG (UK)

EQUITY, DIVERSITY AND INCLUSION IN EDUCATION

“What are we going to do about it then?”

Dr Joan Mason Oct 2003

It's just over 20 years since I heard Joan Mason say those words. At the time I couldn't have imagined where that would take me, but it's certainly been an interesting path and I've learned an enormous amount about myself and life in general. Much more than I would have done if I had stuck on the typical research scientist career path. Besides, that was not really an option for lots of reasons. In this article I'd like to share some of the key things I've learned about equality, equity, diversity and inclusion.

Joan Mason was the Chair of AWiSE, the Association for Women in Science and Engineering. The purpose of AWiSE [1] was to work for gender equality (as we then called it), a network for women in male-dominated fields to help them progress, find mentors and generally speak up for issues of importance to women.

Being the only one in the room

I guess for some young women now, it might seem odd that I mention the term “male-dominated field” as a Pharmacologist. Back in the 1990s, whenever I gave a talk at a scientific meeting as a 30-something year-old senior post-doc/junior PI, I would often be one of few women. I don't recall consciously thinking about it at that point but I think my unconscious response influenced the way I interacted with people. There were plenty of women at PhD level in biological sciences, but not at the level of permanent jobs. And I guess by 2003, I was finding out why that might be.

Accumulation of many small disadvantages

In AWiSE and many other meetings, we spent a lot of time asking why there were a lot of women at junior levels but few at senior levels. To cut a very long story short, the most helpful answer came from Prof Virginia Valian and her book [2] “Why So Slow?” published in 1999. Her central argument was that there was an accumulation of many small disadvantages due to implicit hypotheses about gender differences. Just solving any one of them for example, childcare or providing mentoring would help, but each on its own would not solve the problem. If you imagine a brick wall with a few gaps, some women sneak through or are helped over, but to make large scale change, you need to dismantle the bricks, one by one.

The grass is greener in some places but finding them can be hard

One of the activities of AWiSE in the mid-2000s was a survey of women's experiences of part time and flexible working. This revealed that progress was patchy, the grass was indeed greener in some research labs and organisations than others. The attitudes of senior leaders is equally patchy. Some just get it. Others need to deal with their own insecurities first or reach a stage where they see someone they love struggling to make a science career a success.

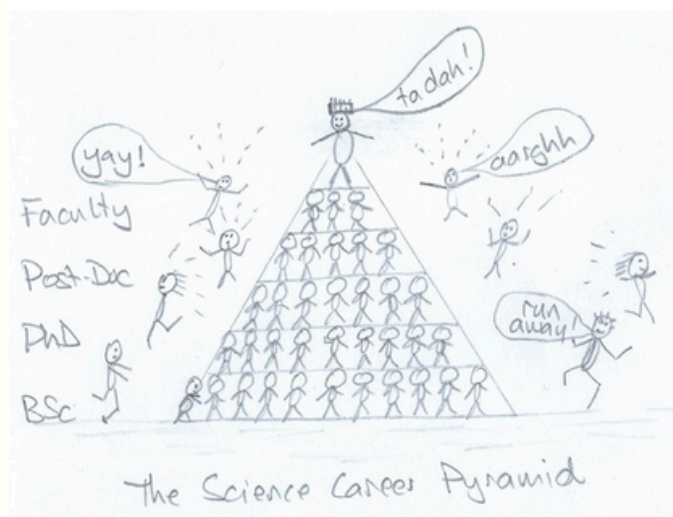
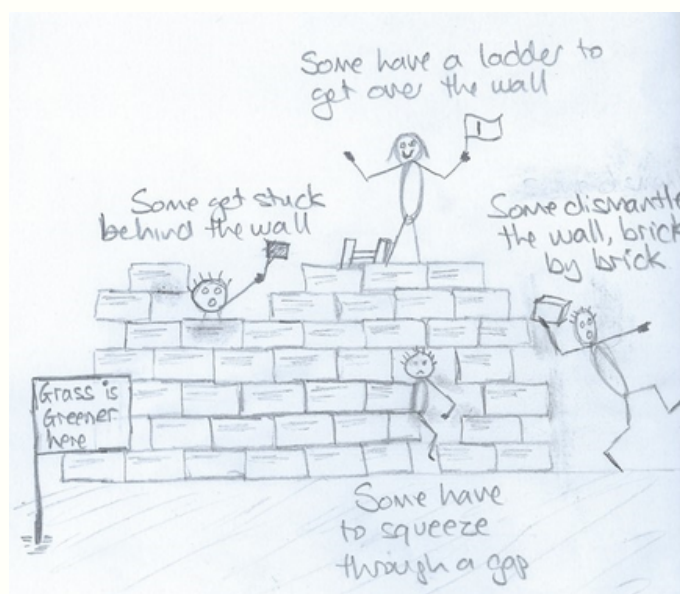
COUNCILLOR PERSPECTIVE: DR JENNY KOENIG (UK)

EQUITY, DIVERSITY AND INCLUSION IN EDUCATION

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Falling off the research career pyramid

Through talking with other women at our meetings, we developed a picture of the research scientist career ladder as a pyramid and, at each level, there was a gradual attrition. Some left happily, dare I say it – eagerly – whilst others left resentfully. In the middle of that spectrum, some realised they couldn't see a future, but didn't really know where to go or what to do. I fell into the last group. It was scary leaving my Senior Research Fellowship in 2004. Part of me was very pleased to be able to jettison all the things I didn't like, but it was a very unsettling and difficult time as I came to terms with the idea that, after 18 years since the start of my PhD, I was no longer a research scientist. I wanted, (actually needed) a part-time, flexible role in the Cambridge area but, as they didn't appear to exist, I decided to set up my own business as a science education consultant alongside re-establishing the Cambridge branch of AWiSE as an organisation in its own right after Joan Mason died in March 2004 and the national AWiSE organisation faltered.



Rethinking definitions of success.

Breaking out of a research scientist career and into enterprise turned out to give me fantastic opportunities to find out that I was good at lots of things I never knew existed or never thought I would do. I learned how to chair meetings, raise funds, write a business plan, network, mentor, organise meetings on a shoestring, persuade people that they wanted to help, identify opportunities both for myself and for Cambridge AWiSE. For me success became about pushing things forward, making things happen, facilitating, enabling. Sometimes things didn't work out and I had to lick my wounds and regroup and recover.

I began to realise that there were many and varied definitions of "success". For me, the concept of Ikigai made sense and seemed helpful. I was looking for something/somewhere I enjoyed, was good at, could be paid for and was needed. In my search for a way forward, I just looked out for chances and took up opportunities as they arose if they looked interesting. I had no intention of remaining in academia, but the opportunity arose to do some small group pharmacology tutorial teaching and I took

COUNCILLOR PERSPECTIVE: DR JENNY KOENIG (UK)

EQUITY, DIVERSITY AND INCLUSION IN EDUCATION

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up a part time role at Lucy Cavendish College in the University of Cambridge teaching graduate entry medical students. I enjoyed it, it was flexible and I could explore other consultancy work alongside including pharmaceutical industry training, public outreach activities, e-learning development and writing. After gaining experience working with medical students with dyslexia, ADHD and health issues, an opportunity arose in 2011 to become a part-time specialist study skills tutor for students with disabilities and I learned so much from these students over the course of the next 5 years.

Diversity, neurodiversity and disability

Working one-to-one with students with disabilities was fascinating, I gained an insight into how they approached their studies, what the barriers were and what could help. I also realised that there were a lot of misconceptions amongst academics about what dyslexia and other learning differences were. Many people thought that just because someone might be slow to read a document or have difficulty constructing a written piece, that they were less intelligent when this is not the case. There are plenty of very successful research scientists who are dyslexic or have ADHD. Nowadays, as an Associate Professor at the University of Nottingham, UK, one of my roles is as a Disability Liaison Officer and I take the opportunity to advocate for students who are neurodivergent and to share with them some role models. I also try to find ways of teaching that are inclusive for neurodivergent students and find that things that help them, will help many other students.

Widening horizons and inclusion

The longer I had been away from being a pharmacology research scientist, the more I explored other areas including genetics, history of science, statistics and maths education. In 2017 I stumbled upon the work of Brian Donovan [3] in genetics education which opened up a realisation that the genetics we were teaching in schools and in introductory classes in university biology degrees was, quite frankly, misleading. Putting that alongside greater exposure to clinical pharmacology once I started teaching on the Graduate Entry Medicine programme at the University of Nottingham in 2020 led to a developing interest in how people understand ethnicity. I realised that my own understanding of ethnicity was superficial and incomplete and have enjoyed exploring aspects of sociology [4], history of science [5] and genetics [6]. Working with students to ask how we should teach about ethnicity in the medical curriculum has raised a lot of questions to which we are currently trying to find answers. But in the end it all comes back to “what are we going to do about it then?”

[1] For further information about AWISE in the early 2000s see <https://camawise.org.uk/about/the-history-of-cambridge-awise/> and <https://camawise.org.uk/wp-content/uploads/2011/08/genderdiv.pdf>

[2] Why So Slow?: The Advancement of Women by Virginia Valian DOI: <https://doi.org/10.7551/mitpress/7235.001.0001> up a part time role at Lucy Cavendish College in the University of Cambridge teaching graduate entry

[3] Donovan, B. M. 2017 Learned Inequality: racial labels in the biology curriculum can affect the development of racial prejudice. J Res Science Teaching, 54(30), 379-411. <https://doi.org/10.1002/tea.21370>

[4] Dorothy Roberts, 2011. Fatal Invention: How Science, Politics and Big Business Re-create Race in the Twenty-First Century. The New Press.

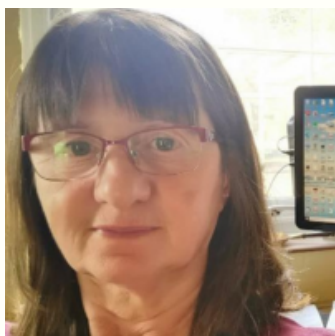
[5] Greg Radick, 2023. Disputed Inheritance: The Battle over Mendel and the Future of Biology. University of Chicago Press.

[6] Kostas Kampourakis, 2023. Ancestry Reimagined: Dismantling the Myth of Genetic Ethnicities, Oxford University Press.

COUNCILLOR PERSPECTIVE: DR JENNY KOENIG (UK)

EQUITY, DIVERSITY AND INCLUSION IN EDUCATION

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Jennifer Koenig is an Associate Professor at the University of Nottingham. She is the Pharmacology Lead for the Graduate Entry Medicine programme and in addition, teaches mathematics, statistics and toxicology in the Medical Physiology and Therapeutics BSc. She has a strong interest in Equality, Diversity and Inclusion (EDI) and has worked extensively with science and maths students with Specific Learning Differences and disabilities. She has published on mathematics and its curriculum in biological sciences and is currently investigating how ethnicity is understood in biomedical science.

WE NEED YOUR HELP!

PHARMACOLOGY EDUCATION PROJECT:

Have you used PEP in teaching? John Szarek, Simon Maxwell and Clare Guiding are putting together a paper with a philosophical look at what online education and knowledge databases might look like in the coming decades, using PEP as a case study ([Pharmacology Education Project | Pharmacology Education Project](#)). For this, the team would love to know if and how any of you have used PEP in your teaching.

➤➤➤ [Have you used PEP in your teaching? Please click here to complete the survey.](#)

SCHOLARSHIP OF TEACHING AND LEARNING:

Unlike physiologists, who have a dedicated journal for education research and innovation, *Advances in Physiology Education*, pharmacology educators have no single repository for their scholarship of teaching and learning. The IUPHAR Education Section (IUPHAR-Ed) would like your assistance in compiling a list of journals that provide authors with the opportunity to publish their education-focussed research. The resulting directory will be made available through the IUPHAR-Ed website and will be circulated to member societies. This short survey should take no more than 5-10 minutes of your time, depending on the number of journals in which you have published. Your help would be greatly appreciated.

➤➤➤ [Where do you publish your education research? Please click here to complete the survey.](#)

MEET THE NEWSLETTER EDITORIAL TEAM



Editor-in-Chief: Associate Professor Elly Djouma (Australia)

Associate Professor Elly Djouma is Head of the Department of Microbiology, Anatomy, Physiology and Pharmacology at La Trobe University in Australia and an IUPHAR Education Section Councillor. She is also a Senior Fellow of the Higher Education Academy (SFHEA) which recognises her sustained record in leading and influencing the practice of those that teach or support high quality learning. Elly currently serves on the Board of Directors of the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists (ASCEPT) and is Chair of the ASCEPT Equity, Diversity, and Inclusion Committee. As Editor-in-Chief of the IUPHAR-Ed newsletter, Elly is passionate about promoting opportunities for engagement, knowledge exchange, and collaboration in pharmacology education to help foster a sense of community among pharmacology educators worldwide. If you have any suggestions for what you'd like to see in future newsletters, please send your feedback to e.djouma@latrobe.edu.au. Previous editions of the newsletter can be viewed on the [IUPHAR-Ed website](#).



Editor: Dr Alex Conibear (UK)

Dr Alex Conibear is a Senior Lecturer in Pharmacology at the University of Bristol where she teaches across the BSc and MSci Pharmacology programmes, the BSc Biomedical Science programme and Medicine. She is currently the Deputy School Education Director in the School of Physiology, Pharmacology and Neuroscience, an IUPHAR Education Section Councillor and a Fellow of the Higher Education Academy (FHEA). Alex is passionate about stimulating curiosity and creating enthusiasm about pharmacology to inspire and enable students to explore independently beyond the confines of a prescribed syllabus. She is also excited to bring her ideas, enthusiasm and expertise to the editorial board of this newsletter.



Editor: Dr Betty Exintaris (Australia)

Dr. Betty Exintaris is the Associate Dean of Learning and Teaching and the Associate Dean of Equity, Diversity, and Inclusion at the Faculty of Pharmacy and Pharmaceutical Sciences, Monash University. A longstanding board member of ASCEPT and co-Deputy Chair of the Higher Education Research and Development Society of Australia (HERDSA) Victorian Branch, she is a dedicated educator known for her innovation and passion in supporting students both inside and outside the classroom. Her commitment is demonstrated through her engaging teaching methods, integration of essential skills in the curriculum, and development of impactful educational resources. Betty's contributions to education have been recognised, internationally, nationally and locally, through numerous awards, grants and invited conference presentations. Betty is also very excited to contribute her expertise and enthusiasm to the editorial board of this newsletter, aiming to enrich our pharmacology educational community further.



Editor: Dr Nilushi Karunaratne (Australia)

Dr Nilushi (Nel) Karunaratne is an Education-focused academic at the Faculty of Pharmacy and Pharmaceutical Sciences, Monash University. Passionate about supporting the educational journey of tertiary students, Nel is dedicated to easing the transition burden through innovative teaching and supportive mentorship. Her contributions to pharmacy and pharmacology education are evident in her scholarly research, mentorship, and numerous presentations and publications. Additionally, Nel's influence extends to the wider education community through her roles as co-Deputy Chair of the HERDSA Victorian Branch and as an IUPHAR Education Section Councillor. Through her role on the newsletter editorial board, Nel aims to further enrich our collaborative pharmacology education endeavors.

UPCOMING PHARMACOLOGY MEETINGS



➤➤➤ **9th European Congress of Pharmacology (EPHAR) 23-26 June, Athens 2024**



➤➤➤ **Pharmacology 2024, 10-12 Dec**



➤➤➤ **ASCEPT, APFP & APSA Joint Congress 1-4 Dec, Melbourne 2024**



➤➤➤ **20th World Congress of Basic and Clinical Pharmacology (WCP) 12-17, July Melbourne 2026**

FOLLOW IUPHAR-ED ON SOCIAL MEDIA



This issue of the IUPHAR-Ed newsletter was compiled by Elly Djouma, Alex Conibear, Nilushi Karunaratne and Betty Extinaris. Thank you to everyone that contributed content. The next issue will be distributed to members around mid- September 2024. If you would to be featured in a future newsletter or have any content to contribute please contact the communications team by sending an email to Elly: e.djouma@latrobe.edu.au. The deadline to contribute content for the September newsletter is 31st August, 2024.