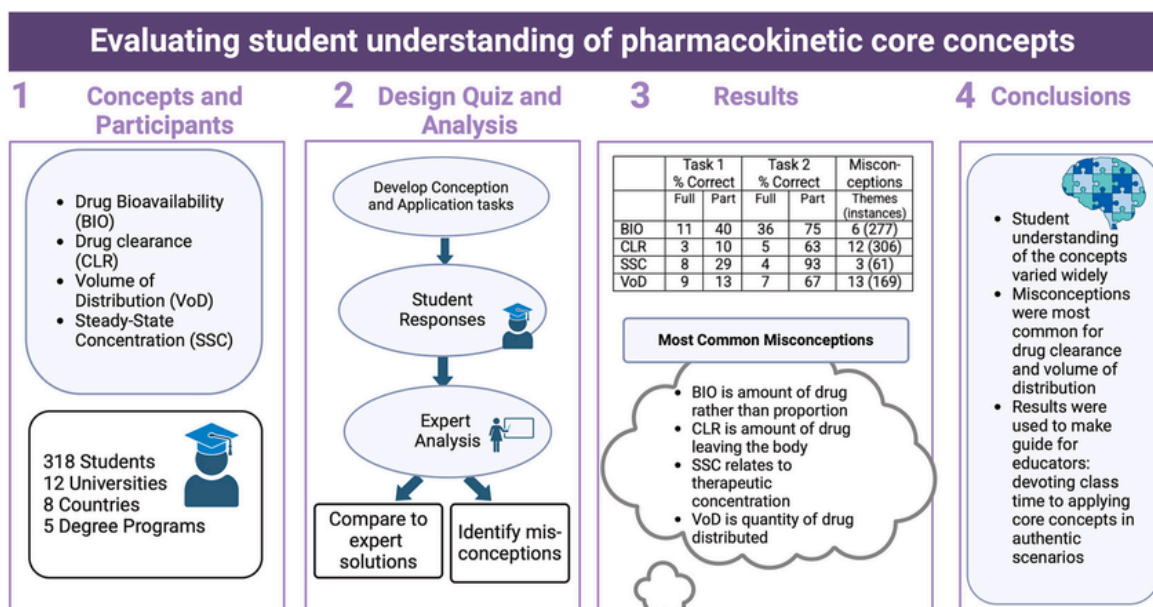


The International Union of Basic and Clinical
Pharmacology Education Section



Graphical abstract from a recently published paper on evaluating student understanding of core pharmacokinetic concepts.
Read the current update on the IUPHAR-Ed Pharmacology core concepts project on page 3.

Welcome to the March edition of the IUPHAR Education Section newsletter. It has been a busy start to 2025! In this edition, we provide updates on various IUPHAR-Ed Initiatives, including insights from the online meeting steering group and progress on the core concepts project. Please complete the survey on page 3 if the core concepts pharmacology project has impacted your teaching practice. Additionally, we spotlight a recently published paper highlighting the importance of creating an inclusive educational environment in pharmacology that benefits all students.

We are excited to announce that abstract submissions are now open for WCP 2026 in Melbourne. We encourage all pharmacology educators to submit their abstracts. We are also planning an education satellite and will share more details as they become available.

We'd also value your feedback on the IUPHAR-Ed newsletter. Your input will help us improve the content and make it more engaging and relevant to our readers. Please take a few minutes to complete the survey on page 9 and share your opinions. We also welcome your contributions to future newsletters. If you'd like to be featured in an upcoming edition, please get in touch.

Professor Clare Guiding, Chair IUPHAR Education Section

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ONLINE MEETINGS STEERING GROUP UPDATE

At the January meeting, the Online Meetings Steering Group (OMSG) discussed the positive responses to the two sets of workshops run in 2024 and potential topics for workshops this year. Conversations at the meeting and a call for expressions of interest afterwards resulted in the creation of teams to organise each of two sessions:

- Designing Objective Structured Practical Examinations (OSPES)
 - Margaret (Maggie) Cunningham, Lynette Fernandes, Betty Exintaris, Nilushi (Nel) Karunaratne, Anna-Marie Babey
 - Tentatively scheduled for July-August 2025
- Place of Pharmacology in an Integrated Curriculum
 - Janet Mifsud, Lindsay Cormier, Munder Zagaar, Carol Restini, John Szarek, Kelly Karpa, Jenny Koenig
 - Tentatively scheduled for September-October 2025

Each team has met to discuss the format and potential speakers for their respective sessions. Once the details have been finalised, more information will be provided to the wider community.

An additional proposal was championed by Willmann Liang and supported by Alex Conibear and Olusola (Shola) Olafuyi on educational technologies. The possibility of a series of showcases with hands-on activities for attendees was considered. The consensus of the group was that this was a potentially valuable addition to the OMSG roster, and could easily include showcases on other education-related activities. Further discussion is warranted, but it would provide members with an opportunity to present their activities to a worldwide audience.

Of particular interest to the membership was a home for the recordings from online sessions and resources generated. The IUPHAR Education Section Chair, Clare Guilding, and OMSG Co-Chair Jenny Koenig have begun discussions about a home for OMSG content with Parthenon, in the wake of the renewal of their contract with IUPHAR. Jenny will be meeting with Kimberly from Parthenon to discuss the format of a dedicated online presence for OMSG.



CORE CONCEPTS OF PHARMACOLOGY UPDATE

The core concepts of the pharmacology project continue to be productive! We are beginning to analyse the collective 1000+ responses to quizzes PD2 and PK2. PK2 analysis and write-up will be led by Jenny Koenig and Steve Tucker, and PD2 analysis will be led by Carol Restini and Betty Exintaris. Over 40 educators have expressed interest in analysing the responses.

You can read the latest publications from this project below:

Babey, A. M., Koenig, J., Cunningham, M., Shield, A., Restini, C., Djouma, E., ... & White, P. J. (2025). Evaluating student understanding of core pharmacokinetic concepts. European Journal of Pharmacology, 990, 177256. (Graphical abstract featured on front page)

Kelly-Laubscher, R., Koenig, J., Cunningham, M., Aljofan, M., Babey, A. M., Hawes, M., ... & White, P. J. (2025). Evaluating student understanding of pharmacodynamics core concepts. European Journal of Pharmacology, 990, 177257.

Netere, A. K., Hughes, T., Babey, A. M., Hawes, M., Mifsud, J., Kelly, J. P., ... & White, P. J. (2024). Evaluating the quality of multiple-choice question pilot database: A global educator-created tool for concept-based pharmacology learning. Pharmacology research & perspectives, 12(5), e70004.

What impact has the Core Concepts in Pharmacology project had you and your teaching practice?

In 2020, a group of educators in Australia and New Zealand embarked on a quest to identify, define and unpack the core concepts in pharmacology. This project led to numerous publications and inspired an international collaboration, the IUPHAR Core Concepts in Pharmacology Education Project (<https://coreconceptspharmacology.org/>). Consensus identification of core concepts and development of tools, such as concept inventories, for assessment have been shown to improve student learning in other disciplines – but what about the impact on educators?



[Scan the QR code or click here to complete the survey!](#)

We are interested to find out what impact the Core Concepts in Pharmacology project has had you and your teaching practice. The survey is anonymous and should take no more than 10 minutes to complete.



WHAT DO WE MEAN BY AN INCLUSIVE PHARMACOLOGY EDUCATION?

A commentary recently published by Jennifer Koenig and Steven Tucker in *Pharmacology Research and Perspectives* highlights the importance of creating an inclusive educational environment in pharmacology that benefits all students. Here are the key takeaways from the paper:

>>> [Read the full paper here](#)

Inclusive Education Definition:

- Inclusive education meets the needs of all students, welcoming diverse cultures, socioeconomic backgrounds, and neurodiversity.
- It involves recognising students' varied backgrounds and experiences, especially during transitions from school to university or between countries.

Mindset and Language:

- Inclusive education is a mindset, not necessarily a change in learning outcomes.
- Simple changes, like clarifying vocabulary, can prevent exclusion and misinterpretation.

Diverse Examples and Representation:

- Using diverse examples in pharmacology, beyond the Western model, acknowledges global scientific contributions.
- Representation of diverse role models in teaching materials fosters a sense of belonging.

Understanding Neurodiversity:

- Recognising strengths and challenges of neurodiverse students can lead to more inclusive curricula and assessments.
- Promoting role models with specific learning differences (SpLD) can normalize neurodivergence.

Disability and Adjustments:

- Universities should anticipate common adjustments for students with disabilities to level the playing field.
- Promoting role models with disabilities can help normalise their experiences.

Socioeconomic and Educational Backgrounds:

- Recognising gaps in students' prior education and providing appropriate teaching to fill these gaps is crucial.
- Ensuring foundational concepts are secure, especially in mathematics and science, is important for student success.

Clarity around Ethnicity, Race, Ancestry, and Genetics:

- Ethnicity in pharmacology often refers to racial groups, which conflicts with its cultural meaning.
- It's important to clarify that continental racial groups are not biologically defined and consider genetic variation in context.

Clarity around Sex and Gender:

- Ensuring both sexes are represented in experimental and clinical data is crucial.
- Emphasising sex and gender in pharmacology teaching and research helps address data gaps and improves future research.

This commentary is the lead article for a PR&P themed issue on inclusive pharmacology education, while the deadline has elapsed for submissions, there is still some flexibility in that timeframe and articles may still be discussed with Jenny (Jennifer.Koenig@nottingham.ac.uk) or Steve (s.j.tucker@abdn.ac.uk).



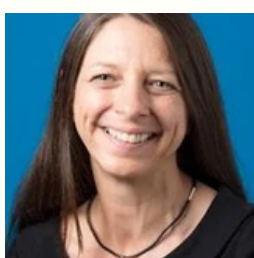
WE CELEBRATE ALL WOMEN IN OUR INTERNATIONAL PHARMACOLOGY COMMUNITY

The "Accelerate Action" campaign for International Women's Day 2025 emphasises the urgency of achieving gender equality. At the current rate, it will take until 2158 to reach full gender parity. The campaign calls for swift, decisive steps to dismantle systemic barriers and biases that women face both personally and professionally.

Key aspects of the campaign include:

- **Economic Empowerment:** Promoting women's participation in the economy and leadership roles.
- **Education and STEM:** Encouraging women and girls to pursue education and careers in science, technology, engineering, and mathematics.
- **Health and Well-being:** Ensuring women have access to healthcare and can make informed decisions about their health.
- **Support for Grassroots Organisations:** Highlighting the importance of supporting local groups that work tirelessly for women's advancement.

The campaign also stresses the importance of inclusivity and intersectionality, recognising that gender inequality affects women differently based on ethnicity, disability, and socioeconomic status. By accelerating action, the campaign aims to create a more equitable world for all women, urging individuals, organisations, and governments to take concrete steps towards this goal.



IUPHAR EDUCATION SECTION

AWARDS AND ACHIEVEMENTS



Congratulations to IUPHAR-Ed Councillor John Szarek on being awarded the Edward Patrick Finnerty Lifetime Achievement Award, which will be given out at the 29th Annual IAMSE Conference in June 2025. This award is bestowed upon an individual member who has demonstrated sustained involvement in and commitment to the advancement of the International Association of Medical Science Educators through their many types of service to the organisation at the maximal level of performance.



Congratulations to Professor Simon Maxwell for being selected as the BPS lecturer for the 20th Congress of Basic and Clinical Pharmacology (WCP 2026).

Simon Maxwell is Professor of Student Learning/Clinical Pharmacology and Prescribing at the University of Edinburgh, where he has led in developing e-Learning strategies to support education in this area. He is also the Director of the University's Masters in Internal Medicine programme. His clinical responsibilities include supervision of acute medical admissions and the management of outpatients at increased cardiovascular risk. He was formerly Vice-President of the BPS and is a fellow of the Royal Colleges of Physicians in London and Edinburgh and of the Higher Education Academy. He led the development of and is Medical Director of the Prescribing Safety Assessment, a joint initiative by the BPS and Medical Schools Council delivering a national assessment of prescribing for all UK medical students. This process has now been adopted in several other countries. He is co-lead for the Pharmacology Education Project (PEP), an IUPHAR initiative to provide freely accessible learning materials for students of the pharmacological sciences in resource-poor countries.



Congratulations to IUPHAR-Ed Councillor Farhan Ahmad Khan who has been elected to the position of Trustee-Senior Academic Leadership at the British Pharmacology Society!

AWARDS AND ACHIEVEMENTS

Congratulations to the team from Monash University for their 2024 Australian Award for University Teaching for curriculum transformation and innovative pedagogy.

A COMPREHENSIVE INSTRUCTIONAL MODEL TO DEVELOP A TRANSFORMED PHARMACY DEGREE

A/Prof Daniel Malone
 Prof Kirstie Galbraith
 Dr Betty Exintaris
 Dr Thao Vu
 Prof Carl Kirkpatrick
 Prof Paul White
 Prof Joseph Nicolazzo
 Dr Suzanne Caliph
 A/Prof Steven Walker
 Mr Simon Furletti



Health professions training programs have an ethical obligation to enhance healthcare. With this in mind, the whole Monash Pharmacy Degree was transformed, focussing on student skill development, aligning program content with outcomes, and clarifying pharmacist responsibilities. This redesign involved redesigning and rebuilding all units of study using an active learning model that balanced flexibility with structure, providing a consistent learning environment while accommodating various teaching approaches. Core skills were identified and vertically integrated throughout the degree, ensuring students develop, practise, and are assessed on these skills.

The transformation also introduced an earlier experiential placement program incorporating Entrustable Professional Activities (EPAs), allowing pharmacy preceptors to provide feedback to students based on their level of independence and required supervision level of students. The success of these changes is evidenced by improved student satisfaction, better examination performance, enhanced clinical skills during placements, and increased contributions to educational sciences. This transformation not only improves healthcare education but also sets a benchmark for ethical educational practices that prioritise skill development and professional alignment, and serves as a guide for others to follow in an ethical pursuit of better healthcare



Congratulations to IUPHAR-Ed Councillor Betty Exintaris for receiving a 2024 Australian Award for University Teaching. Betty received a citation for outstanding contributions to student learning "for transforming the first-year Pharmacy student learning experience through inclusive practice inside and outside the classroom".

IUPHAR EDUCATION SECTION

UPCOMING OPPORTUNITIES/EVENTS



Rang Prize for Outstanding Achievement in Teaching

Deadline for applications: 31 March 2025.

>>> [Read further about how to apply here](#)

This annual prize recognises outstanding achievement in the teaching of both clinical and non-clinical pharmacology. There are up to two awards available. Winners will receive £1,000.

Criteria

Candidates will have made an exceptional contribution to the teaching of clinical or non-clinical pharmacology in the past five years (i.e. it is not a lifetime award but a prize for initiating recent achievements in teaching)

- Significant contribution/impact in pharmacology teaching and education in school, undergraduate, postgraduate, medical or veterinary education.
- Improving educational practice, student outcomes or contributions to pedagogy.
- Supporting others in education by sharing knowledge and skills.

CALL FOR PAPERS: Assessment in Pharmacology



The British Journal of Clinical Pharmacology is proud to announce a call for submissions for our upcoming themed issue on Assessment in Pharmacology. We are actively seeking original research articles and review articles that encompass multifaceted research on various aspects of pharmacology assessment.

Assessment is a crucial element of any curriculum, playing a key role in student retention and success. Historically, assessment has been viewed simply as summative assessment of student learning—a tool for determining student understanding. In this context, the most immediate consequence is that passing or failing an exam can shape a student's future academic trajectory. This type of assessment is often said to 'drive learning' (Biggs, 1996), influencing both what and how students study. Elton and Laurillard (1979) even suggest that 'the quickest way to change student learning is to change the assessment system.'

Modern approaches, however, have expanded the utility of learner assessments to include assessment for learning (formative assessment) and assessment as learning (e.g., capstone projects, placements). In these instances, assessment actively contributes to the learning process. Thus, in the modern classroom, the impact of assessment on student success—whether positive or negative—depends largely on the practices employed by lecturers, institutions, and assessment bodies with regard to exam design, marking standards, and validation procedures. Given its significance, this thematic issue will explore current developments in pharmacology assessment, examining how evolving assessment practices are shaping student outcomes in this field.

Deadline for submissions: 31 March 2025.

Join us in exploring this important topic by submitting your manuscript today. This is an opportunity to share your research and contribute to shaping the future of pharmacology assessment.

Lead guest editor: Rosin Kelly-Laubscher (roisinkelly@ucc.ie)

Co-guest editor: Kelly Quesnelle (quesnelk@greenvillemed.sc.edu)

Submission Guidelines/Instructions

Please refer to the [Author guidelines](#) to prepare your manuscript. When submitting your manuscript, please answer the question: "Is this submission for a special issue?" by selecting the special issue title from the drop-down list.

IUPHAR EDUCATION SECTION

NEWSLETTER CONTRIBUTION AND FEEDBACK

IUPHAR-Education Section Newsletter

Would you like to contribute an article for an upcoming issue?

The aims of the IUPHAR-Education Section Newsletter are to highlight the ongoing activities within the section and to also serve as a catalyst for promoting opportunities for engagement, knowledge exchange, and collaboration in pharmacology education. Our aim is to help foster a sense of community among pharmacology educators by reaching a diverse audience and encouraging active participation from pharmacology educators worldwide.

We welcome submissions in a variety of formats including features, spotlights, opinion pieces, and personal reflections. All content should be focused on pharmacology education.

We also welcome the sharing of any awards, achievements, job opportunities, recently published papers or educational resources, and upcoming events that may be of value to the wider community.

The IUPHAR-Ed newsletter is published quarterly on the 15th day in the following months – March, June, September, and December.

The deadline for contribution is the end of the month prior for each edition. For example, the deadline for the June newsletter is the 31st May, 2025.

The newsletter is disseminated directly via email to all our members and more broadly via IUPHAR- Ed's social media channels (X, LinkedIn, and Instagram).

If you have something you'd like to share, please send an email to Elly Djouma: e.djouma@latrobe.edu.au.

Educator Highlight Registration

We are excited to announce that we will be highlighting educators in our upcoming editions of the IUPHAR-Ed newsletter. If you are an educator and would like to be featured, please register your interest by filling out the form below. We look forward to showcasing the incredible educators in our community.

>>> [Educator highlight registration](#)

Please let us know what you think!

We value your feedback and would like to hear your thoughts on the IUPHAR-Ed newsletter. Your input will help us improve the content and make it more engaging and relevant to our readers. Please take a few minutes to complete this survey and share your opinions.

>>> [Please provide your feedback here!](#)



2025 THEME: SEX/GENDER DIFFERENCES IN CLINICAL PHARMACOLOGY

There are clear differences in how medicines are prescribed to men and women, boys and girls. These differences are partly due to sex differences in patterns of disease, but may also be related to environmental factors (lifestyle, nutrition) and socially determined gender differences in how disease is perceived, diagnosed and treated. Furthermore, there are also sex differences in pharmacokinetics and/or pharmacodynamics, genetics, hormonal influences and differences in the immune response for some medicines, which may require, for example, adjustments of treatment guidelines. In the area of drug safety, it is known that women are almost twice as likely as men to experience an adverse drug reaction.

SAVE THE DATE: IUPHAR INTERNATIONAL STUDENTS' POSTER COMPETITION, MAY 8th, 2025

All entries should illustrate and reflect the 2025 theme "Sex/gender differences in Clinical Pharmacology"

Two poster entries:

- General posters: open to all medical, pharmacy or pharmacology pre-graduate students.
- Research posters: open to all medical, pharmacy or pharmacology pre- and post-graduate students.

We welcome posters on all of these aspects of drug treatment, whether in children, adults or in the elderly!

- Winners of local society competitions due at IUPHAR by April 4th 2025
- Awardees invited to present at World Smart Medication Day Webinar May 8th 2025
- 4 prizes awarded by IUPHAR



LINKS TO RECENTLY PUBLISHED PAPERS

Babey, A. M., Koenig, J., Cunningham, M., Shield, A., Restini, C., Djouma, E., Mraiche, F., Mifsud, J., Kelly, J. P., Nicolazzo, J., Karpa, K. J., Volbrecht, K., Santiago, M. J., Hawes, M., Aljofan, M., Kelly-Laubscher, R., Karunaratne, N., Tucker, S. J., Hinton, T., Liang, W., ... White, P. J. (2025). [Evaluating student understanding of core pharmacokinetic concepts](#). European journal of pharmacology, 990, 177256.

Crowley, F. C., Restini, C., Burke, K., & Rieder, M. J. (2025). [Exploring the landscape of pharmacology education in health professions programs: From historical perspectives to current approaches to teaching](#). European journal of pharmacology, 177386. Advance online publication.

Donker, E. M., van Rosse, F., Janssen, B. J. A., Knol, W., Dumont, G., van Smeden, J., Atiqi, R., Hessel, M., Richir, M. C., van Agtmael, M. A., Kramers, C., Tichelaar, J., & Education committee of the Dutch Society for Clinical Pharmacology and Biopharmacy (2025). [The impact of summative, formative or programmatic assessment on the Dutch National Pharmacotherapy assessment: A retrospective multicentre study](#). European journal of pharmacology, 989, 177267.

Kelly-Laubscher, R., Koenig, J., Cunningham, M., Aljofan, M., Babey, A. M., Hawes, M., Hinton, T., Karpa, K., Karunaratne, N., Nicolazzo, J., Liang, W., Mraiche, F., Restini, C., Santiago, M., Volbrecht, K., Guilding, C., & White, P. J. (2025). [Evaluating student understanding of pharmacodynamics core concepts](#). European journal of pharmacology, 990, 177257.

Koenig, J. A., Olafuyi, O., & Patel, R. (2025). [Addressing Ethnicity in the Design and Evaluation of an Educational Intervention on Interindividual Variation in Pharmacokinetics](#). Pharmacology research & perspectives, 13(1), e70073.

Koenig, J., & Tucker, S. (2025). [What do We Mean by an Inclusive Pharmacology Education?](#). Pharmacology research & perspectives, 13(1), e70050.

Li, Y. K., Xiao, C. L., Ren, H., Li, W. R., Guo, Z., & Luo, J. Q. (2025). [Unraveling the effectiveness of new media teaching strategies in pharmacology education under different educational backgrounds: Insights from 6447 students](#). European journal of pharmacology, 989, 177255.

Netere, A. K., Hughes, T., Babey, A. M., Hawes, M., Mifsud, J., Kelly, J. P., Liang, W., Hernandez, M., Karpa, K., Al-Sallami, H., Fernandes, L. B., Aronsson, P., Restini, C., Caetano Crowley, F., Djouma, E., Hinton, T., Liu, J. J., Mraiche, F., & White, P. J. (2024). [Evaluating the quality of multiple-choice question pilot database: A global educator-created tool for concept-based pharmacology learning](#). Pharmacology research & perspectives, 12(5), e70004.

Szarek, J. L., Guilding, C., & Maxwell, S. (2025). [Transforming pharmacology education: Insights from the pharmacology education project in the era of digital learning](#). European journal of pharmacology, 989, 177258.

GLOBAL JOB ALERTS

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

[Lecturer in Toxicology](#), Department of Pharmacology & Therapeutics, University College Cork, Ireland. Closing date: 8th April 2025.

[Assistant Professor or Associate Professor in Pharmacology / Toxicology or Computational Pharmacology](#), The University of Luxembourg. Closing date: 20th Jan 2026.

UPCOMING PHARMACOLOGY MEETINGS



➤➤➤ [ASPET 2025 Annual Meeting April 3-6, 2025 Portland, Oregon, USA](#)



➤➤➤ [Pharmacology 2025 16-18 December 2025, Belfast, Northern Ireland, UK](#)



ABSTRACT SUBMISSION

ABSTRACT SUBMISSIONS ARE NOW OPEN.

Abstract submission deadline: Monday 15 September 2025

Notification of acceptance/decline: Monday 10 November 2025

➤➤➤ [20th World Congress of Basic and Clinical Pharmacology \(WCP\) 12-17 July 2026, Melbourne, Australia](#)

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-June 2025. 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 **June newsletter is 31st May, 2025**.