

Facilitating psychiatric drug development

As part of its Building Bridges Between industry and academia initiative, the BNA has been running a series of webinars with the Psychiatry Consortium, focusing on key issues in drug development for neuropsychiatric disease.

With one in four people likely to experience a mental health disorder during their lifetime, the burden of mental illness is huge. Unfortunately, despite some notable successes, relatively few drugs are available to treat neuropsychiatric conditions, and high failure rates have led several pharmaceutical companies to exit the field.

The BNA's Building Bridges Between initiative aims to strengthen connections between academia and industry. Under this umbrella, the BNA has teamed up with the Psychiatry Consortium to organise a webinar series focusing on different themes within neuropsychiatric drug development.

The first webinar, held on 9 November 2021 and chaired by BNA Trustee **Kevin Cox**, explored challenges and opportunities for collaborative partnerships. **Laura Ajram** (Psychiatry Consortium) described how the Psychiatry Consortium had been set up in 2019 to revitalise early drug discovery. Its key aims are to promote networking and relationship building across sectors and to support pilot studies on target identification and validation. Through a pre-competitive collaboration across industry partners, it has established a £4m fund to support work to accelerate neuropsychiatric drug discovery.

Ilan Rabiner (Invicro) described some of the challenges involved in bridging the two domains, such as differing funding models, timelines and approaches to intellectual property protection and publication. Invicro, a medical imaging service provider, has a foot in both camps and can help to link the two domains.

One example is the MIND-MAPS consortium, which brings together academic and industry groups and Invicro to develop imaging biomarkers for early clinical studies in a range of brain-based diseases. The rationale is that well-defined imaging tools are needed by



all stakeholders, and their collaborative development will accelerate research across the board.

Liz Tunbridge (Oxford) provided an academic perspective, providing details about the Psychiatry Consortium application process. She was awarded funding for a project focusing on KALRN, a possible target for schizophrenia drug development. The project is exploring expression of different KALRN isoforms in the human brain and the potential to target a specific KALRN domain. The application process involved pitching an idea to a panel of industry partners; if two or more are interested further discussions are held and the project is shaped jointly. The process is quick and requires no pilot data; however, it comes with no overheads, so is less attractive to universities.

The second webinar, on 23 November 2021, focused on understanding and prioritising patient unmet need. Chaired by **Subodh Dave** (Royal College Psychiatrists), it highlighted the importance of ensuring that people with lived experience of mental health conditions are true partners in the therapeutic development process. Psychiatric conditions are hugely complex and influenced by biological, psychological and social factors – the 'biopsychosocial' model. Although therapeutic development focuses on the 'bio', it is also important to understand how this interacts with the 'psycho' and the 'social' – which people with lived experience are uniquely able to provide.

Simon Rose is a lived experience educator who works with a team of 50 patients to help trainee medics gain

insight into the lived experience of mental health disorders. He provided a compelling testimony of his own mental health challenges, and how he conceptualised his own mental health difficulties – as a complex mix of difficult childhood experiences, their impact on his ways of thinking, and possible abnormalities in brain chemistry. His goal is to provide real-world context that will help those developing new therapeutics.

Trudi Seneviratne (Royal College of Psychiatrists) noted that some medicines were already available, although many had side effects that discourage adherence and can make patients reluctant to take part in clinical trials. She noted some promising developments, including in her own field of perinatal psychiatry, and reiterated the need to adopt a biopsychosocial model and to engage deeply with patients.

In the third webinar, held on 22 February 2022, attention to the academic perspective of the challenges of drug discovery. Chaired by **Sam Groom** (Bath) and **Farideh Javid** (Huddersfield), representing the British Pharmacological Society, the webinar heard first-hand experience from **John Davis** (Oxford) and **Robert Drake** (Bristol). With pharma looking to develop academic partnerships, and an increasing range of technical and financial support available, there are growing opportunities for researchers to take their work forward in a translational direction.

The fourth and fifth webinars in the series are taking place during March 2022 and focus on industry perspectives and working together. The webinars can all be viewed online via bit.ly/3HNRPjq.