

The year 2025 was marked by a major milestone: Kim Do Cuénod was named recipient of the **ECNP Lifetime Achievement Award**, presented by the European College of Neuropsychopharmacology (ECNP), Europe's leading organization in neuroscience and psychiatric research. This highly prestigious award recognizes her **outstanding contributions and lifelong dedication to European applied and translational neuroscience in Europe**. It represents a great honour and a significant tribute from the international scientific community.



The award was presented to Kim Do Cuénod by Prof. Martien Kas, President of the ECNP, during a ceremony held as part of the 30th ECNP Congress, which took place in Amsterdam from 11 to 14 October. On this occasion, she was presented with a commemorative statuette and a certificate.

In addition, Kim Do Cuénod received numerous congratulatory messages from colleagues around the world, expressing unanimous admiration and respect for her role as a mentor and leader in advancing neuroscience research, particularly through her studies on the causes and mechanisms of psychosis. These messages also highlighted the quality of her scientific work, her remarkable academic career, her outstanding achievements, and the inspiration she has provided through her dedication and commitment.

In his nomination letter to the award selection committee, Julio Licinio, Professor Emeritus at the State University of New York, mentioned, among other things:

"Her work has garnered international recognition [...] and her publications in top-tier journals have helped shape the direction of psychiatric research. [...]. Her research program exemplifies excellence in translational psychiatry, offering new hope for patients, while inspiring the next generation of researchers. Professor Do's contributions continue to advance our field through groundbreaking discoveries that bridge laboratory insights with clinical applications."

As a further mark of recognition, it is worth noting that Kim Do Cuénod was invited to deliver the **opening keynote lecture** at an international meeting on precision psychiatry, organized by the European College of Neuropsychopharmacology (ECNP) in January 2025. Entitled **ECNP Roadmap Meeting on Precision Psychiatry**, the meeting was held in Frankfurt and brought

together experts from around the world to discuss the challenges and opportunities involved in the development and validation of biomarkers for mental disorders.

In her presentation, Kim Do Cuénod addressed the specific challenges facing precision psychiatry compared with precision medicine. While precision medicine aims to deliver the right intervention to the right patient at the right time, psychiatry faces additional complexities due to its reliance on symptom-based diagnoses and significant clinical heterogeneity. These factors result in treatments that are effective for only a small proportion of patients, as well as variable treatment responses within diagnostic groups. To advance the field, she emphasized **the critical need for quantitative biological markers to enable accurate diagnosis and targeted treatment, together with highly accurate predictive tools for the early stages of disease.**

Link : <https://www.ecnp.eu/meetings/roadmap-meeting-on-precision-psychiatry/2025/>

Throughout 2025, Kim Do Cuénod undertook several other international trips to attend conferences and deliver presentations:

She chaired a symposium at the annual congress of the **Schizophrenia International Research Society (SIRS)**, held in Chicago. The symposium focused on clinical and molecular predictors of psychosis risk.

In June, she attended the World Congress of the **International College of Neuropsychopharmacology (CINP)** in Melbourne, Australia, held jointly with the meeting of the **Asian College of Neuropsychopharmacology (AsCNP)**. Kim Do Cuénod is a member of the CINP Council. She also serves on the College's Fellowship and Awards Committee as well as on its Publications Committee.



From Melbourne, she travelled to China, where she was invited to deliver two lectures: the first at **Peking University Health Science Center** and the second at the **Institute of Neuroscience of the Chinese Academy of Sciences in Shanghai**. The lectures focused on brain-derived biomarkers for early detection and intervention in

psychosis. They generated considerable interest and are expected to lead to collaborations with Chinese scientists to validate these biomarkers in large patient cohorts.

In September, she participated in a symposium during the **World Congress of Biological Psychiatry**, held in Vienna and organized by the World Federation of Societies of Biological Psychiatry (WFSBP).

NEWS FROM RESEARCH

MICRORNA BIOMARKERS TO PREDICT TRANSITION TO PSYCHOSIS IN INDIVIDUALS AT CLINICAL HIGH RISK

Kim Do Cuénod and her collaborators have achieved a potentially major breakthrough in mental healthcare: a simple **blood test that could predict which at-risk individuals are likely to develop psychosis**.

Currently, mental health professionals can identify individuals showing early warning signs of psychosis, but only 10–20% of these individuals actually develop the condition within two years. This makes it difficult to determine who truly needs early intervention.

In collaboration with Professor Philip McGuire of the University of Oxford (UK), the research team analyzed data concerning 344 individuals at risk of psychosis from the EU-GEI High Risk cohort, recruited at 11 sites across Europe, Australia and South America. Participants were followed for up to five years, during which 19% developed psychosis.

Kim Do Cuénod and her colleague, Dr Ines Khadimallah, focused their analyses on tiny molecules in participants' blood called microRNAs, which help regulate various biological processes in the brain. They discovered that measuring the levels of just four specific microRNAs in a blood sample could **predict with remarkable accuracy (97%) which individuals would subsequently develop psychosis**. These microRNAs are involved in key processes such as the regulation of oxidative stress, inflammation and the maintenance of the blood–brain barrier, all of which have previously been linked to the development of psychosis.

In collaboration with Professor Diana Perkins of the University of North Carolina (USA), these promising findings were subsequently tested in an independent group of participants from North America (the NAPLS3 cohort). The blood test once again demonstrated **excellent predictive performance, with an accuracy of 92%**. Such an **external validation** of the initial findings is particularly significant, given how difficult and uncommon it is to obtain comparable results in independent cohorts.

This discovery could transform monitoring and care for at-risk individuals in several important ways:

- Provide clearer information about who is most likely to develop psychosis;
- Enable **earlier and more targeted preventive treatments**;
- **Reduce unnecessary interventions** for individuals at lower risk;
- Identify **new therapeutic targets** based on the biological processes regulated by these microRNAs.

Unlike many advanced medical tests, this approach requires only a simple blood sample, making it highly practical for widespread use across a variety of healthcare settings.

This study provides first evidence that targeted measurements of circulating microRNAs could serve as **clinically implementable biomarkers** for predicting psychosis in high-risk populations. It represents a **significant step towards improved prevention and early intervention in psychosis**, while paving the way for **precision medicine in psychiatry**.

DEVELOPMENT OF FUNCTIONAL MAGNETIC RESONANCE SPECTROSCOPY TO INVESTIGATE NEUROMETABOLIC ALTERATIONS

This study, led by Dr Lijing Xin of the EPFL Centre for Biomedical Imaging, in collaboration with Kim Do Cuénod, has resulted in the development of an innovative method for observing, in real time, the chemical changes that occur in the brain while people perform mental tasks. This technological breakthrough could help clinicians to detect brain disorders earlier and gain a better understanding of their underlying mechanisms.

This three-dimensional, task-based approach to measuring brain chemistry represents a major advance for several reasons:

Early detection: Chemical changes in the brain often occur long before symptoms associated with memory impairment, mood disorders or conditions such as Alzheimer's disease become apparent. By observing these changes while the brain is actively engaged in tasks—when abnormalities may be most evident—clinicians could potentially identify and address problems months or even years earlier.

Improved understanding: In the study, thirty young adults performed cognitive tasks while their brain chemistry was measured in 3D. The researchers observed how key brain chemicals, including glutamate and lactate, changed throughout the brain during cognitive activity, rather than examining only isolated regions.

Insights into ageing: Older adults were also included in the study, following the same protocol as the younger participants. By comparing how brain chemistry differs between younger and older adults during identical cognitive tasks, researchers can gain a better understanding of why some people maintain sharp cognitive abilities as they age, while others experience cognitive decline.

This **pioneering brain imaging method** provides scientists and clinicians with an unprecedented tool, combining whole-brain 3D coverage with the ability to measure chemical changes during active cognitive tasks. It opens up **new avenues for understanding and treating conditions such as Alzheimer's disease, depression and other brain disorders**.

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