

European College of Neuropsychopharmacology (ECNP) 21 May 2024

Elias Eriksson's research contributions to the pharmacology of serotonin reuptake inhibitors recognised by the 2024 ECNP Neuropsychopharmacology Award

The European College of Neuropsychopharmacology (ECNP) is pleased to announce Elias Eriksson as the recipient of the 2024 ECNP Neuropsychopharmacology Award, in recognition of his achievements in advancing the science of serotonin reuptake inhibitors (SSRIs) for the treatment of panic disorder, premenstrual dysphoric disorder and depression. The ECNP Neuropsychopharmacology Award is presented annually and recognises distinguished research in applied and translational neuroscience.

Elias Eriksson is professor of pharmacology at the University of Gothenburg, Sweden, where he trained in Arvid Carlsson's department. He first came to prominence with his work on panic, taking on conventional wisdom to argue that the beneficial effects of tricyclics derived from their impact on serotonin reuptake and showing that the efficacy of tricyclics increased the stronger their effect on the serotonin synapse became. Supporting his senior colleague, psychiatrist Kjell Modigh, he contributed to get panic disorder added to clomipramine's label – the first approval of an antidepressant for panic – and clinically implemented, hence setting clomipramine on a path to became Europe's treatment of choice for panic disorder, until its replacement by SSRIs.

Eriksson's contributions to serotonin research have also extended into other disease areas. In a series of highly cited patient-level meta-analyses, he and his collaborators managed to rebut many of the recent claims questioning the usefulness of SSRIs for the treatment of depression. Demonstrating that almost all clinical trials – including those previously deemed negative – show the SSRI being tested to be superior to placebo in reducing the symptoms of depressed mood, he was able to argue that the alleged failure of many of these studies is due to the Hamilton Depression Rating Scale (HDRS) effect parameters being contaminated by SSRI side effects. Additional results generated by Eriksson and his team have also challenged the popular "placebo-breaking-the blind" theory that posits the apparent benefit of SSRIs in depression as secondary to their side effects, refuting the notion of the dose-response curve of SSRIs being flat and the claim that the antidepressant effect is of a clinically relevant magnitude only in very severe cases.

Eriksson's work on serotonin has also had important implications for premenstrual dysphoric disorder (PMDD), with Eriksson and his co-researchers not only being the first to report on the marked effect of serotonin reuptake inhibition on PMDD, but also the first to show that non-serotonergic antidepressants are not effective for the condition, hence refuting the idea that PMDD is to be regarded as a form of depression. By identifying the very short onset of action they enabled medication to be restricted to the symptomatic weeks of the menstrual cycle – so-called intermittent treatment – thereby setting the standard for international clinical practice. Ten researcher-initiated clinical trials went on to demonstrate the efficacy of SSRIs

with respect to certain key PMDD symptoms, such as irritability, while an animal model of PMDD sensitive to the impact of SSRIs allowed Eriksson to hypothesise a major physiological role for serotonin in dampening sex steroid-driven behaviour. Intermittent, luteal administration of a serotonin reuptake inhibitor, first suggested by Eriksson, is now regarded as first line of treatment for PMDD worldwide.

In announcing the award, ECNP Award Committee chair Eduard Vieta, Spain, said, "Elias Eriksson's pioneering work on the use of serotonin reuptake inhibitors for the treatment of panic disorder, premenstrual dysphoric disorder and depression has made major contributions to clinical psychiatry. In helping to build the science around SSRIs, his work has not only led to better treatment options for patients but has advanced the wider understanding of the role of antidepressants in mental health care. We congratulate him on this award!"

Elias Eriksson will receive the award during the 37th ECNP Congress on 21-24 September 2024 in Milan, Italy, where he will deliver the ECNP Neuropsychopharmacology Award plenary lecture on Sunday 22 September, 16.40-17.25.

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The ECNP Neuropsychopharmacology Award recognises innovative and distinguished research achievements in applied and translational neuroscience. The award is granted each year, alternating between basic science and clinical research. The award carries a prize of €10,000, which accompanies the winner's review article in *European Neuropsychopharmacology*.

ECNP is an independent scientific association whose mission is to advance the science of the brain, promote better treatment and enhance brain health. The annual ECNP Congress attracts some 6,000 scientists and clinicians from across the world to discuss the latest advances in brain research in Europe's largest meeting on brain science. More information about ECNP, its aims and activities, can be found at www.ecnp.eu.

More information on the ECNP Neuropsychopharmacology Award can be found at: www.ecnp.eu/ena-award.

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