

PRESS RELEASE

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Asarina Pharma granted US patent for Sepranolone for Tourette syndrome, OCD and pathological gambling

(Stockholm, 8 June 2021.) The US Patent and Trademark Office has granted a patent for Sepranolone for the treatment of Tourette, Obsessive-Compulsive Disorder (OCD) and pathological gambling. CEO Peter Nordkild: "The powerful neurosteroid Allopregnanolone (ALLO) seems to be the missing link in a raft of stress-related disorders, from Tourette to OCD, characterized by tics and compulsions. Sepranolone is essentially patented isoallopregnanolone, the endogenous compound that inhibits ALLO. This patent confirms Sepranolone's enormous clinical potential."

The new patent is valid until 2038. Tourette and OCD are common co-morbidities, both with strong compulsion mechanisms. In March 2021 Asarina Pharma shared new preclinical data from Professor Marco Bortolato, a Scientific Advisory Board member. This confirmed that Sepranolone's effect on both Tourette and OCD symptoms were on a par with approved treatments in compulsivity animal models. The new data confirmed 2019 data from a previous D1CT-7 transgenic mouse model, and presented improved Pre-pulse inhibition (PPI) data in a rat model of TS/OCD. (Significantly reduced PPI is a feature in TS and OCD and a commonly used metric in preclinical psychiatric tests).

OCD is a highly prevalent, strongly disruptive condition that affects 1.5% of women and 1.0% of men worldwide. People with OCD have recurring, unwanted thoughts, urges or mental images (obsessions) causing extreme anxiety. These obsessions compel them to do something repetitively to reduce the anxiety (compulsions). Today's most common OCD treatments are CBT (cognitive behavioral therapy) and SSRIs. Whilst SSRIs, are sometimes able to reduce OCD anxiety they fail to treat the compulsive mechanism in OCD and have an overall efficacy of < 50%. Asarina Pharma believes that Sepranolone could become the first in line pharmaceutical treatment in Tourette patients for whom CBT has failed, and could also play a key role as a combination treatment with SSRI in OCD.

Sepranolone has been developed to treat the millions worldwide who suffer from neuropsychiatric disorders triggered by the potent neurosteroid Allopregnanolone (ALLO). A wide range of preclinical and clinical data have demonstrated that ALLO is a key trigger in conditions from Tourette and OCD to Menstrual Migraine and PMDD, causing a number of disruptive, often personality- or behavioraltering symptoms. A common characteristic of ALLO-related conditions is their lack of a safe, effective, disease-specific pharma therapy. Sepranolone, Asarina Pharma's patented version of isoallopregnanolone, inhibits and modulates the negative effects of ALLO.

Asarina Pharma is currently running a Phase IIa clinical study in Menstrual Migraine (MM) in Sweden and Finland with results to be released in the second half of June 2021. In May the company received

approval from the Danish Medical Authorities and initiated a Phase IIa study in Tourette syndrome in Denmark with approximately 30 patients between 12 and 45 yrs old.

Asarina Pharma CEO Peter Nordkild: "This new patent is an important step forward for recognition of the massive impact of ALLO. The WHO lists anxiety disorders, including OCD, as the sixth largest contributor to non-fatal health loss globally. It recognizes migraine, including MM, as the leading cause of life lived with a disability for women in their reproductive years. 30 years ago, few people had heard of Serotonin. Now we know it is implicated not just in depression but mood, anxiety, sleep disorders and more. 20 years ago nobody knew about ALLO's potent effect on GABAA receptor mediated actions in the brain. Today, that has changed. We're proud to be leaders in this field and this patent is an important step forward."

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About Asarina Pharma

We are a Swedish biotech company developing Sepranolone for allopregnanolone-related stress, menstrual and neurological disorders. Our product pipeline is built on over 40 years of research into allopregnanolone-related neurological disorders. With our new family of GAMSA compounds (GABA $_{\rm A}$ Modulating Steroid Antagonists) we aim to deliver a new generation of efficacious and safe drugs for still widely untreated neuroendocrinological conditions.