

Personal information

Name: Thibaut Sesia

Degree: B.Sc. (2003), M.Sc. (2005), PHD (2009)

Nationality: France

Contact email: tjs65@pitt.edu

Education

Undergraduate student at Université Louis Pasteur (Strasbourg, France)

Graduate student at University of Maastricht (Maastricht, The Netherlands)

Research Information

Topic: Underlying mechanisms of the efficiency of deep brain stimulation of the ventral striatum in the context of obsessive compulsive disorder.

Research interest:

Deep brain stimulation (DBS) has been recently approved by the US Food and Drug Administration as a treatment for otherwise intractable patient diagnosed with obsessive compulsive disorder (OCD). One of the target used in clinic is the ventral striatum, encompassing at least but not only, the nucleus accumbens (NAc). The NAc has also been reported to be a efficient target for other psychiatric syndromes, such as depression. The possible mechanism of action this successful therapy has been hinted but fully understood. Our research aim clarify the network effect of NAc DBS using electrophysiology, pharmacology and behavior (combined or separately).

Key Words: basal ganglia, clomipramine, nucleus accumbens, deep brain stimulation, reaction time task paradigms, extracellular recording.

Publications

1: Lim LW, Blokland A, Tan S, Vlamings R, **Sesia T**, Aziz-Mohammadi M, Visser-Vandewalle V, Steinbusch HW, Schruers K, Temel Y. Attenuation of fear-like response by escitalopram treatment after electrical stimulation of the midbrain dorsolateral periaqueductal gray. *Exp Neurol*. 2010 Dec;226(2):293-300. Epub 2010 Sep 15. PubMed PMID: 20837005.

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3: Tan SKh, Vlamings R, Lim L, **Sesia T**, Janssen ML, Steinbusch HW, Visser-Vandewalle V, Temel Y. Experimental deep brain stimulation in animal models. *Neurosurgery*. 2010 Oct;67(4):1073-9; discussion1080. PubMed PMID: 20881571.

4: **Sesia T**, Basar K, Groenewegen H, Steinbusch HW, Visser-Vandewalle V, Temel Y. Nucleus accumbens and impulsivity. *Prog Neurobiol*. 2010 Sep 8. [Epub ahead of print] PubMed PMID: 20831892.

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6: Temel Y, Tan S, Vlamings R, **Sesia T**, Lim LW, Lardeux S, Visser-Vandewalle V, Baunez C. Cognitive and limbic effects of deep brain stimulation in preclinical studies. *Front Biosci*. 2009 Jan 1;14:1891-901. Review. PubMed PMID: 19273171.

7: Lim LW, Blokland A, Visser-Vandewalle V, Vlamings R, **Sesia T**, Steinbusch H, Schruers K, Griez E, Temel Y. High-frequency stimulation of the dorsolateral periaqueductal gray and ventromedial hypothalamus fails to inhibit panic-like behaviour. *Behav Brain Res*. 2008 Nov 21;193(2):197-203. Epub 2008 Jun 4. PubMed PMID: 18582503.

8: **Sesia T**, Temel Y, Lim LW, Blokland A, Steinbusch HW, Visser-Vandewalle V. Deep brain stimulation of the nucleus accumbens core and shell: opposite effects on impulsive action. *Exp Neurol*. 2008 Nov;214(1):135-9. Epub 2008 Jul 29. PubMed PMID: 18762185.

9: Lim LW, Temel Y, **Sesia T**, Vlamings R, Visser-Vandewalle V, Steinbusch HW, Blokland A. Buspirone induced acute and chronic changes of neural activation in the periaqueductal gray of rats. *Neuroscience*. 2008 Jul 31;155(1):164-73. Epub 2008 Jun 5. PubMed PMID: 18588948.

Chapter in peer reviewed international books

Sesia T, Tan S, Vlamings S, Lim LW, Visser-Vandewalle, Temel Y. Basal Ganglia and Behaviour: Behavioural effects of deep brain stimulation in experimental neuropsychiatry. In *Basal Ganglia XI*. Groenewegen HJ (ed.). Springer (in press).