

PERSONAL INFORMATION

Sophie Leclercq



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Date of birth 26/02/1988 | Nationality Belgian

EDUCATION AND TRAINING

2016/03 – Now

FNRS Post-doctoral Researcher

Université catholique de Louvain, Brussels, Belgium

Institute of Neuroscience, Clinical Neurosciences
 Louvain Drug Research Institute, Metabolism and Nutrition Group
 Laboratory for Experimental Psychopathology

2015/01 – 2016/03

Post-doctoral fellow

McMaster University, Hamilton, Ontario, Canada
 Faculty of Health Sciences, Department of Pathology and Molecular Medicine
 St. Joseph's Healthcare Hamilton, Brain-body Institute

- Supervisor: Prof. John Bienenstock
- Project: Early-life antibiotic exposure induces long-term effect on gut microbiota, brain and behavior.

2010-2014

PhD in biomedical and pharmaceutical sciences

Université Catholique de Louvain, Brussels, Belgium

Institute of Neuroscience, Neuropsychiatry Group
 Louvain Drug Research Institute, Metabolism and Nutrition Group

- Supervisors: Prof Philippe de Timary and Prof Nathalie Delzenne
- Thesis: New targets in the management of alcohol dependence: which role for gut microbiota, gut barrier and immunity ?

2012

Nutribrain summer school

Université de Bordeaux2, France. (2 weeks)

- Supervisors: Prof Sophie Layé and Dr Nathalie Castanon
- Project : Role of corticosterone in the behavioral alterations associated with metabolic syndrome

2008-2010

Master's degree in biomedical sciences

Suma Cum Laude

Specialisation in human nutrition
 Université Catholique de Louvain, Brussels, Belgium

2005 - 2008

Bachelor's degree in biomedical sciences

Magna Cum Laude

Université de Mons, Mons, Belgium

PERSONAL SKILLS

Research interests Alcohol-dependence; gut-brain axis; gut microbiota; intestinal permeability; metabolomics; inflammatory pathways, lipopolysaccharides, peptidoglycans, nutrition, antibiotics, metabolism, stress, depression, anxiety, alcohol craving, cognitive deficits, social behaviour.

Laboratory skills qPCR and Western blotting
ELISA, Multiplex ImmunoAssay, TransAM
RNA and DNA extraction
Detection of endotoxins by Endosafe®-Multi-Cartridge System
Isolation of peripheral blood mononuclear cells
Cell culture
Metabolomic analyses (Gas Chromatography/Mass Spectrometry)
Analysis of 454 pyrosequencing data
FACS analysis

Psychological scales and tests (clinical populations) Beck Depression Inventory (BDI-II)
State-Trait Anxiety Inventory (STAI)
Obsessive Compulsive Drinking Scale (OCDS)
Self-consciousness (ERCS-22)
Trait Emotional Intelligence Questionnaire (TEIQue-75)
Description in Five Dimensions (D5D)
Batterie d'attention de William Lenox (BAWL)
Working memory (Brown Peterson task and Digit Span)
Executive functions (Trail making test, Stroop, Iowa gambling task)

Behavioural tests (mice) Open field
Light/Dark box
Elevated-plus maze
Social behaviour
Preference for social novelty
Social Avoidance
Chronic social defeat and sub-threshold social defeat

Statistical skills Univariate and multivariate analyses
Statistical programs: SPSS, JMP, NCSS, RCommander
Graphs editors: GraphPad Prism, YeD

Mother tongue French

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Dutch	A2	A2	A2	A2	A2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Hobbies ▪ Tennis player (Belgian ranking: 86th)
▪ Tennis teacher
▪ Marathon runner

Other skills ▪ Driving licence B
▪ First-aid certificate

ADDITIONAL INFORMATION

Publications

S. Leclercq, P. Forsythe and J. Bienenstock (2016). Post-traumatic brain disorder: does the gut microbiota hold the key?. **The Canadian Journal of Psychiatry**. *In press*.

P. de Timary, **S. Leclercq**, P. Stärkel and N. M. Delzenne (2015). A Dysbiotic Subpopulation of Alcohol-Dependent Subjects. **Gut microbes**. 6:6, 388-391.

S. Leclercq, S. Matamoros, P. D Cani, A. Neyrinck, F. Jamar, P. Stärkel, K. Windey, V. Tremaroli, F. Bäckhed, K. Verbeke, P. de Timary and N. M Delzenne (2014). Intestinal permeability, gut bacterial dysbiosis and behavioral markers of alcohol dependence severity. **Proceedings of the National Academy of Sciences (PNAS)**. Oct 21;111(42):E4485-93

S. Leclercq, C. Desaegeer, N. Delzenne, P. de Timary, P. Stärkel (2014). Role of inflammatory pathways, blood mononuclear cells, and gut-derived bacterial products in alcohol dependence. **Biological Psychiatry**. Nov 1;76(9):725-33

S. Leclercq, P.D. Cani, A.M. Neyrinck P. Stärkel, F. Jamar, M. Mikolajczak, N.M. Delzenne and P.de Timary (2012). Role of intestinal permeability and inflammation in the biological and behavioral control of alcohol-dependent subjects. **Brain, Behavior and Immunity**, 26.911–918

P. de Timary, P. D. Cani, J. Duchemin, A. M. Neyrinck, D. Gihousse, PF. Laterre, A. Badaoui, **S. Leclercq**, N. M. Delzenne, P. Starkel (2012). The loss of metabolic control on alcohol drinking in heavy drinking alcohol-dependent subjects. **PLoS ONE** 7(7), e38682

Awards

Bourse du Patrimoine. Université catholique de Louvain (2014)

Prize Hugo d'Haenen, Belgian College Of Neuropsychopharmacology and Biological Psychiatry, Leuven, Belgium (2011)

Best oral presentation, Prize Institute of Neurosciences PhD Student day, Université Catholique de Louvain, Brussels, Belgium (2011)

Communications and posters

Communications

S. Leclercq, S. Matamoros, P. D Cani, F.Jamar, P. Stärkel, K. Windey, V. Tremaroli, F. Backhed, K. Verbeke, P. de Timary ,N.M Delzenne. Increased Intestinal Permeability is Related to Gut Bacterial Dysbiosis and Behavioral Markers of Addiction Severity in Alcohol-dependent Subjects. **15th Congress of European Society for Biomedical Research on Alcoholism (ESBRA). 2015**, Valencia, Spain.

S. Leclercq, S. Matamoros, P. D Cani, F.Jamar, P. Stärkel, K. Windey, V. Tremaroli, F. Backhed, K. Verbeke, P. de Timary ,N.M Delzenne. Increased Intestinal Permeability is Related to Gut Bacterial Dysbiosis and Behavioral Markers of Addiction Severity in Alcohol-dependent Subjects. **International Twined Congress, Psychiatry beyond DSM-5, 2014**, Iseo, Italy.

S. Leclercq, S. Matamoros, P. D Cani, F.Jamar, P. Stärkel, K. Windey, V. Tremaroli, F. Backhed, K. Verbeke, P. de Timary ,N.M Delzenne. Increased Intestinal Permeability is Related to Gut Bacterial Dysbiosis and Behavioral Markers of Addiction Severity in Alcohol-dependent Subjects. **16th International Society for Addiction Medicine Meeting (ISAM), 2014**, Yokohama, Japan.

S. Leclercq, N. Delzenne, P. Cani, S. Matamoros, P. Stärkel, F. Bäckhed, V. Tremaroli, K. P. de Timary. Role of gut microbiota in the behavioral control of alcohol-dependent subjects. **14th Congress of European Society for Biomedical Research on Alcoholism (ESBRA). 2013**, Warsaw, Poland

S. Leclercq, C. Desaegeer, N. Delzenne, P. de Timary, P. Stärkel. Stimulation of specific pathways for systemic inflammation in alcohol dependent subjects and relation with psychological symptoms. **International Society of Addictive Medicine (ISAM), 2012**, Geneva, Switzerland.

S. Leclercq, P.D. Cani, A.M. Neyrinck P. Stärkel, F. Jamar, P. de Timary and N.M. Delzenne. Role of intestinal permeability and inflammation on the biological and behavioral control of alcohol-dependent subjects. **13th Congress of European Society for Biomedical Research on Alcoholism (ESBRA), 2011**, Vienna, Austria.

S. Leclercq, P.D. Cani, A.M. Neyrinck P. Stärkel, F. Jamar, P. de Timary and N.M. Delzenne. Role of intestinal permeability and inflammation on the biological and behavioral control of alcohol-dependent subjects. **Belgian College of Neuropsychopharmacology and biological psychiatry, 2011**, Leuven, Belgium

Posters

S. Leclercq, S. Matamoros, P. D Cani, F.Jamar, P. Stärkel, K. Windey, V. Tremaroli, F. Backhed, K. Verbeke, P. de Timary ,N.M Delzenne. A Possible Role of gut microbiota in the behavioral control of alcohol-dependent subjects. **International Society for Biomedical Research on Alcoholism and Research Society of Alcoholism (ISBRA/RSA), 2014**, Bellevue, WA, USA.

S. Leclercq, P. de Timary, A. Neyrinck, P. Cani, N. Delzenne. Role of gut microbiota in the biological and behavioral control of alcohol-dependence. **Joint conference in sustainable diet and food security, 2013**, Lille, France.

S. Leclercq, C. Desaegeer, N. Delzenne, P. de Timary, P. Stärkel. Etude des voies inflammatoires dans les cellules sanguines mononucléés et relation avec les symptômes psychologiques et cognitifs développés par les sujets alcoolo-dépendants. **Journée de printemps de la Société de Neurophysiologie de Langue Française (SNLF), 2013**, Caen, France.

S. Leclercq, P.D. Cani, A.M. Neyrinck P. Stärkel, F. Jamar, P. de Timary and N.M. Delzenne. Role of intestinal permeability and inflammation in the biological and behavioral control of alcohol-dependent subjects. **Belgian Nutrition Society, 2011**, Brussels, Belgium.