Clara FONTENEAU

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EDUCATION

Université Claude Bernard Lyon 1, France			
2015-2018 2012-2014 2010-2012	PhD, Neurosciences – Lyon Neuroscience Research Center MSc, Neurosciences Bachelor, Biology and Physiology	ard Lyon 1, France	
ACADEMIC POSITIONS			
2019 - present	Anticevic Lab, Division of Neurocognition, Neurocomputation & Neurogenetics (N3) Yale University School of Medecine, Department of Psychiatry Post Doctoral Associate Supervisors: Dr A. Anticevic	New Haven, USA	
2018 - 2019	PSYR2 Team, Centre de Recherche en Neurosciences de Lyon (CRNL) CRNL / INSERM / CNRS / UCBL1 / CH Le Vinatier Post Doctoral Associate	Lyon, France	
2014-2018	PSYR2 Team, Centre de Recherche en Neurosciences de Lyon (CRNL) CRNL / INSERM / CNRS / UCBL1 / CH Le Vinatier	Lyon, France	
	PhD in Neuroscience Impact of a single frontal transcranial direct current stimulation on the dopaminergi subjects Supervisor: Dr M.F. Suaud-Chagny Grant: Hospital/Research engineer – CH Le Vinatier Missions	c network in healthy	
	 Transcranial stimulation in healthy humans (tDCS, rTMS) Impact of bifrontal tDCS on the dopaminergic transmission using F Neurophysiological impact of fronto-temporal tDCS using a mu approach (PET dopamine, fMRI, ASL, DTI) 	ltimodal PET-MRI	
	 Pathophysiology and transcranial stimulation in patients with schizophrer IRMf data analysis (Impact of transcranial stimulation on structural (I connectivity (MRS, rs-fMRI) in patients with schizophrenia with and without 	OTI) and functional	
2014 (5 months)	DYCOG Team, Centre de Recherche en Neurosciences de Lyon (CRNL) CRNL/INSERM/CNRS/UCBL1 MSc Neurosciences Mecanisms of attentional preparation in the auditory cortex Supervisors: Dr A. Bidet-Caulet & Dr O. Bertrand	Lyon, France	
	<u>Missions</u> : Electrophysiological recordings (intracranial EEG , evoked potential and ti	me-frequency)	
2013 (6 weeks)	Helen Wills Neurosciences Institute, UC Berkeley Bachelor, Biology and Physiology, Neurosciences Neurophysiological mechanisms of auditory attention in humans Supervisors: Pr R. Knight & Dr A. Bidet-Caulet Missions: Electrophysiological recordings (scalp EEG) in patients with frontal lesions	Berkeley, USA and healthy controls	
2012 (5 weeks)	DYCOG Team, Centre de Recherche en Neurosciences de Lyon (CRNL) CRNL/INSERM/CNRS/UCBL1 Research Assistant Attentional preparation and distractibility: a scalp EEG study Supervisors: Dr A. Bidet-Caulet & Dr O. Bertrand	Lyon, France	
2011 (2 months)	Institut des sciences cognitives (ISC), UMR 5229 Research Assistant Decision making and Reward – An fMRI study <u>Supervisors</u> : Dr J.C. Dreher	Lyon, France	
(1 month)	IMPACT Team, Centre de Recherche en Neurosciences de Lyon (CRNL) CRNL/INSERM/CNRS/UCBL1 Research Assistant Visual extention and Haminagliagnes	Lyon, France	

Visuo-spatial representation – Visual attention and Heminegligence Supervisors: Dr L. Pisella

HONORS AND AWARDS

- Poster presentation 1-place Non Invasive Brain stimulation techniques (NIBS) for psychiatric disorders, Germany Young Investigator Travel Award, 2- International Brain Stimulation conference, Barcelona, Spain
- 2015 **Poster presentation 2-place**, Non-Invasive brain stimulation techniques (NIBS) for psychiatric disorders, Belgium

RESEARCH FUNDING

- 2015 Fondation Neurodis, Dr Suaud-Chagny (PI), 30/06/2015 2018: €48,000 COMBISTIM. Role: Co-I
- 2014 CSR, Dr Brunelin (PI), 18/02/2015 11/07/2016: €38,505 *DOPASTIM*. Role: Co-I

PUBLICATIONS

Peer-Reviewed Research Articles

- 1. <u>Fonteneau Clara</u>, Mondino Marine, Arns Martijn, Baeken Chris, Bikson Marom, Brunoni Andre R, Burke Matthew J, Neuvonen Tuomas, Padberg Frank, Pascual-Leone Alvaro, Poulet Emmanuel, Ruffini Giulio, Santarnecchi Emiliano, Sauvaget Anne, Schellhorn Klaus, Suaud-Chagny Marie-Francoise, Palm Ulrich, Brunelin Jérome (2019) Sham tDCS: a hidden source of variability? Reflections for further blinded, controlled trials; *Brain Stimulation*, https://doi.org/10.1016/j.brs.2018.12.977
- 2. <u>Fonteneau Clara</u>, Redouté Jérome, Haesebaert Frédéric, Le Bars Didier, Costes Nicolas, Suaud-Chagny Marie-Françoise, Brunelin Jérome (2018) Frontal transcranial direct current stimulation induces dopamine release in the ventral striatum in human, *Cerebral Cortex*, Volume 28, Issue 7, 1 July 2018, Pages 2636–2646, https://doi.org/10.1093/cercor/bhy093
- 3. Psomiades Marion, Mondino Marine, <u>Fonteneau Clara</u>, Bation Rémy, Haesebaert Fréderic, Suaud-Chagny Marie-Françoise, Brunelin Jérome (2018) N-Acetyl-Aspartate in the dorsolateral prefrontal cortex in men with schizophrenia and auditory verbal hallucinations: A 1.5T Magnetic Resonance Spectroscopy Study; *Scientific Report* (2018) [accepted; SREP-17- 27645B]
- 4. Psomiades Marion, <u>Fonteneau Clara</u>, Mondino Marine, Luck David, Haesebaert Frederic, Suaud-Chagny Marie-Françoise, Brunelin Jérome (2016) Integrity of the arcuate fasciculus in patients with schizophrenia with and without auditory verbal hallucinations: A DTI-tractography study; *NeuroImage: Clinical* 12 (2016) 970–975 http://dx.doi.org/10.1016/j.nicl.2016.04.013
- 5. Bidet-Caulet A, Bottemanne L, <u>Fonteneau C</u>, Giard M-H, Bertrand O (2014) Brain Dynamics of Distractibility: Interaction Between Top-Down and Bottom-Up Mechanisms of Auditory Attention. *Brain Topography*

Reviews, Chapters & Commentaries

- 1. Psomiades Marion*, Fonteneau Clara*, Suaud-Chagny Marie-Françoise, Haesebaert Frédéric, Brunelin Jérôme (2015) Neurostimulation du cortex préfrontal dorsolatéral : quels effets sur la symptomatologie et les émotions dans la dépression et la schizophrénie ?; Santé mentale au Québec; *co-author
- 2. Mondino Marine, Fonteneau Clara, Brunelin Jérôme (2015) Schizophrenia. Book Chapter in Transcranial Direct Current Stimulation in Neuropsychiatric Disorders: Clinical Principles and Management by Brunoni AR, Nitsche MA, Loo CK. Springer NY, USA

Manuscripts under review or in preparation

1. <u>Fonteneau Clara</u>, Merida Ines, Redouté Jérome, Haesebaert Frédéric, Le Bars Didier, Costes Nicolas, Brunelin Jérome, Suaud-Chagny Marie-Françoise; Neurophysiological impact of a fronto-temporal transcranial direct current stimulation (tDCS) in healthy humans: a simultaneous PET-MR approach (*in preparation*)

Conference Presentations

- 1. <u>Fonteneau Clara</u>, Neurophysiological impact of a fronto-temporal transcranial direct current stimulation (tDCS) in healthy humans: a simultaneous PET-MR approach; Talk in the symposium: Transcranial direct current stimulation for auditory hallucinations: evidence from clinical and neurophysiological studies, given at 3rd European Conference on Brain Stimulation in Psychiatry; Lyon, France, October 2018
- 2. Fonteneau Člara, Mondino Marine, Arns Martijn, Baeken Chris, Bikson Marom, Brunoni Andre R, Burke Matthew J, Neuvonen Tuomas, Padberg Frank, Pascual-Leone Alvaro, Poulet Emmanuel, Ruffini Giulio, Santarnecchi Emiliano, Sauvaget Anne, Schellhorn Klaus, Suaud-Chagny Marie-Francoise, Palm Ulrich, Brunelin Jérome; Sham tDCS: a hidden source of variability? Reflections for further blinded, controlled trials; Poster presented at 3rd European Conference on Brain Stimulation in Psychiatry; Lyon, France, October 2018
- 3. Intartaglia Bastien, ElShafei Hesham, <u>Fonteneau Clara</u>, Catenoix Hélène, Bonnefond Mathilde, Bertrand Olivier, Bidet-Caulet Aurélie; Brain oscillatory dynamics in the bottom-up/top-down balance of auditory attention: intracranial recordings; Poster presented at 2nd Salzburg Mind Brain Annual Meeting, SAMBA 2018.
- 4. Fonteneau Clara, Merida Inès, Redouté Jérome, Haesebaert Frédéric, Costes Nicolas, Brunelin Jérome, Suaud-Chagny Marie-Françoise; Neurophysiological impact of a fronto-temporal transcranial direct current stimulation in healthy subjects: a multimodal PET-MR imaging approach; Poster presented at *Non Invasive Brain stimulation techniques (NIBS) for psychiatric disorders*; Munich, Germany; October 2017 *1st poster prize
- 5. Merida Inés, <u>Fonteneau Clara</u>, Reilhac Anthonin, Redouté Jérôme, Irace Zacharie, Suaud-Chagny Marie-Françoise, Hammers Alexander, Costes Nicolas; Motion correction and multi-atlas attenuation correction applied to a simultaneous bolus/infusion PET-MR brain study; Talk given (by I. Merida) at 6th PET-MRI and SPECT-MRI (PSMR) Conference; Lisbon, Portugal, May 2017
- 6. Merida Inés, Hammers Alexander, Redouté Jérôme, McGinnity Colm, Fonteneau Clara, Suaud-Chagny Marie-Françoise, Reilhac Anthonin, Costes Nicolas; Attenuation correction with a multi-atlas method for brain PET-MR imaging: assessment with realistic simulated [11C]raclopride bolus-infusion PET data; Poster presented at 28th International Symposium on Cerebral Blood Flow, Metabolism and Function & 13th International Conference on Quantification of Brain Function with PET; Berlin, Germany, April 2017
- 7. Fonteneau Clara, Haesebaert Frédéric, Redouté Jérome, Le Bars Didier, Costes Nicolas, Brunelin Jérome, Suaud-Chagny Marie-Françoise; Online transcranial direct current stimulation of the frontal cortex induces dopamine release in the striatum a

- spatial and temporal analysis in healthy humans; Poster presented at 2" International Brain Stimulation conference, Barcelona, Spain; March 2017
- 8. Reilhac Anthonin, Berrada Rania, Irace Zacharie, Merida Inés, <u>Fonteneau Clara</u>, Suaud-Chagny Marie-Françoise, Costes Nicolas; Développements d'une méthode de correction de mouvement en IRM-TEP cérébrale; Poster presented at *Recherche en Imagerie et Technologie pour la santé (RITS)*, Lyon, France, Mars 2017
- 9. <u>Fonteneau Clara</u>, Haesebaert Frédéric, Villien Marjorie, Redouté Jérome, Le Bars Didier, Costes Nicolas, Brunelin Jérome, Suaud-Chagny Marie-Françoise; Neurophysiological impact of a fronto-temporal transcranial direct current stimulation in healthy subjects: a multimodal PET-MR imaging approach; Poster presented at *11th International Symposium on Functional NeuroReceptor Mapping of the Living Brain*, Boston, USA; July 2016
- 10. Fonteneau Clara, Haesebaert Frédéric, Redouté Jérome, Le Bars Didier, Costes Nicolas, Brunelin Jérome, Suaud-Chagny Marie-Françoise; Acute and subsequent effects of transcranial direct current stimulation on the dopaminergic transmission in healthy humans; Poster presented at 11th International Symposium on Functional NeuroReceptor Mapping of the Living Brain, Boston, USA; July 2016
- 11. **Fonteneau Clara**, Redouté Jérome, Le Bars Didier, Costes Nicolas, Brunelin Jérome, Suaud-Chagny Marie-Françoise; Impact of transcranial direct current stimulation on the dopaminergic transmission in healthy humans; Poster presented at *Non Invasive Brain stimulation techniques (NIBS) for psychiatric disorders* Ghent, Belgium; December 2015 *2nd poster prize
- 12. Psomiades Marion*, Fonteneau Clara*, Haesebaert Frédéric, Suaud-Chagny Marie-Françoise, Brunelin Jérôme. Does prefrontal non invasive brain stimulation alleviating symptoms in depression and schizophrenia impact emotion processing?; Poster presented at *Non Invasive Brain stimulation techniques (NIBS) for psychiatric disorders* Ghent, Belgium; December 2015; *co-author

NOTABLE INVITED TALKS

Neurophysiological impact of a fronto-temporal transcranial direct current stimulation (tDCS) in healthy subjects: a PET-MR multimodal imaging approach

NeuroImaging Journal Club, CRNL, Lyon Journée Scientifique LILI – IRM-TEP, Lyon

Online transcranial direct current stimulation of the prefrontal cortex induces dopamine release in the ventral striatum in humans

Annual Scientific Meeting, Doctoral School of Neuroscience and Cognition, Lyon

L'exploration des méthodes de modélisation TEP dans le cas de déplacement par un neurotransmetteur endogène (approche lp-ntPET)

Journal Club CERMEP, Lyon

2016 Effets de la stimulation transcrânienne en courant continu sur la transmission dopaminergique chez le sujet sain

Partenariat Université Lyon 2 et Conseil scientifique de la recherche CH Le Vinatier, Lyon

Neurophysiological impact of transcranial direct current stimulation (tDCS) in healthy subjects

Berenson-Allen Center for NonInvasive Brain Stimulation, Boston

Neurophysiological impact of a fronto-temporal transcranial direct current stimulation (tDCS) in healthy subjects: a multimodal imaging approach

Conseil scientifique de la fondation Neurodis, Lyon

TEACHING AND SUPERVISION

2018-2019	Co-supervisor of Louis Simon, MSc Clinical Neuroscience
2017-2018	Co-supervisor of Charline Magnin, MSc Clinical Neuroscience
2017	Lecturer – tDCS & Neuroimaging (STEP – Stimulation transcrânienne en Psychiatry, de la théorie à la pratique, Module 4 – Technique de neuromodulation – Effets cognitifs, biologiques et comportementaux) – Centre Hospitalier Le Vinatier
2016-2017	Teaching Assistant – Neurophysiology (Developmental histology) – Université Lyon 1 Co-supervisor of Julie Renaud, MSc
2015	Co-supervisor of Jeanne Monnier, MSc
2010-2013	Tutor in English at the Language center – Université Lyon 1

PROFESSIONAL SERVICE

Lab services

Memberships Society for Neuroscience, Stimulation transcrânienne en Psychiatry (STEP)

Peer Review Journal of Neurochemistry; Neuropsychopharmacology; Schizophrenia Bulletin

Co-organizer, Big Data in Neuroscience Conference (2016)

Invited guest speakers: Dr G. Varoquaux, Dr P-A Gourraud, Dr N. Lechopier

Organizer, PsyR2 Team Journal Club (2015-2018) Grant and Funding watch for PsyR2 Team (2015-2018) Lab skills Research project design; Grant submission; Clinical trial management (ethics requirements (CPP, ANSM),

subject recruitement); Computer science (Windows/Mac/Linux, Bash); Data analysis (Python, Matlab, SPM, CONN, FSL, Minc Tool Kit, Turku, Niftireg, Mango, MedINRIA); Statistical analysis (R, SPSS, JASP); scalp EEG and intracranial EEG acquisition and analysis; PET acquisition and analysis; MRI acquisition and analysis (ASL, DTI, resting-state fMRI); brain stimulation (tDCS, TMS)

Communication English bilingual, German conversation, Spanish proficient

INTEREST

Sports Rock climbing, Alpinism, Ski, Tennis Hobbies Photography, Cooking, Trekking, Cello

REFERENCES

Dr Marie-Françoise Suaud-Chagny
DR INSERM
Co-Director, PSYR2 Team, CRNL, Lyon
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