

# ENP ALUMNI

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## ALTARELLI Irene

**Session:** GP and PhD started in Oct 2009

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Neuroanatomical correlates of developmental dyslexia.

**Thesis director:** Franck RAMUS

**PhD defense:** 17.09.2013

**Position:** PostDoc – University of Geneva (Switzerland) – **Daphné BAVELIER**'s lab.

**Ramus F, Altarelli I, Jednoróg K, Zhao J, Scotto di Covella L.** Neuroanatomy of developmental dyslexia: Pitfalls and promise. *Neurosci Biobehav Rev.* 2017 Aug 7. pii: S0149-7634(16)30746-1. doi: 10.1016/j.neubiorev.2017.08.001. PMID: 28797557

Łoński P, Gradkowski W, **Altarelli I**, Monzalvo K, van Ermingen-Marbach M, Grande M, Heim S, Marchewka A, Bogorodzki P, **Ramus F**, Jednoróg K. Multi-parameter machine learning approach to the neuroanatomical basis of developmental dyslexia. *Hum Brain Mapp.* 2017 Feb;38(2):900-908. doi: 10.1002/hbm.23426. Epub 2016 Oct 6. PMID: 27712002

Zhao J, Thiebaut de Schotten M, **Altarelli I**, Dubois J, **Ramus F**. Altered hemispheric lateralization of white matter pathways in developmental dyslexia: Evidence from spherical deconvolution tractography. *Cortex.* 2016 Mar;76:51-62. doi: 10.1016/j.cortex.2015.12.004. Epub 2016 Jan 14. PMID: 26859852

Martinaud O, Pouliquen D, Parain D, Goldenberg A, Gérardin E, Hannequin D, **Altarelli I, Ramus F**, Hertz-Pannier L, Dehaene-Lambertz G, Cohen L. Impaired functional differentiation for categories of objects in the ventral visual stream: A case of developmental visual impairment *Neuropsychologia.* 2015 Oct;77:52-61. doi: 10.1016/j.neuropsychologia.2015.08.009. Epub 2015 Aug 10. PMID: 26272240

Katarzyna Jednorog, Artur Marchewka, **Irene Altarelli**, Ana Karla Monzalvo Lopez, Muna van Ermingen-Marbach, Marion Grande, Anna Grabowska, Stefan Heim, and **Franck Ramus**. How Reliable are Gray Matter Disruptions in Specific Reading Disability Across Multiple Countries and Languages? Insights from a Large-Scale Voxel-Based Morphometry Study. *Human Brain Mapping* 36:1741–1754 (2015). doi: 10.1002/hbm.22734. Epub 2015 Jan 17. PMID: 25598483

**Altarelli I, Leroy F, Monzalvo K, Fluss J, Billard C, Dehaene-Lambertz G, Galaburda AM, Ramus F.** Planum temporale asymmetry in developmental dyslexia: Revisiting an old question. *Hum Brain Mapp.* 2014 Dec;35(12):5717-35. doi: 10.1002/hbm.22579. Epub 2014 Jul 10. PMID: 25044828

**Altarelli I, Monzalvo K, Iannuzzi S, Fluss J, Billard C, Ramus F, Dehaene-Lambertz G.** A functionally guided approach to the morphometry of occipito-temporal regions in developmental dyslexia: evidence for differential effects in boys and girls. *J Neurosci.* 2013 Jul 3;33(27):11296-301. doi: 10.1523/JNEUROSCI.5854-12.2013. PMID: 23825432

Jednoróg K\*, **Altarelli I\***, Monzalvo K, Fluss J, Dubois J, Billard C, Dehaene-Lambertz G, **Ramus F**. \*equal contributors The influence of socioeconomic status on children's brain structure. *PLoS One.* 2012;7(8):e42486. doi: 10.1371/journal.pone.0042486. PMID:22880000

## ARAKAKI Takafumi

**Session:** GP started in Sept 2011 – PhD started in Oct 2012

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Collective dynamics of basal ganglia-thalamo-cortical loops and their roles in functions and dysfunctions.

**Thesis director:** David HANSEL

**PhD defense:** 21.03.2016

**Position:** Post doc – University of Oregon (USA) – Institute of Neuroscience – **Yashar AHMADIAN**'s lab.

**Arakaki T**, Mahon S, Charpier S, Leblois A, **Hansel D**. *The Role of Striatal Feedforward Inhibition in the Maintenance of Absence Seizures.* *J Neurosci.* 2016 Sep 14;36(37):9618-32. doi: 10.1523/JNEUROSCI.0208-16.2016. PMID: 27629713

## ARDUIN Pierre-Jean

**Session:** GP & PhD started in February 2008

**Doctoral school:** ED 474 – Frontiere du Vivant – ENS

**Thesis title:** Operant conditioning of neurons in the rat motor cortex for a graded control of a prosthetic device.

**Thesis directors:** Daniel SHULZ & Yves FREGNAC

**PhD defense:** 05.12.2011

**Position:** R&D engineer at **MaunaKea Technologies** (France).

**Arduin PJ, Frégnac Y, Shulz DE, Ego-Stengel V.** Bidirectional control of a one-dimensional robotic actuator by operant conditioning of a single unit in rat motor cortex. *Front Neurosci.* 2014 Jul 25;8:206. doi: 10.3389/fnins.2014.00206. eCollection 2014. PMID: 25120417

**Pierre-Jean Arduin, Yves Frégnac, Daniel E. Shulz, and Valérie Ego-Stengel.** "Master" neurons induced by operant conditioning in rat motor cortex during a brain-machine interface task. *J Neurosci.* 2013 May 8;33(19):8308-20. doi: 10.1523/JNEUROSCI.2744-12.2013. PMID: 23658171

## BARBEITO Ana

**Session:** GP and PhD started in February 2009

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Role of the chemokine CXCL12 and its receptor CXCR4 in-glia interaction motoneurone in Amyotrophic Lateral Sclerosis.

**Thesis director:** Michel MALAT

**PhD defense:** 06.06.2013

**Position:** R&D manager at **BioBank** (France).

**Barbeito AG, Mesci P, Boillée S.** Motor neuron-immune interactions: the vicious circle of ALS. *J Neural Transm.* 2010 Aug;117(8):981-1000. doi: 10.1007/s00702-010-0429-0. PMID: 20552235

## BEGUE Aurélien

**Session:** GP started in April 2009 – PhD started in Oct 2009

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Two-photon optogenetics.

**Thesis director:** Valentina EMILIANI

**PhD defense:** 21.11.2012

**Position:** PostDoc – Harvard Medical School (USA) – **Bernardo SABATINI's** lab.

**Bègue A, Papagiakoumou E, Leshem B, Conti R, Enke L, Oron D, Emiliani V.** Two-photon excitation in scattering media by spatiotemporally shaped beams and their application in optogenetic stimulation. *Biomed Opt Express.* 2013 Nov 18;4(12):2869-79. doi: 10.1364/BOE.4.002869. PMID: 24409387

**Eirini Papagiakoumou, Aurélien Bègue, Ben Leshem, Osip Schwartz, Brandon M. Stell, Jonathan Bradley, Dan Oron & Valentina Emiliani.** Functional patterned multiphoton excitation deep inside scattering tissue. *Nature Photonics* 7, 274–278 (2013) doi:10.1038/nphoton.2013.9

**Papagiakoumou E, Anselmi F, Bègue A, de Sars V, Glückstad J, Isacoff EY, Emiliani V.** Scanless two-photon excitation of channelrhodopsin-2. *Nat Methods.* 2010 Oct;7(10):848-54. doi: 10.1038/nmeth.1505. PMID:20852649

**Anselmi F, Ventalon C, Bègue A, Ogden D, Emiliani V.** Three-dimensional imaging and photostimulation by remote-focusing and holographic light patterning. *Proc Natl Acad Sci U S A.* 2011 Dec 6;108(49):19504-9. doi: 10.1073/pnas.1109111108. PMID: 22074779

**Bègue A**, Anselmi F, Papagiakoumou E, **Emiliani V**. Wavefront engineering for two-photon excitation of optogenetic tools. *Med Sci (Paris)*. 2011 Oct;27(10):811-3. doi: 10.1051/medsci/20112710006. PMID: 22027415

## **BERCIER Valérie**

**Session:** GP started in Sept 2012 – PhD started in Oct 2013

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Dynactin1 mutations associated with amyotrophic lateral sclerosis and their effect on axonal transport and neuromuscular junction formation.

**Thesis director:** Filippo DEL BENE

**PhD defense:** 18.09.2017

**Position:** PostDoc – Institut Curie, Centre de Recherche – **Filippo DEL BENE's** lab.

Auer TO, Xiao T, **Bercier V**, Gebhardt C, Duroure K, Concordet JP, Wyart C, Suster M, Kawakami K, Wittbrodt J, Baier H, **Del Bene F**. Deletion of a kinesin I motor unmasks a mechanism of homeostatic branching control by neurotrophin-3. *Elife*. 2015 Jun 15;4. doi: 10.7554/eLife.05061. PMID: 26076409

**Kabashi E**, El Oussini H, **Bercier V**, Gros-Louis F, Valdmanis PN, McDearmid J, Meijer IA, Dion PA, Dupre N, Hollinger D, Sinniger J, Dirrig-Grosch S, Camu W, Meininger V, Loeffler JP, René F, Drapeau P, Rouleau GA, Dupuis L. Investigating the contribution of VAPB/ALS8 loss of function in amyotrophic lateral sclerosis. *Hum Mol Genet.* (12):2350-60. doi: 10.1093/hmg/ddt080. Epub 2013 Feb 26. PMID: 23446633

## **BLOCKUS Heike**

**Session:** GP started in Sept 2011 – PhD started in Oct 2012

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Evolution and Molecular Mechanisms of Commissure Formation.

**Thesis director:** Alain CHEDOTAL

**PhD defense:** 24.09.2015

**Position:** PostDoc – Columbia University (USA) – **Franck POLLEUX's** lab.

**Blockus H, Chédotal A**. Slit-Robo signaling. *Development*. 2016 Sep 1;143(17):3037-44. doi: 10.1242/dev.132829. PMID: 27578174

**Blockus H, Chédotal A**. Fly Dscams Can Also Help You Find the Right Partners. *Neuron*. 2016 Feb 3;89(3):423-5. doi: 10.1016/j.neuron.2016.01.021. PMID: 26844824

**Heike Blockus, Alain Chédotal**. Disorders of Axon Guidance. *The Genetics of Neurodevelopmental Disorders*. Published Online: 24 JUL 2015. DOI: 10.1002/9781118524947.ch8

Kadaré G, Gervasi N, Brami-Cherrier K, **Blockus H**, El Messari S, Arold ST, **Girault JA**. Conformational dynamics of the focal adhesion targeting domain control specific functions of focal adhesion kinase in cells. *J Biol Chem*. 2015 Jan 2;290(1):478-91. doi: 10.1074/jbc.M114.593632. Epub 2014 Nov 12. PMID: 25391654

Zelina P\*, **Blockus H\***, Zagar Y\*, Péres A, Friocourt F, Wu Z, Rama N, Fouquet C, Hohenester E, Tessier-Lavigne M, Schweitzer J, Roest Crollius H, **Chédotal A**. \* These authors contributed equally. Signaling Switch of the Axon Guidance Receptor Robo3 during Vertebrate Evolution. *Neuron*. 2014 Dec 17;84(6):1258-72. doi: 10.1016/j.neuron.2014.11.004. Epub 2014 Nov 26. PMID: 25433640.

**Blockus H, Chédotal A**. The multifaceted roles of Slits and Robos in cortical circuits: from proliferation to axon guidance and neurological diseases. *Curr Opin Neurobiol*. 2014 Mar 31;27C:82-88. doi: 10.1016/j.conb.2014.03.003. PMID: 24698714.

**Blockus H, Chédotal A**. Dystroglycan adds more sugars to the midline cocktail. *Neuron*. 2012 Dec 6;76(5):864-7. doi: 10.1016/j.neuron.2012.11.017. PMID: 23217735

## **BÖHM Urs Lucas**

**Session:** GP started in Sept 2011 – PhD started in Oct 2012

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Physiological inputs to cerebrospinal fluid-contacting neurons.

**Thesis director:** Claire WYART

**PhD defense:** 16.09.2016

**Position:** PostDoc – Harvard University (USA) – **Adam COHEN's** lab.

Wolf S, Dubreuil AM, Bertoni T, **Böhm UL**, **Bormuth V**, Candelier R, Karpenko S, Hildebrand DGC, Bianco IH, Monasson R, **Debrégeas G**. Sensorimotor computation underlying phototaxis in zebrafish. *Nat Commun.* 2017 Sep 21;8(1):651. doi: 10.1038/s41467-017-00310-3. PMID: 28935857

Knafo S, Fidelin K, Prendergast A, Tseng PB, Parrin A, Dickey C, **Böhm UL**, Figueiredo SN, Thouvenin O, Pascal-Moussellard H, **Wyart C**. Mechanosensory neurons control the timing of spinal microcircuit selection during locomotion. *Elife.* 2017 Jun 19;6. pii: e25260. doi: 10.7554/eLife.25260. PMID: 28623664

**Böhm UL**, **Wyart C**. Spinal sensory circuits in motion. *Curr Opin Neurobiol.* 2016 Dec;41:38-43. doi: 10.1016/j.conb.2016.07.007. Epub 2016 Aug 27. PMID: 27573214

Hubbard JM, **Böhm UL**, Prendergast A, Tseng PB, Newman M, Stokes C, **Wyart C**. Intraspinal Sensory Neurons Provide Powerful Inhibition to Motor Circuits Ensuring Postural Control during Locomotion. *Curr Biol.* 2016 Nov 7;26(21):2841-2853. doi: 10.1016/j.cub.2016.08.026. Epub 2016 Oct 6. PMID: 27720623

**Böhm UL**, Prendergast A, Djenoune L, Nunes Figueiredo S, Gomez J, Stokes C, Kaiser S, Suster M, Kawakami K, Charpentier M, Concordet JP, Rio JP, Del Bene F, **Wyart C**. CSF-contacting neurons regulate locomotion by relaying mechanical stimuli to spinal circuits. *Nat Commun.* 2016 Mar 7;7:10866. doi: 10.1038/ncomms10866. PMID: 26946992

Le Roux N, Cabezas C, **Böhm UL**, **Poncer JC**. Input-specific learning rules at excitatory synapses onto hippocampal parvalbumin-expressing interneurons. *J Physiol.* 2013 Apr 1;591(Pt 7):1809-22. doi: 10.1113/jphysiol.2012.245852. PMID: 23339172

## **BOUCHACOURT Flora**

**Session:** GP started in Sept 2011 – PhD started in Oct 2012

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Hebbian mechanisms and temporal contiguity for unsupervised task-set learning.

**Thesis director:** Srdjan OSTOJIC

**PhD defense:** 07.11.2016

**Position:** PostDoc – Princeton University (USA) – **Jonathan COHEN's** lab.

## **CAHILL Emma**

**Session:** GP started in Sept 2008 – PhD started in Oct 2009

**Doctoral school:** ED158 – UPMC

**Thesis title:** Integration of Dopamine and Glutamate signalling by D1R/NMDAR heteromers in the striatum in response to cocaine.

**Thesis director:** Peter VANHOUTTE

**PhD defense:** 25.06.2013

**Position:** PostDoc – University of Cambridge – Department of Psychology (United\_Kingdom) – **Barry EVERITT's** lab.

Dos Santos M, **Cahill EN**, Bo GD, **Vanhoutte P**, **Caboche J**, Giros B, Heck N. Cocaine increases dopaminergic connectivity in the nucleus accumbens. *Brain Struct Funct.* 2017 Oct 12. doi: 10.1007/s00429-017-1532-x. [Epub ahead of print]. PMID: 29027032

**E Cahill**, V Pascoli, P Trifilieff, D Savoldi, V Kappès, C Lüscher, **J Caboche**, and **P Vanhoutte**. D1R/GluN1 complexes in the striatum integrate dopamine and glutamate signalling to control synaptic plasticity and cocaine-induced responses. *Molecular Psychiatry* (2014) 19, 1295–1304; doi:10.1038/mp.2014.73; Epub 2014 Jul 29. PMID: 25070539

Pascoli V, **Cahill E**, Bellivier F, Caboche J, **Vanhoutte P**. Extracellular Signal-Regulated Protein Kinases 1 and 2 Activation by Addictive Drugs: A Signal Toward Pathological Adaptation. *Biol Psychiatry.* 2014 Apr 18. pii: S0006-3223(14)00264-9. doi: 10.1016/j.biopsych.2014.04.005. PMID: 24844603

**Cahill E**, Salery M, **Vanhoutte P**, Caboche J. Convergence of dopamine and glutamate signaling onto striatal ERK activation in response to drugs of abuse. *Front Pharmacol.* 2014 Jan 8;4:172. eCollection 2014. PMID: 24409148

Roze E, **Cahill E**, Martin E, Bonnet C, **Vanhoutte P**, Betuing S, Caboche J. Huntington's Disease and Striatal Signaling. A review *Front Neuroanat.* 2011 Aug 23;5:55. doi: 10.3389/fnana.2011.00055. PMID: 22007160.

## **CHANES Lorena**

**Session:** GP started in Sept 2009 – PhD started in Oct 2010

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Frontal and parietal contributions to visual perception in humans.

**Thesis director:** Antoni VALERO-CABRE

**PhD defense:** 25.02.2014

**Position:** PostDoc and Part-Time Faculty – Northeastern University (USA) – **Lisa FELDMAN BARRETT & Karen QUIGLEY's** lab.

Quentin R, Elkin Frankston S, Vernet M, Toba MN, Bartolomeo P, **Chanes L**, **Valero-Cabré A**. Visual Contrast Sensitivity Improvement by Right Frontal High-Beta Activity Is Mediated by Contrast Gain Mechanisms and Influenced by Fronto-Parietal White Matter Microstructure. *Front Pharmacol.* 2014 Jan 8;4:172. eCollection 2014. PMID: 24409148

**Chanes L**, Quentin R, Vernet M, **Valero-Cabré A**. Arrhythmic activity in the left frontal eye field facilitates conscious visual perception in humans. *Cortex.* 2015 Oct;71:240-7. doi: 10.1016/j.cortex.2015.05.016. Epub 2015 May 27. PMID: 26247410

Vernet M, Quentin R, **Chanes L**, Mitsumasa A, **Valero-Cabré A**. Frontal eye field, where art thou? Anatomy, function, and non-invasive manipulation of frontal regions involved in eye movements and associated cognitive operations. *Front Integr Neurosci.* 2014 Aug 22;8:66. doi: 10.3389/fnint.2014.00066. eCollection 2014. PMID: 25202241

Quentin R, **Chanes L**, Vernet M, **Valero-Cabré A**. Fronto-Parietal Anatomical Connections Influence the Modulation of Conscious Visual Perception by High-Beta Frontal Oscillatory Activity. *Cereb Cortex.* 2014 Feb 18. PMID: 24554730

Quentin R, **Chanes L**, Migliaccio R, Valabrègue R, **Valero-Cabré A**. Fronto-tectal white matter connectivity mediates facilitatory effects of non-invasive neurostimulation on visual detection. *Neuroimage.* 2013 Nov 15;82:344-54. doi: 10.1016/j.neuroimage.2013.05.083. Epub 2013 May 24. PMID: 23707586

**Chanes L**, Quentin R, Tallon-Baudry C, **Valero-Cabré A**. Causal frequency-specific contributions of frontal spatiotemporal patterns induced by non-invasive neurostimulation to human visual performance. *J Neurosci.* 2013 Mar 13;33(11):5000-5. doi: 10.1523/JNEUROSCI.4401-12.2013. PMID: 23486970

**Chanes L**, Chica AB, Quentin R, **Valero-Cabré A**. Manipulation of pre-target activity on the right frontal eye field enhances conscious visual perception in humans. *PLoS One.* 2012;7(5):e36232. doi: 10.1371/journal.pone.0036232. Epub 2012 May 15. PMID: 22615759



Chica AB, Lasaponara S, **Chanes L, Valero-Cabré A**, Doricchi F, Lupiáñez J, Bartolomeo P. Spatial attention and conscious perception: the role of endogenous and exogenous orienting. *Atten Percept Psychophys*. 2011 May;73(4):1065-81. doi: 10.3758/s13414-010-0082-6. PMID: 21327748

### COLLETTE Sven

**Session:** GP and PhD started in Dec 2008

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Value-based Decision-Making of Actions and Tasks in Human Prefrontal Cortex.

**Thesis director:** Etienne KOEHLIN

**PhD defense:** 30.05.2012

**Position:** Research associate in Neuroscience – **Campus Biotech** (Switzerland).

### CUI Yihui

**Session:** GP started in Oct 2008 – PhD started in Oct 2009

**Doctoral school:** ED 158 – UPMC

**Thesis title:** The Many Faces of Corticostriatal Spike-Timing Dependent Plasticity.

**Thesis director:** Laurent VENANCE

**PhD defense:** 23.09.2013

**Position:** PostDoc – Institute of Neuroscience of the Chinese Academy of Sciences (China) – **Hailan HU's** lab.

**Cui Y, Prokin I, Xu H, Delord B, Genet S, Venance L, Berry H.** Endocannabinoid dynamics gate spike-timing dependent depression and potentiation. *Elife*. 2016 Feb 27;5:e13185. doi: 10.7554/eLife.13185. PMID: 26920222

**Cui Y, Paillé V, Xu H, Genet S, Delord B, Fino E, Berry H, Venance L.** Endocannabinoids mediate bidirectional striatal spike-timing-dependent plasticity. *J Physiol*. 2015 Jul 1;593(13):2833-49. doi: 10.1113/JP270324. Epub 2015 May 13. PMID: 25873197

**Eddine R, Valverde S, Tolu S, Dautan D, Hay A, Morel C, Cui Y, Lambollez B, Venance L, Marti F, Faure P.** A concurrent excitation and inhibition of dopaminergic subpopulations in response to nicotine. *Sci Rep*. 2015 Feb 2;5:8184. doi: 10.1038/srep08184. PMID: 25640814

**Evans RC, Morera-Herreras T, Cui Y, Du K, Sheehan T, Koteleski JH, Venance L, Blackwell KT.** The effects of NMDA subunit composition on calcium influx and spike timing-dependent plasticity in striatal medium spiny neurons. *PLoS Comput Biol*. 2012;8(4):e1002493. doi: 10.1371/journal.pcbi.1002493. PMID: 22536151

**Puente N, Cui Y, Lassalle O, Lafourcade M, Georges F, Venance L, Grandes P, Manzoni OJ.** Polymodal activation of the endocannabinoid system in the extended amygdala. *Nat Neurosci*. 2011 Nov 6;14(12):1542-7. doi: 10.1038/nn.2974. PMID: 22057189

**Fino E, Paillé V, Cui Y, Morera-Herreras T, Deniau JM, Venance L.** Distinct coincidence detectors govern the corticostriatal spike timing-dependent plasticity. *J Physiol*. 2010 Aug 15;588(Pt 16):3045-62. doi: 10.1113/jphysiol.2010.188466. PMID: 20603333

### DEGHANI Nima

**Session:** GP and PhD started in July 2009

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Electromagnetic signature of human cortical dynamics during wakefulness and sleep.

**Thesis director:** Alain DESTEXHE

**PhD defense:** 30.08.2012

**Position:** Research scientist – **Massachusetts Institute of Technology** (USA).

Telenczuk B, **Dehghani N**, Le Van Quyen M, Cash SS, Halgren E, Hatsopoulos NG, **Destexhe A**. Local field potentials primarily reflect inhibitory neuron activity in human and monkey cortex. *Sci Rep*. 2017 Jan 11;7:40211. doi: 10.1038/srep40211. PMID: 28074856

Le Van Quyen M, Muller LE 2nd, Telenczuk B, Halgren E, Cash S, Hatsopoulos NG, **Dehghani N**, **Destexhe A**. High-frequency oscillations in human and monkey neocortex during the wake-sleep cycle. *Proc Natl Acad Sci U S A*. 2016 Aug 16;113(33):9363-8. doi: 10.1073/pnas.1523583113. PMID: 27482084

**Dehghani N**, Peyrache A, Telenczuk B, Le Van Quyen M, Halgren E, Cash SS, Hatsopoulos NG, **Destexhe A**. Dynamic Balance of Excitation and Inhibition in Human and Monkey Neocortex. *Sci Rep*. 2016 Mar 16;6:23176. doi: 10.1038/srep23176. PMID: 26980663

**Dehghani N**, Hatsopoulos NG, Haga ZD, Parker RA, Greger B, Halgren E, Cash SS, **Destexhe A**. Avalanche Analysis from Multielectrode Ensemble Recordings in Cat, Monkey, and Human Cerebral Cortex during Wakefulness and Sleep. *Front Physiol*. 2012 Aug 3;3:302. doi: 10.3389/fphys.2012.00302. PMID: 22934053

Peyrache A, **Dehghani N**, Eskandar EN, Madsen JR, Anderson WS, Donoghue JA, Hochberg LR, Halgren E, Cash SS, **Destexhe A**. Spatiotemporal dynamics of neocortical excitation and inhibition during human sleep. *Proc Natl Acad Sci U S A*. 2012 Jan 31;109(5):1731-6. doi: 10.1073/pnas.1109895109. PMID: 22307639

**Dehghani N**, Bédard C, Cash SS, Halgren E, **Destexhe A**. Comparative power spectral analysis of simultaneous electroencephalographic and magnetoencephalographic recordings in humans suggests non-resistive extracellular media. *J Comput Neurosci*. 2010 Dec;29(3):405-21. doi: 10.1007/s10827-010-0263-2. PMID: 20697790

**Dehghani N**, Bédard C, Cash SS, Halgren E, **Destexhe A**. Comparative power spectral analysis of simultaneous electroencephalographic and magnetoencephalographic recordings in humans suggests non-resistive extracellular media: EEG and MEG power spectra. *J Comput Neurosci*. 2010 Dec;29(3):405-21. doi: 10.1007/s10827-010-0263-2. PMID: 20556640

### **DONGELMANS Marie Louise**

**Session:** GP started in Sept 2012 – PhD started in Oct 2013

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Nicotine-induced modifications in value-based decision-making

**Thesis director:** Philippe FAURE

**PhD defense:** 03.10.2017

**Position:** Postdoc –

Naudé J, **Dongelmans M**, Faure P. Nicotinic alteration of decision-making. *Neuropharmacology*. 2015 Sep;96(Pt B):244-54. doi: 10.1016/j.neuropharm.2014.11.021. Epub 2014 Dec 9. PMID: 25498234

Parnaudeau S, **Dongelmans ML**, Turiault M, Ambroggi F, Delbes AS, Cansell C, Luquet S, Piazza PV, Tronche F, Barik J. Glucocorticoid receptor gene inactivation in dopamine-innervated areas selectively decreases behavioral responses to amphetamine. *Front Behav Neurosci*. 2014 Feb 12;8:35. doi: 10.3389/fnbeh.2014.00035. PMID: 24574986

### **FUENTEALBA Jaime**

**Session:** GP started in Sept 2012 – PhD started in Oct 2013

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Understanding the role of perivascular macrophages in Parkinson's disease pathophysiology

**Thesis director:** Stéphane HUNOT

**PhD defense:** 28.09.2017

**Position:** Postdoc – Institut du Cerveau et de la Moelle épinière – **Stéphane HUNOT's** lab

## **HARRINGTON Lauriane**

**Session:** GP started in March 2011 – PhD started in Oct 2011

**Doctoral school:** ED 158 – UPMC

**Thesis title:** The role of  $\beta 4$ ,  $\alpha 3$  and  $\alpha 5$  nicotinic acetylcholine receptor subunits in nicotine addiction.

**Thesis director:** Uwe MASKOS

**PhD defense:** 09.07.2015

**Position:** R&D Associate, Future Leaders Programme – **GSK** (Belgium).

**Harrington L**, Viñals X, Herrera-Solís A, Flores A, Morel C, Tolu S, Faure P, Maldonado R, **Maskos U**, Robledo P. Role of  $\beta 4^*$  Nicotinic Acetylcholine Receptors in the Habenulo-Interpeduncular Pathway in Nicotine Reinforcement in Mice. *Neuropsychopharmacology*. 2015 Nov 20. doi: 10.1038/npp.2015.346. PMID: 26585290

## **IYER Keerthana**

**Session:** GP started in Sept 2010 – PhD started in Oct 2011

**Doctoral school:** ED 158 – UPMC

**Thesis title:** The role of complement system-related genes in synapse formation and specificity in the olivo-cerebellar network.

**Thesis director:** Fekrije SELIMI

**PhD defense:** 16.09.2015

**Position:** Looking for a position in science policy consulting.

Usardi A, **Iyer K**, Sigoillot SM, Dusonchet A, **Selimi F**. The immunoglobulin-like superfamily member IGSF3 is a developmentally regulated protein that controls neuronal morphogenesis. *Dev Neurobiol*. 2017 Jan;77(1):75-92. doi: 10.1002/dneu.22412. Epub 2016 Jul 8. PMID: 27328461

Sigoillot SM, **Iyer K**, Binda F, González-Calvo I, Talleur M, Vodjdani G, Isope P, **Selimi F**. The Secreted Protein C1QL1 and Its Receptor BAI3 Control the Synaptic Connectivity of Excitatory Inputs Converging on Cerebellar Purkinje Cells. *Cell Rep*. 2015 Feb 4. pii: S2211-1247(15)00059-5. doi: 10.1016/j.celrep.2015.01.034. [Epub ahead of print]. PMID: 25660030

Lanoue V, Usardi A, Sigoillot SM, Talleur M, **Iyer K**, Mariani J, Isope P, Vodjdani G, Heintz N, **Selimi F**. The adhesion-GPCR BAI3, a gene linked to psychiatric disorders, regulates dendrite morphogenesis in neurons. *Mol Psychiatry*. 2013 Aug;18(8):943-50. doi: 10.1038/mp.2013.46. PMID: 23628982

## **KATZ Shauna**

**Session:** GP started in Sept 2011 – PhD started in Oct 2012

**Doctoral school:** ED 419 – Université Paris-Sud

**Thesis title:** Role of microRNA-9 in regulating neural stem cell states.

**Thesis director:** Laure BALLY-CUIF

**PhD defense:** 13.11.2015

**Position:** Valorisation Manager for the **LABEX DEEP** and the **LABEX Celtisphybio** – Institut Curie (France).

**Katz S**, Cussigh D, Urbán N, Blomfield I, Guillemot F, **Bally-Cuif L**, Coolen M. A Nuclear Role for miR-9 and Argonaute Proteins in Balancing Quiescent and Activated Neural Stem Cell States. *Cell Rep.* 2016 Oct 25;17(5):1383-1398. doi: 10.1016/j.celrep.2016.09.088. PMID: 27783951

Coolen M, **Katz S**, **Bally-Cuif L**. miR-9: a versatile regulator of neurogenesis. *Front Cell Neurosci.* 2013 Nov 20;7:220. doi: 10.3389/fncel.2013.00220. PMID: 24312010

## **LIU Xinhe**

**Session:** GP started In Sept 2009 – PhD started in Oct 2010

**Doctoral school:** ED 158 – UPMC

**Thesis title:** The role of astroglial connexin 30 in sleep homeostasis.

**Thesis director:** Christian GIAUME

**PhD defense:** 23.09.2014

**Position:** PostDoc – Institut de Biologie de l'Ecole Normale Supérieure (France) – **Laurent BOURDIEU's** lab.

Duchêne A, Perier M, Zhao Y, **Liu X**, Thomasson J, Chauveau F, Piérard C, Lagarde D, Picoli C, Jeanson T, Mouthon F, Dauvilliers Y, **Giaume C**, Lin JS, Charvériat M. Impact of Astroglial Connexins on Modafinil Pharmacological Properties. *Sleep.* 2016 Jun 1;39(6):1283-92. doi: 10.5665/sleep.5854. PMID: 27091533

**Liu X**, Gangoso E, Yi C, Jeanson T, Kandelman S, Mantz J, **Giaume C**. General anesthetics have differential inhibitory effects on gap junction channels and hemichannels in astrocytes and neurons. *Glia.* 2016 Apr;64(4):524-36. doi: 10.1002/glia.22946. PMID: 26666873

**Liu X**, Petit JM, Ezan P, Gyger J, Magistretti P, **Giaume C**. The psychostimulant modafinil enhances gap junctional communication in cortical astrocytes. *Neuropharmacology.* 2013 Dec;75:533-8. doi: 10.1016/j.neuropharm.2013.04.019. PMID: 23665355

**Giaume C**, **Liu X**. From a glial syncytium to a more restricted and specific glial networking. *J Physiol Paris.* 2012 Jan;106(1-2):34-9. doi: 10.1016/j.jphysparis.2011.09.001. PMID: 21979115

## **LYONS Declan**

**Session:** GP started in Sept 2009 – PhD started in Oct 2010

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Mapping oxygen in the awake mouse brain.

**Thesis director:** Serge CHARPAK

**PhD defense:** 06.02.2015

**Position:** PostDoc – University College London (United Kingdom) – **Jason RIHÉL's** lab.

**Lyons DG**, Parpaleix A, Roche M, **Charpak S**. Mapping oxygen concentration in the awake mouse brain. *Elife.* 2016 Feb 2;5. pii: e12024. doi: 10.7554/eLife.12024. PMID: 26836304

Otsu Y, Couchman K, **Lyons DG**, Collot M, Agarwal A, Mallet JM, Pfrieger FW, Bergles DE, **Charpak S**. Calcium dynamics in astrocyte processes during neurovascular coupling. *J Physiol Paris.* 2012 Jan;106(1-2):34-9. doi: 10.1016/j.jphysparis.2011.09.001. PMID: 21979115

## **MALDONADO Paloma**

**Session:** GP started in March 2010 – PhD started in Oct 2010

**Doctoral school:** ED Bio SPC – Université Paris Descartes/Université Paris Diderot

**Thesis title:** Synaptic and non-synaptic communication between neurons and Oligodendrocyte Precursor Cells.

**Thesis director:** Maria Cecilia ANGULO

**PhD defense:** 09.12.2013

**Position:** PostDoc – Netherlands Institute for Neuroscience (The Netherlands) – **Christian LOHMANN's** lab.

Zampini V, Liu JK, Diana MA, **Maldonado PP**, Brunel N, **Dieudonné S**. Mechanisms and functional roles of glutamatergic synapse diversity in a cerebellar circuit. *Elife*. 2016 Sep 19;5. pii: e15872. doi: 10.7554/eLife.15872. PMID: 27642013

Orduz D, **Maldonado PP**, Balia M, Vélez-Fort M, de Sars V, Yanagawa Y, Emiliani V, Angulo MC. Interneurons and oligodendrocyte progenitors form a structured synaptic network in the developing neocortex. *Elife*. 2015 Apr 22;4. doi: 10.7554/eLife.06953. PMID: 25902404

Sahel A, Ortiz FC, Kerninon C, **Maldonado PP**, Angulo MC, Nait-Oumesmar B. Alteration of synaptic connectivity of oligodendrocyte precursor cells following demyelination. *Front Cell Neurosci*. 2015 Mar 17;9:77. doi: 10.3389/fncel.2015.00077. eCollection 2015. PMID: 25852473

**Maldonado PP**, Angulo MC. Multiple Modes of Communication between Neurons and Oligodendrocyte Precursor Cells. *Neuroscientist*. 2014 Apr 10. PMID: 24722526

**Maldonado PP**, Vélez-Fort M, Levavasseur F, Angulo MC. Oligodendrocyte precursor cells are accurate sensors of local K<sup>+</sup> in mature gray matter. *J Neurosci*. 2013 Feb 6;33(6):2432-42. doi: 10.1523/JNEUROSCI.1961-12.2013. PMID: 23392672

**Maldonado PP**, Vélez-Fort M, Angulo MC. Is neuronal communication with NG2 cells synaptic or extrasynaptic? *J Anat*. 2011 Jul;219(1):8-17. doi: 10.1111/j.1469-7580.2011.01350.x.PMID: 21352226

Vélez-Fort M, **Maldonado PP**, Butt AM, Audinat E, Angulo MC. Postnatal switch from synaptic to extrasynaptic transmission between interneurons and NG2 cells. *J Neurosci*. 2010 May 19;30(20):6921-9. doi: 10.1523/JNEUROSCI.0238-10.2010. PMID: 20484634

## **MATHO Katherine**

**Session:** GP started in Sept 2008 – PhD started in Oct 2009

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Structure and dynamism in a central neural circuit in adulthood and postnatal development.

**Thesis director:** Jean LIVET

**PhD defense:** 26.09.2013

**Position:** PostDoc – Cold Spring Harbor Laboratory (USA) – **Z. Josh HUANG's** lab.

Loulier K, Barry R, Mahou P, Le Franc Y, Supatto W, **Matho KS**, Ieng S, Fouquet S, Dupin E, Benosman R, Chédotal A, Beaurepaire E, Morin X, **Livet J**. Multiplex cell and lineage tracking with combinatorial labels. *Neuron*. 2014 Feb 5;81(3):505-20. doi: 10.1016/j.neuron.2013.12.016. PMID: 24507188

Mahou P, Zimmerley M, Loulier K, **Matho KS**, Labroille G, Morin X, Supatto W, **Livet J**, Débarre D, Beaurepaire E. Multicolor two-photon tissue imaging by wavelength mixing. *Nat Methods*. 2012 Jul 8;9(8):815-8. doi: 10.1038/nmeth.2098. PMID: 22772730

## **MEDVEDEVA Vera**

**Session:** GP started in March 2010 – PhD started in Oct 2011

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Characterization of Foxp2 functions in the mouse cortex.

**Thesis director:** Matthias GROSZER

**PhD defense:** 17.06.2015

**Position:** PostDoc – Institut Jacques Monod – **Alessandra PIERANI's** lab.

*Kraushar ML, Viljetic B, Wijeratne HR, Thompson K, Jiao X, Pike JW, Medvedeva V, Groszer M, Kiledjian M, Hart RP, Rasin MR. Thalamic WNT3 Secretion Spatiotemporally Regulates the Neocortical Ribosome Signature and mRNA Translation to Specify Neocortical Cell Subtypes. J Neurosci. 2015 Aug 5;35(31):10911-26. doi: 10.1523/JNEUROSCI.0601-15.2015. PMID:26245956*

## **MOZAFARI Sabah**

**Session:** GP started in March 2011 – PhD started in Oct 2012

**Doctoral school:** ED 158 – UPMC

**Thesis director:** Anne BARON VAN EVERCOOREN

**Thesis title:** Characterization of neural precursors derived from iPSCs in vitro and in vivo after transplantation into the demyelinated central nervous system.

**PhD defense:** 15.06.2016

**Position:** PostDoc – Institut du Cerveau et de la Moelle – **Anne BARON VAN EVERCOOREN's** lab.

*Ehrlich M, Mozafari S, Glatza M, Starost L, Velychko S, Hallmann AL, Cui QL, Schambach A, Kim KP, Bachelin C, Marteyn A, Hargus G, Johnson RM, Antel J, Sternecker J, Zaehres H, Schöler HR, Baron-Van Evercooren A, Kuhlmann T. Rapid and efficient generation of oligodendrocytes from human induced pluripotent stem cells using transcription factors. Proc Natl Acad Sci U S A. 2017 Mar 14;114(11):E2243-E2252. doi: 10.1073/pnas.1614412114. Epub 2017 Feb 28. PMID: 28246330*

*Pourabdolhossein F, Gil-Perotín S, Garcia-Belda P, Dauphin A, Mozafari S, Tepavcevic V, Manuel Garcia Verdugo J, Baron-Van Evercooren A. Inflammatory demyelination induces ependymal modifications concomitant to activation of adult (SVZ) stem cell proliferation. Glia. 2017 May;65(5):756-772. doi: 10.1002/glia.23124. Epub 2017 Feb 13. PMID: 28191668*

*Mozafari S, Laterza C, Roussel D, Bachelin C, Marteyn A, Deboux C, Martino G, Baron-Van Evercooren A. Skin-derived neural precursors competitively generate functional myelin in adult demyelinated mice. J Clin Invest. 2015 Sep 1;125(9):3642-56. doi: 10.1172/JCI80437. Epub 2015 Aug 24. PMID: 26301815*

*Tepavčević V, Kerninon C, Aigrot MS, Meppiel E, Mozafari S, Arnould-Laurent R, Ravassard P, Kennedy TE, Nait-Oumesmar B, Lubetzki C. Early netrin-1 expression impairs central nervous system remyelination. Ann Neurol. 2014 Jun 18. doi: 10.1002/ana.24201. PMID: 24942777.*

## **MULLER Lyle**

**Session:** GP started in Oct 2009 – PhD started in Oct 2010

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Spatiotemporal dynamics in neocortex: Quantification, analysis, models.

**Thesis director:** Alain DESTEXHE

**PhD defense:** 04.06.2014

**Position:** PostDoc – Salk Institute for Biological Studies (USA) – **Terry SEJNOWSKI's** lab.

*Chemla S, Muller L, Reynaud A, Takerkart S, Destexhe A, Chavane F. Improving voltage-sensitive dye imaging: with a little help from computational approaches. Neurophotonics. 2017 Jul;4(3):031215. doi: 10.1117/1.NPh.4.3.031215. Epub 2017 May 19. PMID: 28573154*

Le Van Quyen M, **Muller LE 2nd**, Telenczuk B, Halgren E, Cash S, Hatsopoulos NG, Dehghani N, **Destexhe A**. High-frequency oscillations in human and monkey neocortex during the wake-sleep cycle. *Proc Natl Acad Sci U S A*. 2016 Aug 16;113(33):9363-8. doi: 10.1073/pnas.1523583113. PMID: 27482084

M Rudolph-Lilith, **LE Muller** (équipe Destexhe). On a link between Dirichlet kernels and central multinomial coefficients. *Discrete Mathematics* 338 (9), 1567-1572

**L Muller, A Destexhe**, M Rudolph-Lilith. Brain networks: small-worlds, after all? *New Journal of Physics* 16 (10), 105004 doi:10.1088/1367-2630/16/10/105004

Petrovici MA, Vogginger B, Müller P, Breitwieser O, Lundqvist M, **Muller L**, Ehrlich M, **Destexhe A**, Lansner A, Schüffny R, Schemmel J, Meier K. Characterization and compensation of network-level anomalies in mixed-signal neuromorphic modeling platforms. *PLoS One*. 2014 Oct 10;9(10):e108590. doi: 10.1371/journal.pone.0108590. eCollection 2014. PMID: 25303102

M Rudolph-Lilith, **LE Muller**. (Destexhe) Aspects of randomness in neural graph structures. *Biol Cybern*. 2014 Aug;108(4):381-96. doi: 10.1007/s00422-014-0606-6. PMID: 24824724

M Rudolph-Lilith, **LE Muller**. (équipe Destexhe). On a representation of the Verhulst logistic map. *Discrete Mathematics* 324, 19-27.

**L Muller**, A Reynaud, F Chavane, **A Destexhe**. The stimulus-evoked population response in visual cortex of awake monkey is a propagating wave. *Nat Commun*. 2014 Apr 28;5:3675. doi: 10.1038/ncomms4675. PMID:24770473

M Rudolph-Lilith, **LE Muller** (Destexhe) Algebraic approach to small-world network models. *Phys Rev E Stat Nonlin Soft Matter Phys*. 2014 Jan;89(1):012812. PMID: 24580286

**Lyle E Muller**, Alexandre Reynaud, Frédéric Chavane, **Alain Destexhe**. Propagating waves structure spatiotemporal activity in visual cortex of the awake monkey. *BMC Neuroscience*. 2013; 14(Suppl 1): O8. Published online 2013 Jul 8. doi: 10.1186/1471-2202-14-S1-O8. PMCID: PMC3704421

**Muller L, Destexhe A**. Propagating waves in thalamus, cortex and the thalamocortical system: Experiments and models. *J Physiol Paris*. 2012 Sep-Dec;106(5-6):222-38. doi: 10.1016/j.jphysparis.2012.06.005. PMID: 22863604

**Muller L, Brette R, Gutkin B**. Spike-timing dependent plasticity and feed-forward input oscillations produce precise and invariant spike phase-locking. *Front Comput Neurosci*. 2011 Nov 15;5:45. doi: 10.3389/fncom.2011.00045. PMID: 22110429

Brüderle D, Petrovici MA, Vogginger B, Ehrlich M, Pfeil T, Millner S, Grübl A, Wendt K, Müller E, Schwartz MO, de Oliveira DH, Jeltsch S, Fieres J, Schilling M, Müller P, Breitwieser O, Petkov V, **Muller L**, Davison AP, Krishnamurthy P, Kremkow J, Lundqvist M, Muller E, Partzsch J, Scholze S, Zühl L, Mayr C, **Destexhe A**, Diesmann M, Potjans TC, Lansner A, Schüffny R, Schemmel J, Meier K. A comprehensive workflow for general-purpose neural modeling with highly configurable neuromorphic hardware systems. *Biol Cybern*. 2011 May;104(4-5):263-96. doi: 10.1007/s00422-011-0435-9. PMID: 21618053

## **PARRAY Aeijaz**

**Session:** GP started in February 2008 – PhD started in Oct 2008

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Role of Semaphorin6A and its receptors PlexinA2 and PlexinA4 in the retina development.

**Thesis director:** Alain CHEDOTAL

**PhD defense:** 29.09.2011

**Position:** PostDoc – University of Minnesota (USA).

Belle M, **Parray A**, Belle M, **Chédotal A**, Nguyen-Ba-Charvet KT. PlexinA2 and Sema6A are required for retinal progenitor cell migration. *Dev Growth Differ*. 2016 Jun;58(5):492-502. doi: 10.1111/dgd.12298. Epub 2016 Jun 15. PMID: 27301906

Matsuoka RL, Nguyen-Ba-Charvet KT, **Parray A**, Badea TC, **Chédotal A**, Kolodkin AL. Transmembrane semaphorin signalling controls laminar stratification in the mammalian retina. *Nature*. 2011 Feb 10;470(7333):259-63. doi: 10.1038/nature09675. PMID: 21270798

### **PAVLICEK Beth**

**Session:** GP started in Sept 2008 – PhD started in Oct 2009

**Doctoral school:** ED158 – UPMC

**Thesis title:** Value-based decision making, cognitive regulation, and obesity.

**Thesis director:** Etienne KOEHLIN

**PhD defense:** 02.12.2013

**Position:** Quality Engineer\Supervisor at **Douglas Corporation** (USA).

Palminteri S, Justo D, Jauffret C, **Pavlicek B**, Dauta A, Delmaire C, Czernecki V, Karachi C, Capelle L, Durr A, **Pessiglione M**. Critical roles for anterior insula and dorsal striatum in punishment-based avoidance learning. *Neuron*. 2012 Dec 6;76(5):998-1009. doi: 10.1016/j.neuron.2012.10.017. PMID: 23217747

### **PETKOVIC Maja**

**Session:** GP started in Feb 2009 – PhD started in Oct 2009

**Doctoral school:** ED Bio SPC – Université Paris Descartes/Université Paris Diderot

**Thesis title:** Membrane expansion in neuronal growth.

**Thesis director:** Thierry GALLI

**PhD defense:** 22.02.2013

**Position:** PostDoc – University of California (USA) – **Yuh Nung JAN's** lab.

**Maja Petkovic**, Aymen Jemaiel, Frédéric Daste, Christian G. Specht, Ignacio Izeddin, Daniela Vorkel, Jean-Marc Verbavatz, Xavier Darzacq, Antoine Triller, Karl H. Pfenninger, David Tareste, Catherine L. Jackson & **Thierry Galli**. The SNARE Sec22b has a non-fusogenic function in plasma membrane expansion. *Nat Cell Biol*. 2014 May;16(5):434-44. doi: 10.1038/ncb2937. PMID: 24705552

Danglot L, Zylbersztein K, **Petkovic M**, Gauberti M, Meziane H, Combe R, Champy MF, Birling MC, Pavlovic G, Bizot JC, Trovero F, Della Ragione F, Proux-Gillardeaux V, Sorg T, Vivien D, D'Esposito M, **Galli T**. Absence of TI-VAMP/Vamp7 leads to increased anxiety in mice. *J Neurosci*. 2012 Feb 8;32(6):1962-8. doi: 10.1523/JNEUROSCI.4436-11.2012. PMID: 22323709

Zylbersztein K, **Petkovic M**, Burgo A, Deck M, Garel S, Marcos S, Bloch-Gallego E, Nothias F, Serini G, Bagnard D, Binz T, **Galli T**. The vesicular SNARE Synaptobrevin is required for Semaphorin 3A axonal repulsion. *J Cell Biol*. 2012 Jan 9;196(1):37-46. doi: 10.1083/jcb.201106113. PMID: 22213797



Ribrault C, Reingruber J, **Petković M, Galli T**, Ziv NE, Holcman D, Triller A. Syntaxin1A lateral diffusion reveals transient and local SNARE interactions. *J Neurosci*. 2011 Nov 30;31(48):17590-602. doi: 10.1523/JNEUROSCI.4065-11.2011. PMID: 22131420

### **RAMOS-BROSSIER Mariana**

**Session:** GP started in March 2011 – PhD started in Oct 2011

**Doctoral school:** ED Bio SPC – Université Paris Descartes/Université Paris Diderot

**Thesis title:** Unraveling the impact of IL1RAPL1 mutations on synapse formation: towards potential therapies for intellectual disability.

**Thesis director:** Pierre BILLUART

**PhD defense:** 09.10.2015

**Position:** PostDoc – Institut Necker Enfants Malades (France) – **Franck OURY's** lab.

Montani C, **Ramos-Brossier M**, Ponzoni L, Gritti L, Cwetsch AW, Braida D, Saillour Y, Terragni B, Mantegazza M, Sala M, Verpelli C, **Billuart P**, Sala C. The X-linked intellectual disability protein IL1RAPL1 regulates dendrite complexity. *J Neurosci*. 2017 Jun 2. pii: 3775-16. doi: 10.1523/JNEUROSCI.3775-16.2017. [Epub ahead of print]. PMID: 28576939

**Ramos-Brossier M**, Montani C, Lebrun N, Gritti L, Martin C, Seminatore-Nole C, Toussaint A, Moreno S, Poirier K, Dorseuil O, Chelly J, Hackett A, Gecz J, Bieth E, Faudet A, Heron D, Frank Kooy R, Loeyes B, Humeau Y, Sala C, Billuart P. Novel IL1RAPL1 mutations associated with intellectual disability impair synaptogenesis. *Hum Mol Genet*. 2015 Feb 15;24(4):1106-18. doi: 10.1093/hmg/ddu523. PMID: 25305082

Houbaert X, Zhang CL, Gambino F, Lepleux M, Deshors M, Normand E, Levet F, **Ramos M**, Billuart P, Chelly J, Herzog E, Humeau Y. Target-specific vulnerability of excitatory synapses leads to deficits in associative memory in a model of intellectual disorder. *J Neurosci*. 2013 Aug 21;33(34):13805-19. doi: 10.1523/JNEUROSCI.1457-13.2013. PMID: 23966701

Faure C, **Ramos M, Girault JA**. Pyk2 cytonuclear localization: mechanisms and regulation by serine dephosphorylation. *Cell Mol Life Sci*. 2013 Jan;70(1):137-52. doi: 10.1007/s00018-012-1075-5. PMID: 22802128

### **REPAK Emilienne**

**Session:** GP started in Sept 2009 – PhD started in Oct 2010

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Characterization of a novel photo-reversible NMDA receptor-specific agonist for precise temporal control of receptor activation.

**Thesis director:** David DIGREGORIO

**PhD defense:** 30.09.2014

**Position:** Test & Installation Engineer – **Scientifica** (United Kingdom).

Laprell L, **Repak E**, Franckevicius V, Hartrampf F, Terhag J, Hollmann M, Sumser M, Rebola N, DiGregorio DA, Trauner D. Optical control of NMDA receptors with a diffusible photoswitch. *Nat Commun*. 2015 Aug 27;6:8076. doi: 10.1038/ncomms9076. PMID: 26311290

### **SAHEL Aurelia**

**Session:** GP started in Sept 2008 – PhD started in Oct 2009

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Neuron-NG2 cell synapses in myelination, remyelination, and multiple sclerosis.

**Thesis director:** Brahim NAIT-OUMESMAR

**PhD defense:** 30.09.2013

**Position:** Reoriented – Medicine School (France).

**Sahel A**, Ortiz FC, Kerninon C, Maldonado PP, Angulo MC, Nait-Oumesmar B. Alteration of synaptic connectivity of oligodendrocyte precursor cells following demyelination. *Front Cell Neurosci.* 2015 Mar 17;9:77. doi: 10.3389/fncel.2015.00077. eCollection 2015. PMID: 25852473

## **SAKAE Diana**

**Session:** GP started in March 2010 – PhD started in Oct 2010

**Doctoral school:** ED 158 – UPMC

**Thesis title:** The Vesicular Glutamate Transporter type three in the nucleus accumbens and the regulation of reward and cocaine intake.

**Thesis director:** Salah EL MESTIKAWY

**PhD defense:** 11.04.2014

**Position:** PostDoc – University of Dundee (United Kingdom) – **Stephen MARTIN's** lab.

Fasano C, Rocchetti J, Pietrajtis K, Zander JF, Manseau F, **Sakae DY**, Marcus-Sells M, Ramet L, Morel LJ, Carrel D, Dumas S, Bolte S, Bernard V, Vigneault E, Goutagny R, Ahnert-Hilger G, Giros B, Daumas S3, Williams S, **El Mestikawy S**. Regulation of the Hippocampal Network by VGLUT3-Positive CCK- GABAergic Basket Cells. *Front Cell Neurosci.* 2017 May 16;11:140. doi: 10.3389/fncel.2017.00140. eCollection 2017. PMID: 28559797

Ramet L, Zimmermann J, Bersot T, Poirel O, De Gois S, Silm K, **Sakae DY**, Mansouri-Guilani N, Bourque MJ, Trudeau LE, Pietrancosta N, Daumas S, Bernard V, Rosenmund C, **El Mestikawy S**. Characterization of a Human Point Mutation of VGLUT3 (p.A211V) in the Rodent Brain Suggests a Nonuniform Distribution of the Transporter in Synaptic Vesicles. *J Neurosci.* 2017 Apr 12;37(15):4181-4199. doi: 10.1523/JNEUROSCI.0282-16.2017. Epub 2017 Mar 17. PMID: 28314816

**Diana Yae Sakae**, Fabio Marti, Salvatore Lecca, Florence Vorspan, Elena Martín-García, Lydie Jacqueline Morel, Annabelle Henrion, Javier Gutiérrez-Cuesta, Antoine Besnard, Nicolas Heck, Etienne Herzog, Susanne Bolte, Vania F. Prado, Marco A.M. Prado, Frank Bellivier, Chin B. Eap, Séverine Crettol, Peter Vanhoutte, Jocelyne Caboche, Alain Gratton, Luc Moquin, Bruno Giros, Rafael Maldonado, Stéphanie Daumas, Manuel Mameli, Stéphane Jamain, **Salah El Mestikawy**. The absence of VGLUT3 predisposes to cocaine abuse by increasing dopamine and glutamate signaling in the nucleus accumbens *Mol Psychiatry.* 2015 Nov;20(11):1448-59. doi: 10.1038/mp.2015.104. Epub 2015 Aug 4. PMID: 26239290

## **SKVORTSOVA Vasilisa**

**Session:** GP started in Sept 2010 – PhD started in Oct 2011

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Neural mechanisms of instrumental learning: neuroimaging, pharmacological and stimulation studies in humans.

**Thesis director:** Mathias PESSIGLIONE

**PhD defense:** 17.09.2015

**Position:** PostDoc – Ecole Normale Supérieure (France) – **Etienne KOEHLIN's** lab.

Schmidt L, **Skvortsova V**, Kullen C, Weber B, **Plassmann H**. How context alters value: The brain's valuation and affective regulation system link price cues to experienced taste pleasantness. *Sci Rep.* 2017 Aug 14;7(1):8098. doi: 10.1038/s41598-017-08080-0. PMID: 28808246

**Skvortsova V**, Degos B, Welter ML, Vidailhet M, **Pessiglione M**. A selective role for dopamine in learning to maximize reward but not to minimize effort: evidence from patients with Parkinson's disease. *J Neurosci.* 2017 Jun 21;37(25):6087-6097. doi: 10.1523/JNEUROSCI.2081-16.2017. Epub 2017 May 24. PMID: 28539420

**Skvortsova V, Palminteri S, Pessiglione M.** Learning to minimize efforts versus maximizing rewards: computational principles and neural correlates. *J Neurosci.* 2014 Nov 19;34(47):15621-30. doi: 10.1523/JNEUROSCI.1350-14.2014. PMID: 25411490

### **STERNBERG Jenna**

**Session:** GP started in Sept 2011 – PhD started in Nov 2012

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Neuronal populations underlying locomotion in the zebrafish.

**Thesis director:** Claire WYART

**PhD defense:** 20.09.2016

**Position:** PostDoc – Harvard University – Department of Molecular and Cellular Biology (USA) – **Alexander SCHIER's** lab.

Djenoune L, Desban L, Gomez J, **Sternberg JR**, Prendergast A, Langui D, Quan FB, Marnas H, Auer TO, Rio JP, Del Bene F, Bardet PL, **Wyart C.** The dual developmental origin of spinal cerebrospinal fluid-contacting neurons gives rise to distinct functional subtypes. *Sci Rep.* 2017 Apr 7;7(1):719. doi: 10.1038/s41598-017-00350-1. PMID: 28389647

**Sternberg JR**, Severi KE, Fidelin K, Gomez J, Ihara H, Alcheikh Y, Hubbard JM, Kawakami K, Suster M, **Wyart C.** Optimization of a Neurotoxin to Investigate the Contribution of Excitatory Interneurons to Speed Modulation In Vivo. *Curr Biol.* 2016 Sep 12;26(17):2319-28. doi: 10.1016/j.cub.2016.06.037. PMID: 27524486

Lauterbach MA, Ronzitti E, **Sternberg JR Wyart C**, Emiliani V. Fast Calcium Imaging with Optical Sectioning via HiLo Microscopy. *PLoS One.* 2015 Dec 1;10(12):e0143681. doi: 10.1371/journal.pone.0143681. PMID: 26625116

**Sternberg JR, Wyart C.** Neuronal wiring: linking dendrite placement to synapse formation. *Curr Biol.* 2015 Mar 2;25(5):R190-1. doi: 10.1016/j.cub.2015.01.006. PMID: 25734265

De Vico Fallani F, Corazzol M, **Sternberg JR, Wyart C**, Chavez M. Hierarchy of neural organization in the embryonic spinal cord: granger-causality graph analysis of in vivo calcium imaging data. *IEEE Trans Neural Syst Rehabil Eng.* 2015 May;23(3):333-41. doi: 10.1109/TNSRE.2014.2341632. Epub 2014 Aug 6. PMID: 25122836

Olivier Mirat, **Sternberg JR**, Kristen E. Severi and Claire Wyart. ZebraZoom: an automated program for high-throughput behavioral analysis and categorization. *Front Neural Circuits.* 2013 Jun 12;7:107. doi: 10.3389/fncir.2013.00107. PMID: 23781175

### **TELENCZUK KRAMAREK Maria**

**Session:** GP started in Sept 2011 – PhD started in Oct 2012

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Intracellular and extracellular signatures of action potentials initiated in the axon.

**Thesis director:** Romain BRETTE

**PhD defense:** 23.09.2016

**Position:** PostDoc –Unité de Neurosciences, information et complexité (France) – **Alain DESTEXHE's** lab.

**Telenczuk M, Fontaine B, Brette R.** The basis of sharp spike onset in standard biophysical models. *PLoS One.* 2017 Apr 25;12(4):e0175362. doi:10.1371/journal.pone.0175362. eCollection 2017. PMID: 28441389.

Bazlot M, **Teleńczuk MT**, Miles R. Single CA3 pyramidal cells trigger sharp waves in vitro by exciting interneurons. *J Physiol.* 2016 May 15;594(10):2565-77. doi: 10.1113/JP271644. PMID: 26728572

Le Duigou C, Simonnet J, **Teleńczuk MT**, Fricker D, Miles R. Recurrent synapses and circuits in the CA3 region of the hippocampus: an associative network. *Front Cell Neurosci.* 2014 Jan 8;7:262. doi: 10.3389/fncel.2013.00262. PMID: 24409118.

### **TINTERRI Andrea**

**Session:** GP started in Sept 2012 – PhD started in Feb 2013

**Doctoral school:** ED 515 – UPMC

**Thesis title:** From fate specification to circuit formation within the basal ganglia.

**Thesis director:** Sonia GAREL

**PhD defense:** 30.09.2016

**Position:** PostDoc – Institut de Biologie de l'École Normale Supérieure (France) – **Sonia GAREL's** lab.

**Tinterri A, Deck M, Keita M, Mailhes C, Rubin AN, Kessar N, Lokmane L, Bielle F, Garel S.** Tangential migration of corridor guidepost neurons contributes to anxiety circuits. *J Comp Neurol.* 2017 Sep 18. doi: 10.1002/cne.24330. [Epub ahead of print]. PMID: 28921616

## Wu Jinjin

**Session:** GP started in Sept 2010 – PhD started in Oct 2011

**Doctoral school:** ED 419 – Université Paris-Sud

**Thesis title:** Neural Bases of Breathing in the Mouse : Monosynaptic Tracing and Genetic Dissection of Phrenic Premotor Neurons.

**Thesis director:** Gilles FORTIN

**PhD defense:** 28.06.2016

**Position:** Faculty member – Capital Medical University – Department of Neurobiology (China).

**Wu J, Capelli P, Bouvier J, Goulding M, Arber S, Fortin G.** A V0 core neuronal circuit for inspiration. *Nat Commun.* 2017 Sep 15;8(1):544. doi: 10.1038/s41467-017-00589-2. PMID: 28916788

## YAVUZ Esin

**Session:** GP & PhD started in February 2008

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Source separation analysis of visual cortical dynamics revealed by voltage sensitive dye imaging.

**Thesis director:** Yves FREGNAC

**PhD defense:** 19.10.2012

**Position:** Chief Scientist & Cofunder – **Cyanapse** (United Kingdom).

## YPSILANTI Athena Rebecca

**Session:** GP and PhD started in Oct 2008

**Doctoral school:** ED 158 – UPMC

**Thesis title:** Role of Slit and Robo proteins in the postnatal forebrain

**Thesis director:** Alain CHÉDOTAL

**PhD defense:** 25.10.2012

**Position:** PostDoc – University of California (USA) – **John RUBENSTEIN's** lab.

**Minocha S, Valloton D, Ypsilanti AR, Fiumelli H, Allen EA, Yanagawa Y, Marin O, Chédotal A, Hornung JP, Lebrand C.** Nkx2.1-derived astrocytes and neurons together with Slit2 are indispensable for anterior commissure formation. *Nat Commun.* 2015 Apr 23;6:6887. doi: 10.1038/ncomms7887. PMID: 25904499

**Ypsilanti AR, Chédotal A.** Roundabout receptors. *Adv Neurobiol.* 2014;8:133-64. PMID: 25300136

**Mommersteeg MT, Andrews WD, Ypsilanti AR, Zelina P, Yeh ML, Norden J, Kispert A, Chédotal A, Christoffels VM, Parnavelas JG.** Slit-roundabout signaling regulates the development of the cardiac systemic venous return and pericardium. *Circ Res.* 2013 Feb 1;112(3):465-75. doi: 10.1161/CIRCRESAHA.112.277426. PMID: 23255421

Saha B, **Ypsilanti AR**, Boutin C, Cremer H, Chédotal A. Plexin-B2 regulates the proliferation and migration of neuroblasts in the postnatal and adult subventricular zone. *J Neurosci*. 2012 Nov 21;32(47):16892-905. doi: 10.1523/JNEUROSCI.0344-12.2012. PMID: 23175841

Cariboni A, Andrews WD, Memi F, **Ypsilanti AR**, Zelina P, Chédotal A, Parnavelas JG. Slit2 and Robo3 modulate the migration of GnRH-secreting neurons. *Development*. 2012 Sep;139(18):3326-31. doi: 10.1242/dev.079418. PMID: 22912413

**Ypsilanti AR**, Zagar Y, Chédotal A. Moving away from the midline: new developments for Slit and Robo. *Development*. 2010 Jun;137(12):1939-52. doi: 10.1242/dev.044511. PMID: 2050158