

Education

- 2012 Ph.D. in Neuroscience, (*summa cum laude*)
French Ministry of Higher Education and Research fellowship
University of Bordeaux, France
- 2008 Master degree in Neuroscience (*summa cum laude*)
University of Bordeaux, France
- 2006 Bachelor degree in Cellular Biology and Physiology (*cum laude*)
University of Bordeaux, France
- 2005 Higher National Diploma in Biological Engineering (*cum laude*)
Institute of technology, La Rochelle, France

Research experience

- 2020-present Assistant Professor in Neuroscience
The Rowett Institute, University of Aberdeen, Scotland, UK.
- 2017-2020 Research Associate (w/ Dr. James McCutcheon)
Dept. of Neuroscience Psychology and Behaviour, University of Leicester, England, UK
- 2019 Visiting fellow (3 months; w/ Dr. Yeka Aponte)
Cellular Neurobiology Research Branch, NIDA IRP, Baltimore, MD, USA.
- 2016-2017 Postdoctoral fellow (w/ Dr. Guillaume Ferreira)
Nutrition and Integrative Neurobiology laboratory INRA UMR 1286, University of Bordeaux, France.
- 2014-2016 Postdoctoral fellow (w/ Dr. Martine Cador)
Aquitaine Institute for Cognitive and Integrative Neuroscience (INCIA) UMR 5287
CNRS/University of Bordeaux, France.
- 2008-2012 PhD fellow (w/ Dr. Etienne Coutureau)
INCIA UMR 5287 CNRS/University of Bordeaux, France.
- 2008 Undergraduate research assistant (8 months; w/ Dr. Etienne Coutureau)
Centre for Integrative and Cognitive Neuroscience (CNIC) UMR 5228 CNRS/University of Bordeaux, France.
- 2007 Undergraduate research assistant (3 months; w/ Dr. Guillaume Drutel)
Pathophysiology of neuronal plasticity, INSERM U588, Bordeaux, France
- 2005 Undergraduate research assistant (10 weeks, w/ Dr. Etienne Coutureau)
Cognitive Neuroscience laboratory, CNSR UMR 5106, CNRS/University of Bordeaux, France.

Peer-reviewed publications

ORCID ID: 0000-0002-7888-338X; **Researcher ID:** H-4300-2013

(Google scholar: <https://scholar.google.co.in/citations?user=CNe4fIIAAAAJ&hl=en&oi=ao>)

As First author: 9

As Last author: 1

I. Original publications

1. **Naneix F.**, Pinder S.C., Summers M.Y., Rouleau R.M., Robinson E., Myers K.P, McCutcheon J.E. Portion size does not influence food consumption in rats. (2019) *Physiology & Behavior* 206: 225-231. doi.org/10.1016/j.physbeh.2019.04.013 (*bioRxiv* doi.org/10.1101/524272).

2. **Naneix F.**, Darlot F., De Smedt-Peyrusse V., Pape J-R., Coutureau E., Cador M. Protracted motivational dopamine-related deficits following adolescence sugar overconsumption (2018). *Neuropharmacology* 129: 12-25. doi.org/10.1016/j.neuropharm.2017.11.021
3. **Naneix F.***, Tantot F.*, Glangetas C., Kaufling J, Janthakhin Y., Boitard C., De Smedt-Peyrusse V., Pape J-R., Vancassel S., Trifilieff P., Georges F., Coutureau E., Ferreira G. Impact of early consumption of high-fat diet on the mesolimbic system (2017). *eNeuro* 4(3). doi.org/10.1523/ENEURO.0120-17.2017
Article summarized on NeurOnline website: <https://neuronline.sfn.org/scientific-research/high-fat-diet-during-adolescence-leads-to-alterations-in-the-functioning-of-the-dopamine-system#.WlYYSNYr-Ew.link>
4. Tantot F. Parkes S.L., Marchand A.R., Boitard C. **Naneix F.**, Layé S., Trifilieff P., Coutureau E., Ferreira G. The effect of high-fat diet consumption on appetitive instrumental behavior in rats (2017). *Appetite* 108: 203-211. doi.org/10.1016/j.appet.2016.10.001
5. **Naneix F.**, Darlot F., Coutureau E., Cador M. Long-lasting deficits in hedonic and nucleus accumbens reactivity to sweet rewards by sugar overconsumption during adolescence (2016). *European Journal of Neuroscience* 43: 671-680. doi.org/10.1111/ejn.13149
6. Alcaraz F.*, **Naneix F.***, Desfosses E., Marchand A.R., Wolff M., Coutureau E. (*equal contribution) Dissociable effects of anterior and mediodorsal thalamic regions on spatial goal-directed behavior (2014). *Brain Structure and Function* 221(1): 79-89. doi.org/10.1007/s00429-014-0893-7
7. **Naneix F.**, Marchand A.R., Pichon A., Pape J-R., Coutureau E. Adolescent stimulation of D2 receptors alters the maturation of dopamine-dependent goal-directed behavior (2013). *Neuropsychopharmacology* 38(8): 1566-1574. doi.org/10.1038/npp.2013.55
8. **Naneix F.**, Marchand A.R., Di Scala G., Pape J-R., Coutureau E. Parallel maturation of goal-directed behavior and dopaminergic systems during adolescence (2012). *The Journal of Neuroscience* 32(46): 16223-16232. doi.org/10.1523/JNEUROSCI.3080-12.2012
9. **Naneix F.**, Marchand A.R., Di Scala G., Pape J-R., Coutureau E. A role for medial prefrontal dopaminergic innervation in instrumental conditioning (2009). *The Journal of Neuroscience* 29(18): 6599-6606. doi.org/10.1523/JNEUROSCI.1234-09.2009

II. Reviews

1. **Naneix F.**, Peters K.Z., McCutcheon J.E. Investigating the effect of physiological need states on palatability and motivation using microstructural analysis of licking (in press). *Neuroscience (Special Issue: Neuroscience of Obesity)*. doi.org/10.1016/j.neuroscience.2019.10.036

III. Commentaries

1. Parkes S.L., Furlong T.M., **Naneix F.** Commentary "Cafeteria diet impairs expression of sensory-specific satiety and stimulus-outcome learning". *Frontiers in Psychology*. doi.org/10.3389/fpsyg.2015.00536

IV. Under review/preprint articles

1. Chiacchierini G.*, **Naneix F.***, Peters K.Z., Snoeren E.M.S., McCutcheon J.E. (*equal contribution) Protein appetite drives activity in the ventral tegmental area. *bioRxiv* doi.org/10.1101/542340
2. **Naneix F.**, Peters K.Z., Young A.M.J., McCutcheon J.E. Age dependent effects of protein restriction on the dopamine system. *bioRxiv* doi.org/10.1101/2020.04.09.033985 (under review)

3. **Naneix F.***, Bakoyiannis I.*, Santoyo-Zedillo M., Bosch-Bouju, Pacheco-Lopez G., Coutureau E., Ferreira G. Chemogenetic silencing of ventral hippocampus and amygdala reveals a double dissociation in periadolescent obesogenic diet-induced memory alterations (submitted)

Grants and fellowships

- 2019 **Doctoral College Early Career Researcher Fund (3 months, £2k; Research fellow)**
University of Leicester
"In vivo imaging of hypothalamic populations activity in obesity models" (in collaboration with Dr. Yeka Aponte, NIDA IRP, Baltimore, USA).
- 2014-2016 **Fond Français Alimentation et Santé postdoctoral fellowship (2 years, €130k; Postdoctoral fellow / PI : Dr. Martine Cador)**
"Impact of sucrose overconsumption during adolescence on motivational and hedonic processes"
- 2012 **Fondation pour la Recherche Médicale (FRM) postdoctoral short-term fellowship (6 months, €6k; Research fellow)**
"Maturation and vulnerability of the dopamine system during adolescence"
- 2008 **French Ministry of Higher Education and Research Ph.D. fellowship (3 years, €60k)**
"Role and maturation of the dopamine mesocortical pathway in action control"

Grant applications (unfunded)

- 2018 **Marie Skłodowska-Curie Actions Individual fellowship (Score: 84.6%)**
"Impact of sugar overconsumption during adolescence on the control of food-seeking behaviour by limbic circuits"
- 2017 **Marie Skłodowska-Curie Actions Individual fellowship (Score: 90.4%)**
"Impact of juvenile obesity on nutritional coding in mesolimbic circuits"
Brain & Behavior Research Foundation Young Investigator grant
"Impact of food binge eating during adolescence on mesolimbic dopamine circuits underlying reward-seeking behaviors"
Biotechnology and Biological Sciences Research Council (BBSRC) as Co-Investigator (Score: 3.75/6)
"Impact of sugar binge consumption during adolescence on the control of food-seeking behaviours by mesolimbic circuits"

Honours and Awards

- 2020 Symposium Chair, Monitoring Molecules in Neuroscience (MMiN) meeting 2021, Lyon, "Central and Peripheral control of feeding" (cancelled in 2020 due to the COVID-19 pandemic).
- 2019 Symposium Chair, EBBS meeting 2019, Prague, *"Maturation and vulnerability of mesocorticolimbic circuitries"*.
EBBS 2019 Travel award (Elsevier-Brain and Behaviour Research).
The Physiology Society travel award to attend the Society for Neuroscience 2019 meeting.
- 2018 Research Leadership Programme, University of Leicester.

2017 Postdoc Prize talk, Dept. of Neuroscience, Psychology and Behaviour, University of Leicester.

Teaching/Training experience

I. PhD candidates

2018-2020 Co-supervision of Giulia Chiacchierini (College of Life Sciences doctoral program, Leicester)
2017 Co-supervision of Sophie Pinder (2018; MIBTP BBSRC-funded doctoral training, Leicester)
2016-2017 Co-supervision of Marianella Santoyo Zedillo (Health and Life Sciences Doctoral School, Bordeaux)

II. Postgraduate students

2019 Direct supervision of Lillian Behan (NIDA Summer Volunteer)
2016 Direct supervision of Imane Hurel (Neuroscience Master Program, Bordeaux)
2015 Co-supervision of Anaïs Saillard (Neuroscience Master Program, Bordeaux)
2011 Co-supervision of Mathilde Dausse (Neuroscience Master Program, Bordeaux)
2011 Direct supervision of Anaïs Pichon (Neuroscience Master Program, Bordeaux)
2010 Co-supervision of Geoffroy-Victor Belaud (Neuroscience Master Program, Bordeaux)

III. Demonstrating

2017 Demonstrator for the Neuroanatomy practical (BSc Biological Sciences, University of Leicester) ~75 students
2016 Instructor in the 3rd Cajal Training International Nutrition and Brain Summer school (Bordeaux)
2014 Instructor in the 1st Cajal Training International Nutrition and Brain Summer school (Bordeaux)

Professional activities

I. Peer review service

Ad Hoc:

Addiction Biology
Behavioural Processes
Brain Research
Journal of Comparative Neurology
Neuropharmacology

With supervisors:

Current biology
Psychopharmacology

II. Conference activities

- MMiN 2021 meeting, Lyon: Session organizer and chair "*Central and peripheral control of feeding*"
- EBBS 2019 meeting, Prague: Session organizer and chair "*Maturation and vulnerability of mesocorticolimbic circuitries*"

III. Administration and community engagement

2018-2019 Organization committee member and participant (dynamic poster and experiment about *Taste detection and coding in humans and animal models*), Brain Awareness Day (2018-2019), University of Leicester.

2018	Organization committee member, Postgraduate Researchers Day 2018 of the Department of Neuroscience, Psychology and Behaviour, University of Leicester.
2010	Organization committee member, Bordeaux Neurosciences Institute Annual Meeting.
2009-2011	Organization committee member, Bordeaux Health and Life Sciences Doctoral School, Arcachon, France
2009	Student organization committee member, NeuroFrance meeting, Bordeaux, France.
2008-2012	Student Elected member at the INCIA department council
2008-2012	Student Elected member at the Bordeaux Health and Life Sciences Doctoral School scientific council.

IV. Scientific societies

French Neuroscience society (2008-present), Federation of European Neuroscience Societies (FENS, 2008-present), European Brain and Behaviour Society (EBBS, 2008-present), European Behavioural Pharmacology Society (EBPS, 2016-present), The Physiology Society (2019-present), Society for Neuroscience (SfN, 2016-present).

Research techniques

<i>In vivo</i> neuronal recordings	<ul style="list-style-type: none"> • Genetically-encoded calcium (GCaMP) and biosensor (dLight) imaging in behaving rats and mice • Fibre photometry recordings • Miniaturised fluorescence microscope and GRIN lens implantation.
<i>Ex vivo</i> fast-scan cyclic voltammetry	<ul style="list-style-type: none"> • Slice recordings of dopamine release in response to electrical or drug stimulation.
Rodent behaviour	<ul style="list-style-type: none"> • Associate learning procedures (Pavlovian and instrumental conditioning). • Feeding, motivation and hedonic processes (progressive ratio task, licking microstructure analysis, hedonic reactivity). • Intra-oral and intra-gastric administration • Short and long-term memory testing (object location and recognition memory, T-Maze task). • Locomotor activity, open-field behaviour, elevated plus-maze. • Systemic pharmacological manipulations (i.p., s.c., i.m.).
Targeting and manipulation of brain circuits and neuronal populations	<ul style="list-style-type: none"> • Excitotoxic lesions (<i>e.g.</i> 6-OHDA lesions). • Pharmacological local approaches using Intracerebral drug microinfusions. • Viral targeting. • Retrograde tracers. • Chemogenetic approaches (DREADD).
Rodent surgery	<ul style="list-style-type: none"> • Rat and mouse stereotaxic surgeries.

	<ul style="list-style-type: none"> • Intra-oral and intra-gastric catheter. • Brain cannula implantation. • Optical fibre and GRIN lenses brain implantation.
Ex vivo brain analysis	<ul style="list-style-type: none"> • Bright field and fluorescent immunostaining and microscopy • Molecular biology approaches (RNA extraction, reverse transcription, quantitative RT-PCR, electrophoresis) • Western Blot.

Language: French (mother tongue), English (fluent reader, speaker and writer).

IT skills: GraphPad Prism, ImageJ, Adobe Illustrator and Photoshop, Python.

Scientific presentations

I. Invited talks

- 2017 “Chemogenetic targeting of amygdalo-hippocampal circuit involved in high-fat diet-induced memory impairments”. *10th meeting Nutrition and Neuroscience*, Bordeaux, France.
- 2015 “Impact of sugar overconsumption during adolescence on hedonic and motivational processes”. *8th meeting Nutrition and Neuroscience*, Bordeaux, France.
- 2013 “Role and maturation of the dopamine mesocortical pathway in goal-directed behaviour”. *Research Institute of Molecular Pathology (IMP)*, Vienna, Austria.
- 2012 “Dopamine and action control: involvement and maturation of the mesocortical pathway”. *Nutrition and Integrative Neurobiology laboratory*, University of Bordeaux, France.
- 2011 “Dopamine and action control in the adult and adolescent Rat”. *11th Bordeaux Health and Life Sciences Doctoral School Meeting*, Arcachon, France.

II. Selected talks

- 2019: “Feed your teenage brain: impact of food diets during adolescence on dopamine circuits and functions”. *EBBS meeting*, Prague, Czech Republic.
- “Protein appetite drives VTA neural activity”. *EBBS Young Investigators Blitz session*, Prague, Czech Republic.
- 2017: “Feed your teenage brain: how food diet during adolescence can affect cognitive and brain development”. *Postdoc Prize talk, Dept. of Neuroscience, Psychology and Behaviour*, University of Leicester, UK.
- “Amygdalo-hippocampal pathway regulates diet-induced memory impairments”. *NeuroMem meeting*, Bordeaux, France.
- 2016: “Activation of mesolimbic pathway reverses deficits induced by sugar overconsumption during adolescence”. *NeuroMem meeting*, Lacanau, France.
- 2010: “Adolescence and behavioural control in Rat”. *NeuroMem meeting*, Oléron, France.

III. Posters in national and international conferences

- 2019 **Naneix F.**, Chiacchierini G., Peters K.Z., Snoeren E.M.S., McCutcheon J.E. Impact of protein appetite on the dopamine mesolimbic system. *Society for Neuroscience Annual meeting*, Chicago, USA.
- Chiacchierini G., **Naneix F.**, Peters K.Z., Snoeren E.M.S., McCutcheon J.E. Restriction of dietary protein leads to rapid and selective preference for protein and elevated neural activity in ventral tegmental area. *SSIB 2019 meeting*, Utrecht, Netherlands.
- Chiacchierini G., **Naneix F.**, Peters K.Z., Snoeren E.M.S., McCutcheon J.E. Restriction of dietary protein leads to rapid and selective preference for protein and elevated neural activity in ventral tegmental area. *British Neuroscience Association 2019*, Dublin, Ireland.
- Chiacchierini G., **Naneix F.**, Peters K.Z., Snoeren E.M.S., McCutcheon J.E. Restriction of dietary protein leads to rapid and selective preference for protein and impact the mesolimbic system. *Neuroscience of Energy Balance Symposium*, Manchester, UK.
- Bakoyiannis I., **Naneix F.**, Santoyo-Zedillo M., Pacheco-Lopez G., Coutureau E., Ferreira, G. Are obesogenic diet-induced memory alterations during adolescence related to changes in amygdalo-hippocampal pathway? *NeuroFrance 2019*, Marseille, France.
- 2018 Chiacchierini G., **Naneix F.**, Peters K.Z., Snoeren E.M.S., McCutcheon J.E. Restriction of dietary proteins alters preference for protein and associated neural activity in ventral tegmental area. *Monitoring Molecules in Neuroscience 2018*, Oxford, UK.
- 2017 **Naneix F.**, Santoyo Zedillo M., Pacheco-Lopez G., Coutureau E., Ferreira G. Hippocampal-dependent memory impairment induced by high-fat diet consumption during adolescence is mediated by enhanced amygdala activity. *NeuroFrance 2017*, Bordeaux, France.
- Darlot F., **Naneix F.**, Herrouin C., Cathala A., Spampinato U., Coutureau E., Cador M. Long-term impact of sucrose overconsumption at adolescence on adult dopamine and reward-related behavior. *NeuroFrance 2017*, Bordeaux, France.
- Pacheco-Lopez G., **Naneix F.**, Santoyo Zedillo M., Coutureau E., Ferreira G. Enhanced amygdala activity mediates hippocampal memory impairment induced by high-fat diet during adolescence. *SSIB 2017 meeting*, Montreal, Canada.
- 2016 **Naneix F.**, Herrouin C., Darlot F., Cathala A., Spampinato U., Coutureau E., Cador M. Long-term impact of sucrose overconsumption at adolescence on mesolimbic dopamine system. *Dopamine 2016*, Vienna, Austria.
- 2015 **Naneix F.**, Darlot F., Pape J-R., Coutureau E., Cador M. Long-term impact of sucrose overconsumption at adolescence on hedonic and motivational systems. *EBBS & EBPS Joint Meeting*, Verona, Italy.
- Tantot F., Glangetas C., Kaufling J., Janthakhin Y., Boitard C., **Naneix F.**, De SmedtPeyrusse V., Pape J-R., Marchand A.R., Laye S., Trifilieff P., Vancassel S., Georges F., Coutureau E., Ferreira G. Effect of juvenile high-fat diet consumption on mesolimbic dopaminergic system. *NeuroFrance 2015*, Montpellier, France.

- Cador M., **Naneix F.**, Pape J-R., Darlot F., Coutureau E. Overconsumption of sweet rewards at adolescence induced protracted down regulation of dopaminergic and opioidergic receptors at adulthood in rats. *NeuroFrance 2015*, Montpellier, France.
- 2014 Coutureau E., **Naneix F.**, Pape J-R., Darlot F., Cador M. Overconsumption of sweet rewards at adolescence induced protracted down regulation of dopaminergic and opioidergic receptors at adulthood in rats. 9th Federation of European Neuroscience Societies forum, Milan, July 2014. *FENS forum*, Milan, Italy.
- Cador M., **Naneix F.**, Darlot F., Pape J-R., Coutureau E. Overconsumption of sweet rewards at adolescence induced protracted down regulation of dopaminergic and opioidergic receptors at adulthood in Rats. *Society for Neuroscience Annual Meeting*, Washington DC, USA.
- Alcaraz F., **Naneix F.**, Desfosses E., Marchand A.R., Wolff M., Coutureau E. Dissociable effects of anterior and mediodorsal thalamic lesions on spatial goal-directed behaviour. *NeuroMem Meeting*, Grasse, France.
- 2013 Tantot F., Boitard C., **Naneix F.**, De Smedt-Peyrusse V., Pape J-R., Marchand A.R., Laye S., Coutureau E. and Ferreira G. Effect of juvenile high-fat diet consumption on dopamine reward system behavioral evidence and potential role of glucocorticoids. *NeuroFrance 2013*, Lyon, France.
- 2012 **Naneix F.**, Marchand A.R., Pichon A., Pape J-R., Coutureau E. Action control and maturation of dopaminergic system in adolescent rat. *FENS forum*, Barcelona, Spain.
- Boitard C., **Naneix F.**, Dausse M., Marchand A.R., Laye S., Coutureau E., Ferreira G. Differential effect of early high-fat diet consumption on mesolimbic and mesostriatal dopamine systems: Behavioral evidences. *NeuroMem Meeting*, Cargèse, France.
- Ferreira G., Boitard C., **Naneix F.**, Dausse M., Marchand A., Laye S., Coutureau E. Differential effect of early high-fat diet on mesocortical and mesolimbic dopamine systems: behavioral evidence. *FENS forum*, Barcelona, Spain.
- 2011 **Naneix F.**, Marchand A.R., Di Scala G., Pape J-R., Coutureau E. Action control and maturation of dopaminergic system in adolescent rat. *Society for Neuroscience Annual Meeting*, Washington DC, USA.
- 2010 **Naneix F.**, Marchand A.R., Di Scala G., Pape J-R., Coutureau E. Changes in response control across adolescence in the Rat. *Bordeaux Neurocampus Annual Meeting*, Bordeaux, France.
- 2009 **Naneix F.**, Marchand A.R., Di Scala G., Pape J-R., Coutureau E. A role for medial prefrontal dopaminergic innervation in goal-directed behaviour. *NeuroFrance 2009*, Bordeaux, France.
- Naneix F.**, Marchand A.R., Di Scala G., Pape J.R. Coutureau E. Specific contribution of medial prefrontal dopamine in goal-directed behavior. *EBBS meeting*, Rhodes, Greece.