CURRICULUM VITAE

PERSONAL INFORMATION

Family name, First name: **YALCIN Binnaz**
Researcher unique identifier: **ORCID 0000-0002-1924-6807**
Date of birth: **20th July 1977**
Nationality: **French-Turkish**
URL for web site: https://blog.u-bourgogne.fr/yalcingroup/

• EDUCATION

2014 **HDR** in Neurosciences (Accreditation to Direct Research, Highest French Academic degree)
Institute of Genetics and Molecular and Cellular Biology, University of Strasbourg, France

2007 **PhD** in Genetics (Supervision: Prof Richard Mott)
Wellcome Centre for Human Genetics, University of Oxford, Exeter College, UK

• CURRENT POSITION

2019-present **Tenured Assistant Professor** in Neurogenetics
Dijon Centre of Translational and Molecular Medicine, INSERM Unit 1231, Dijon, France

• PREVIOUS POSITIONS

2016-2019 **Junior Team Leader**
Institute of Genetics and Molecular and Cellular Biology, University of Strasbourg, France

2011-2016 **Independent Research Fellow**
Centre for Integrative Genomics, Switzerland

2007-2011 **Postdoctoral Fellow** (Advisor: Prof Jonathan Flint)
Wellcome Centre for Human Genetics, Oxford University, UK

2002-2005 **PhD** entitled "Gene Mapping in Animal Models for Anxiety" (Advisor: Prof Richard Mott)
Wellcome Centre for Human Genetics, Oxford University, UK

• SELECTED FELLOWSHIPS, AWARDS AND APPOINTMENTS

2023-2027 **ANR Researcher** Laureate, University of Bourgogne Franche-Comté, France
2022-2023 **Nominated Scientific Evaluation Member**, European Joint Programme on Rare Diseases
2022-2026 **Nominated Scientific Evaluation Member**, INSERM
2021 **INSERM International Researcher** Award (first laureate of the program)
2020 **European Commission Solve-RD** Award (first laureate of the seeding program)
2019 **INSERM Permanent Researcher** position in Genetics (ranked first)
2019 **Mary Lyon** Award in recognition for an early-stage independent female researcher
2018-2021 **ANR Young Researcher** Laureate, University of Strasbourg, France
2016-2019 **Chair of Excellence** Award, University of Strasbourg, France
2016 **Gutenberg Mobility** Award, University of Strasbourg, France
2015 **Tremplin** Fellowship for Female Researchers, University of Lausanne, Switzerland
2013-2016 **SNSF Ambizione** Fellowship, University of Lausanne, Switzerland
2013 **Korner Mobility** Fellowship Fund, University of Sussex, UK
2011-2014 **ANR Postdoctoral Researcher** Laureate, University of Strasbourg
2011-2013 **EMBO Long-Term Researcher** Fellowship, University of Lausanne, Switzerland
2008-2011 **Wellcome Trust Postdoctoral** Fellowship, University of Oxford, UK
2008 **Academic Merit** Award, University of Oxford, UK
2002 **Wellcome PhD Studentship** Award, University of Oxford, UK

• INVITED TEACHING ACTIVITIES

2023 1-hour broad audience lecture, Topic: Neurobiology of Cohen syndrome, Clermont, France
2021-present 2-hour invited lecture, Topic: Neuro-anatomy, UBFC, Besançon, France
2020-present 2-hour invited lecture, Topic: Neuro-signalisation, University of Burgundy, Dijon, France
2019 4-hour broad audience lecture, Topic: Brain Development in Children, Dijon, France
2012-present Annual 2-hour invited lecture, Topic: Mouse Genetics, Pasteur Institute, Paris, France
2018 2-hour invited lecture, Topic: Next Generation Sequencing, University of Cambridge, UK
2016 3-days ITMO School, Topic: Translational Research in Neurosciences, Bordeaux, France
2015 1-week European Advanced School, Topic: Mouse Phenogenomics, Alsace, France
2013 2-hour invited lecture, Topic: Mouse Genomics, ESBS, University of Strasbourg, France

- **ORGANISATION OF SCIENTIFIC MEETINGS**

2023 Chair IMGS conference, Session: Human Disease Model, Japan (200 participants)
2022 Chair IRC5 conference, Session: Human Genetics, online (250 participants)
2021-present Coordinator of Webinars on Brain Research, IRC5 consortium (50 participants)
2020-present Organizer of Internal Seminars, INSERM Unit 1231, Dijon, France (50 participants)
2020 Organizer of Symposium on Brain Imaging, University of Burgundy, Dijon (50 participants)
2018 Organizer of Symposium on Statistics, University of Strasbourg, France (50 participants)
2017 Chair IMGS conference, Session: Human Disease Model, Germany (150 participants)

- **INSTITUTIONAL RESPONSIBILITIES**

2023 Nominated member at the European Joint Programme on Rare Diseases
2022-2027 Nominated member at the INSERM Scientific Evaluation Board
2022-present Scientific Advisor Panel Member of the PhD School (University of Milan)
2020 Nomination as President for the International Mouse Genome Society (IMGS)
2019-present Ambassador, eLIFE Early Career Researchers Community
2016-present PhD thesis examiner (N=13)
2016-present Member of examination board for Masters and PhD students (N=4)
2016-present HDR (Accreditation to Direct Research, Highest French Academic degree) examiner (N=2)

- **REVIEWING ACTIVITIES**

2016-present **Expert Reviewer of Journals**: Nature, Nature Genetics, Nucleic Acids Research, Trends in Genetics, Cell Reports, Theranostics, eLife, Neurobiology of Disease, Frontiers Cell & Developmental Biology, PLOS Genetics, International Journal of Neuropsychopharmacology, Progress in Neuropsychopharmacology & Biological Psychiatry, Frontiers in Neuroscience, Human Mutation, Molecular Neurobiology, Molecular Genetics & Metabolism, BMC Genomics (x2), Biomolecules, PLOS One (x2), Genes Brain & Behaviour, Journal of Clinical Medicine, Mammalian Genome (x3), BMC Research Notes, Journal of Metabolomics & Systems Biology, Genes Genomes & Genetics (x3), Life Science Alliance, Brain Research (x3), Journal of Paediatric Genetics (**1 every 2 months**)
2016-present **Expert Reviewer of Grants**: Sorbonne University Emergence Grant, European Joint Programme on Rare Diseases, MRC UK, French Foundation for Medical Research Line-Pomaret, IDEX Marseille, Research Foundation Flanders, Rare Disease Foundation
2016-present **Editorial Board Member**: Frontiers in Genetics

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

2021-present **Member** of various societies including NeuroFrance, FENS, ISTT, CFATG and ESHG
2020 **Nominated Member** to take the leadership of the International Mammalian Genome Society
2019-present **Co-director**, International Research Consortium for the Corpus Callosum and Connectivity
2016-present **Elected Member**, International Mammalian Genome Society
2005-2011 **Elected Member**, Complex Trait Consortium

- **CAREER BREAKS** (account for the temporary dip in publications)

03/18-04/19 6-month pregnancy-related sick leave + 6-month maternity leave
04/12-09/12 6-month sick leave
08/07-09/08 6-month pregnancy-related sick leave + 6-month maternity leave
07/05-08/06 6-month pregnancy-related sick leave + 6-month maternity leave

- **OTHER**

2017 The High Council for the Evaluation of Research and Higher Education Institutions (HCERES) has scored my team as "**excellent to outstanding with great future prospects**".

- **COVID-19 IMPACT TO SCIENTIFIC PRODUCTIVITY**

During the lockdown periods, my laboratory interrupted mouse experiments and reduced colony size to a strict minimum as we were not allowed to breed mice anymore. Also, during these periods, I experienced increased caring responsibilities for my dependent father and my children with home schooling.

Current research grants:

Project Title	*Funding source*	*Amount (Euros)*	*Period*	*Role of the PI*	*Relation to current proposal*
Chromatin remodeler CHD1L in neurogenesis and in 1q21.1 Copy Number Variant-associated neurodevelopmental phenotypes (**CHROMATISM**)	ANR	450 000	4 years (2022-2026)	Co-Coordinator	None
An integrated approach to uncover genetic, molecular, and cellular mechanisms underlying severe neurodevelopmental disorders (**NeuroGen**)	CEFIPRA	200 000	3 years (2022-2025)	Co-Coordinator	None
Genetic and functional characterization of WDR genes in neurodevelopmental disorders (**WDR**)	ANR	250 000	5 years (2018-2023)	Coordinator	None
Deciphering physio-pathological mechanisms to better understand comorbidities between neurodevelopmental disorders and obesity (**DIOBE**)	ANER	50 000	2 years (2022-2024)	Coordinator	None
Mouse models for CTNNA2 heterozygous *de novo* missense variants (**CTNNA2**)	Solve-RD	20 000	3 years (2021-2023)	Coordinator	None

On-going and submitted grant applications:

Project Title	*Funding source*	*Amount (Euros)*	*Period*	*Role of the PI*	*Relation to current proposal*
Investigation of the cerebellum as a target for the treatment of autism spectrum disorder	ANR	500 000	4 years (2024-2027)	Co-Coordinator	None
Dysregulation of Midasin 1 AAA ATPase impacts pre-60S particles export to the cytosol and causes a novel multisystem disease with cerebellar atrophy	Telethon	200 000	2 years (2024-2025)	Co-Investigator	None
In-depth functional characterization of new CTNNA2 variants involved in pediatric neurodevelopmental disorders to reduce the diagnostic odyssey	NIH	100 000	2 years (2024-2025)	Co-Coordinator	None
Genetics and physiopathology of rare disorders of the developing brain	BQR	100 000	2 years (2024-2025)	Coordinator	None
An integrated approach to uncover genetic, molecular, and cellular mechanisms underlying severe neurodevelopmental disorders	INSERM	75 000	5 years (2024-2028)	Coordinator	None

- **SHORT BIOSKETCH**

I have contributed to important aspects of neurological disease genetics using high-throughput genetic, genomic methodologies and mice as genetic models. My ambition has always been to pursue my career in functional brain disease genetics at the highest level. In 2011, I secured an EMBO Young Investigator Fellowship allowing me to move to Switzerland where I obtained an Ambizione Fellowship to work on the genetics of neurodevelopmental diseases. I set up my own laboratory in 2016 at the IGBMC (Strasbourg, France) through an international call in the framework of a Chair of excellence in research program. One year later, the High Council for the Evaluation of Research and Higher Education scored my team as "excellent to outstanding with great future prospects". I presented my work at 49 International Conferences of which 12 were under a formal invitation. I have received 17 awards/prizes. To fund my research, I raised and managed more than three million Euros and employed since 2016 four PhD students, three postdoctoral fellows, one engineer, six research assistants. I hosted in my laboratory more than 60 students worldwide at all levels (MSc, BSc, Intern, Assistants and ERASMUS). My first three PhD students have graduated each with one significant first-author paper (Kannan *et al.* 2017 PNAS, Mikhaleva *et al.* 2019 Nature Communications, Kretz *et al.* 2023 Genome Biology In revision). In 2019, I secured a tenured INSERM researcher position after being ranked Major in a highly competitive national selection. I have built an international reputation for the contribution to the field of brain biology with the identification of several important genes associated with neuroanatomical phenotypes and biomarkers. Driving the field forward, my leadership was recognized by an invitation to be part of the Governance Board of the International Research Consortium for the Corpus Callosum and Cerebral Connectivity (IRC5) and the International Mammalian Genome Society (IMGS).

- **OFFICIAL SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

2019-present **1 Postdoc**, **2 PhDs**, 1 Engineer, 10 Masters, 18 Undergraduates, 2 Research Assistants
Inserm Unit 1231, University of Bourgogne Franche-Comté, France

2016-2019 **2 Postdocs**, **2 PhDs**, 11 Masters, 16 Undergraduates, 4 Research Assistants
Institute of Genetics and Molecular and Cellular Biology, University of Strasbourg, France

- **PUBLICATIONS**

Total of 44 publications:
17 corresponding/last-author
9 first-author
8 invited

Biometrics (January 2023):
Category Normalised Citation Impact **3.2**
11% of publications in **Top 1%**, 40% in **Top 10%**
H-index **23**, Sum of the times cited **5532**

Articles published in: ***Cell*** (x1), ***Nature*** (x2), ***Nature Genetics*** (x2), ***Nature Communications*** (x3), ***Genome Biology*** (x4), ***MBE*** (x1), ***Science Advances*** (x1), ***Biological Psychiatry*** (x2), ***AJHG*** (x3), ***PNAS*** (x2), ***Genome Research*** (x2), ***GIM*** (x1), ***Journal of Neuroscience*** (x1), ***PLoS Genetics*** (x3), ***Human Genetics*** (x1), ***HMG*** (x1), ***IJMS*** (x1), ***Epilepsia*** (x1), ***Frontiers in Genetics*** (x1), ***Genetics*** (x2), ***Behavioural Brain Research*** (x1), ***PLoS ONE*** (x1), ***JANAT*** (x1), ***Mammalian Genome*** (x2) and ***CPMB*** (x3)

Selected publications

1. Kretz P, Wagner C, Mikhaleva A, Hugel S, Morella I, Montillot C, Kannan M, Fischer MC, Milhau M, Yalcin I, Brambilla R, Selloum M, Herault Y, Reymond A, Collins SC, **Yalcin B***. Dissecting the autism-associated 16p11.2 locus identifies sex-specific drivers in neuroanatomical phenotypes and unveils a new role for the major vault protein (in revision in **Genome Biology**). [*Correspondence].
2. Szpak M, Collins SC, Li Y, Liu X, Ayub Q, Vancollie VE, Lelliott CJ, Xue Y, **Yalcin B***, Yang H, Tyler-Smith C*. A positively-selected MAGEE2 LoF allele is associated with sexual dimorphism in human brain size, and shows similar phenotypes in Magee2 null mice. **Molecular Biology & Evolution**. 2021 Aug 31. [*Co-Correspondence].
3. Duncan AR, Vitobello A, Collins SC, Vancollie VE, Lelliott CJ, Rodan L, Shi J, Seman AR, Agolini E, Novelli A, Prontera P, Guillen Sacoto MJ, Santiago-Sim T, Trimouille A, Goizet C, Nizon M, Bruel AL, Philippe C, Grant PE, Wojcik MH, Stoler J, Genetti CA, van Dooren MF, Maas SM, Alders M, Faivre L, Sorlin A, Yoon G, **Yalcin B***, Agrawal PB*. Heterozygous Variants in KDM4B Lead to Global Developmental Delay and Neuroanatomical Defects. **AJHG**. 2020 Dec;107(6):1170-1177 [*Co-Correspondence].
4. Collins SC, Mikhaleva A, Vrcelj K, Vancollie VE, Wagner C, Demeure N, Whitley H, Kannan M, Balz R, Anthony LFE, Edwards A, Moine H, White JK, Adams DJ, Reymond A, Lelliott CJ, Webber C, **Yalcin B***. Large-scale neuroanatomical study uncovers 198 gene associations in mouse brain morphogenesis. **Nature Communications**. 2019 Aug;10(1):3465 [*Correspondence].
5. Kannan M, Bayam E, Wagner C, Rinaldi B, Kretz PF, Tilly P, Roos M, McGillewie L, Bär S, Minocha S, Chevalier C, Po C, Chelly J, Mandel JL, Borgatti R, Piton A, Kinnear C, Loos B, Adams DJ, Hérault Y, Collins SC, Friant S, Godin JD, **Yalcin B***. WD40-repeat 47, a microtubule-associated protein, is essential for brain development and autophagy. **PNAS**. 2017 Oct 31;114(44) [*Correspondence].

6. **Yalcin B***, Wong K, Bhomra A, Goodson M, Keane T, Adams D, Flint J. The fine-scale architecture of structural variants in 17 mouse genomes. **Genome Biology**. 2012, 13(3):R18 [*Correspondence].
7. **Yalcin B**, Wong K, Agam A, Goodson M, Keane T, Gan X, Nellåker C, Goodstadt L, Nicod J, Bhomra A, Whitley H, Cleak J, Dutton R, Mott R, Adams D, Flint J. Sequence based characterization of structural variation in the mouse genome. **Nature**. 2011, 477(7364):326-9.
8. **Yalcin B**, Nicod J, Bhomra A, Davidson S, Cleak J, Farinelli L, Østerås M, Yuan W, Whitley A, Gan X, Goodson M, Klenerman P, Satpathy A, Benoist C, Adams DJ, Mott R, Flint J. Commercially available outbred mice for genome-wide association studies. **Plos Genetics**. 2010, 2;6(9).
9. **Yalcin B**, Willis-Owen SA, Fullerton J, Meesaq A, Deacon RM, Rawlins JNP, Copley RR, Morris AP, Flint J, Mott R. Genetic dissection of a behavioural quantitative trait locus shows that *Rgs2* modulates anxiety in mice. **Nature Genetics**. 2004, 36:1197-1202.
10. **Yalcin B**, Fullerton J, Miller S, Keays DA, Brady SA, Bhomra A, Jefferson A, Volpi E, Copley RR, Flint J, Mott R. Unexpected complexity in the haplotypes of commonly used inbred strains of laboratory mice. **PNAS**. 2004, 101:9734-9739.

- **RESEARCH MONOGRAPHS**

I have built an international reputation for the careful assessment of neuroanatomical phenotypes. I have been formally invited to publish our collection of standard operating procedures (PMIDs: 29944194, 27584555 and 27584555) and to contribute to a chapter on innovation in neurosciences published by Springer Nature.

- **INVITED CONFERENCES**

2023 4th NeuroFrance Meeting, Lyon, **Talk**
2022 20th Anniversary ICS, Strasbourg, France, **Talk**
2021 International Research Consortium on Corpus Callosum, Brazil, **Talk** (online)
2019 3rd Meeting Gene Expression and Epigenome, Strasbourg, France, **Talk**
2018 33rd International Mouse Genome Conference, USA, **Mary Lyon Award Talk**
2018 International Research Consortium on Corpus Callosum, California, USA, **Talk**
2017 Advancing Personalised Medicine with Animal Models, Athens, Greece, **Talk**
2017 2nd Functional annotation of genome-wide variants, Lausanne, Switzerland, **Talk**
2016 11th International Meeting on CNVc and Genes in Autism, Troina, Italy, **Talk**
2016 5th International Mouse Phenotyping Consortium, Strasbourg, France, **Talk**
2013 6th Colloque Belles Souris, Montpellier, France, **Talk**
2005 11th International School on Neurogenetics, Bordeaux, France, **Talk**

- **SELECTED CONFERENCES**

2023 36th International Mouse Genome Conference, Tsukuba, Japan, **Talk**
2022 35th International Mouse Genome Conference, Vancouver, Canada, **Talk**
2022 International Research Consortium on Corpus Callosum, USA, **Talk** (online)
2022 54th European Society of Human Genetics, Vienna, Austria, Poster and **Talk**
2022 11th Assises de Génétique Humaine et Médicale, Rennes, France, **Talk**
2017 50th European Society of Human Genetics, Copenhagen, Denmark, **Talk**
2016 1st Genomics of Brain Disorders, Hinxton, United Kingdom, Poster & **Talk**
2015 65th American Society of Human Genetics, USA, Poster & **Talk** (+ Award)
2015 *17th International Cognitive Disorders Workshop,* Strasbourg, France, **Talk**
2015 48th European Society of Human Genetics, Glasgow, Scotland, **Talk**
2015 2nd Gencodys Conference, Chania, Crete, **Talk**
2015 10th International Meeting on CNV and Genes in Autism, Italy, **Talk**
2014 7th Personal Genomes: Discovery, Treatment & Outcomes, CSH, USA, **Talk**
2014 28th International Mouse Genome Conference, Maine, USA, **Talk**
2014 10th Neurogenetics Symposium, Strasbourg, France, **Talk**
2014 6th Meeting of the International Society for CSF Disorders, Bristol, UK, **Talk**
2013 1st Neurosciences Meeting, Dijon, France, **Talk**
2012 11th Complex Trait Consortium Meeting, Pasteur Institute, Paris, France, **Talk**
2009 8th Complex Trait consortium Meeting, Manchester, United Kingdom, **Talk**
2003 17th International Mouse Genome Conference, Braunschweig, Germany, **Talk**
2003 2nd Complex Trait Consortium Meeting, Oxford, United Kingdom, **Talk**