

International Curriculum Vitae

Name: **CARRÉ Clément**; Tenured Associate Professor (MCU-HC) & co-group leader, PhD, HDR.
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Date of birth: March, 20th, 1977 - Country of citizenship: France

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SCIENCE EDUCATION/POSITIONS

From 2019 **co-group leader** of the TErBio lab IBPS - UMR7622, Paris, France
2016-2018 **co-group leader** of the GED lab IBPS - Paris, France
2016 **HDR** (Habilitation) - Pierre et Marie Curie Université
2006 **PhD, Biology, Genetics** - Pasteur Institute Paris, France
2003 **MSc, Biology, Genetics** - Jacques Monod Institute, Paris, France

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RESEARCH INTERESTS & ONGOING COLLABORATIONS

sncRNAs, RNA methylation, Epitranscriptomic, chromatin, RNAPII biogenesis. Pr. Yuri **Motorin**, University of Lorraine; Pr. Jozef **Gecz** – Australia, Child Hospital of Adelaide; Dr. Matthias **Schaefer**, MFPL, Vienna; Pr. Jean-Yves **Roignant**, Université de Lausanne; Dr. Damien **Brégeon**, IBPS, Sorbonne University Paris.

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RESEARCH EXPERIENCE

- Institut de Biologie Paris Seine - **January 2019** co-group leader of *TERbio* team: Transgenerational Epigenetics and small RNA biology (HCERES + evaluated wave D Dec 2017)
- Institut de Biologie Paris Seine (IBPS). 2016 to 2018: co-group leader of the Genetics & Epigenetics of *Drosophila* Laboratory. IBPS, Paris. Sept 2011-Oct 2013: ANR Postdoctoral fellow. Dr. Antoniewski lab.
- Wistar Institute of Philadelphia, 2009-2011 & Centre for Genomic Regulation, Barcelona 2007-2009: Postdoctoral fellow. Pr. Shiekhattar lab.
- IRB-Barcelona, Oct 2006-May 2007: Short term Postdoctoral fellow, Pr. Azorin lab.
- Pasteur Institute, Paris. France. 2002-2006; PhD in Genetics; Dr. Antoniewski lab.

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MENTORING (in **bold** the name of the PhD students for whom I am or was PhD director under my HDR).

From 2013 **16 PhD and 6 HDR Jury** (15 as reviewer) + 20 Thesis Advisory Committee (TAC)
2023 October **Nassim Meziane**, PhD student (fellowship obtained in July 2023, ED515)
2023 (6 month) Robin Hogg, M2 Génétique & Epignétique (GépiGéH, BMC)
2022 (3 month) Yuliya Yuryeva, M2 BMC - RNA genetics & biochemistry (BGA)
2021 (2 month each) BTS internship (L. Zeng, C. Tu and N. Uteene, J. Srikanthan), L3 (Y. Boujedli)
2021 - 2024 co-director of **Zoheir Ziriati**, PhD student (*iBio* fellowship in 2021, ED515)
2021 - 2024 co-director of PhD students **Maud Ginestet**, CdF and **Hayet Bouzid** CRI
2020 - 2023 co-director of **Mariangela Spagnuolo**, PhD student in Germany (DFG)
2019 - 2023 **Mira Brazane**, PhD student (fellowship obtained in July 2019, ED515)
2019 (6 month) Mira Brazane, Master 2 BMC - BGA (speciality RNA biochemistry)
2018-2019 Ludivine Rumbo, L2, L3 internship (2x2 month) Master BMC, now PhD at IJM
2018 (6 month) Salman Shehzada, Master 2 Erasmus now PhD at CGH Montpellier
2017 (6 month) Cyrinne Achour, Master 2 now PhD student at Umea University - Sweden
2017 - Sept 2020 **Dilyana Dimitrova**, PhD student (now project leader at *Scipio* Paris)
2016 (2 month) Mérième Bouabid, undergraduate student, L3
(1 month) Guillaume GERARD, undergraduate student L3
(6 month) Elie Makardjian, undergraduate student, Master 2
2015 (2 month) Guillaume Brulere, undergraduate student, L3
2014 - Sept 2018 **Margarita Angelova**, PhD student (now postdoc at Columbia University, NY)
2014 (6 month) Margarita Angelova, undergraduate student, Master 2
(3 month) Souraya Khouider, Master 1 student now PhD at ENS Paris.
2013 (1 year) Eleferia Chalatsi, Erasmus, Master 2, today PhD laureate (Pasteur Institute)
2012 (3 month) Sarah Zarah, undergraduate student, L3

2006 (6 month) Caroline Jacquier, Master 2. Now PhD and Mathematician teacher
 2005 (6 month) Nicolas Dos-Santos, undergraduate student, Master 2
 2003 (3month) Elisa Scola, undergraduate student, MD (Italy)

TEACHING

2020 - **Tenured Hors Class (HC) Associate Professor and Professor Qualification**
 2016 - 2019 **Tenured Associate Professor (HDR) at Sorbonne University**
 2013 - 2016 **Tenured Assistant Professor at the Pierre et Marie Curie University**
 2002 - 2005 **Teaching Assistant at Pierre et Marie Curie University**

HONORS, AWARDS & GRANTS

2023-2024 Projet **ARC** on tRNA Fragments (50K€/ 2 years, leader C. Carré)
ANR PRC # pAgoDE (A. Piton leader, C. Carré participant (100 K€ for our team))
 2021 **ANR-PRC #BioPic** (705K€ for 4 years, leader C. Carré, 350 K€ for our team)
 Grant **Emergence** Sorbonne Université (60 K€/ 2 years, leader C. Carré)
GenOmics #2 - Fondation Maladies Rares (30 K€, leader C. Carré)
La Ligue régionale contre le cancer (30 K€, leader C. Carré)
 Délégation CNRS (50% reduction for teaching in 2021-2022)
 2020 - 2021 Grant **Action-Incitative** from IBPS - 2020 (20 K€, leaders C. Carré and D. Brégeon)
 2020 - 2024 **DFG 53.0103/18** - leaders Roignant/ Carré *Nm in TE control* (30 K€/ an)
 2020 - 2021 Laureate of the CNRS "Délégation" program (teaching discharge 50%)
 2019 - 2023 Laureate of the Research Investigation Price (PIU/ PEDR niveau 2)
 2018 - 2020 **GenOmics #1 - Fondation Maladies Rares** (30 K€, leader C. Carré)
 2018-2019 Grant **Action-Incitative** from IBPS - 2018 (20 K€, leaders C. Carré and M.Réra)
 2017 Nominee as MC member of the [Epitranscriptomic COST Action CA16120 FR](#)
 2017 French *Drosophila* international meeting *Sponsors grants* co-organizer (total 10K€)
 2016 - 2019 Laureate of the Research Investigation Price (PIR/ PEDR niveau 1)
 2016 - 2017 laureate of the CRCT – CNU and CNRS délégation program (teaching discharge 50%)
 2015 to 2023 **Grant BQR-DFI UFR927** for congress organization (total 10 K€)
 2011-2013 ANR-CNRS Post Doctoral Fellowship, France.
 2009-2011 Wistar Institute Post Doctoral Fellowship Award, USA.
 2007-2009 Center of Genomic regulation (CRG) Post Doctoral Fellowship, Spain.
 2007 Association pour la Recherche sur le Cancer (ARC), Postdoctoral Fellowship
 2006 Association pour la Recherche sur le Cancer (ARC), PhD Fellowship Award
 2002-2005 PhD Fellowship from the French Ministère de la Recherche Award

COMMON RESPONSIBILITIES, PEER REVIEW & MEETING ORGANIZATION

- co-organizer of the [BioEC 2023](#) - *Retraite des Enseignants-Chercheurs de Sorbonne Université* (2023)
- **Expert committee** to hire new Associate Professor at the Université de Lorraine in 2023 (CNU 64)
- **Expert committee** to hire new Associate Professor at the University of Paris Cité in 2022 (CNU 64)
- **Elected** member of the [CoNRS section 21 \(bureau member 2021-2025\)](#)
- **Elected** member of the Sorbonne Université [Research Commission 2022-2025](#)
- **Elected** member of the Sorbonne University disciplinary section for students (2021)
- **vice-president** of the [Société Française de Génétique](#) - SFG (from 2019)
- co-organizer of the [RNA virtual but so Real !!!](#) symposium Dec 2020 and 2021 at SU, Paris
- co-organizer of the [VIP@DIF: when Worms meet Drosophila June 2021](#) & 2022 (100 people), IJM, Paris
- **Editorial board** of the non-coding RNA journal and running [Special Issue on RNA modification](#)
- **Topic Editor** at Life journal
- co-organizer of the [RNA Always suRprisiNg](#) symposium Dec 2019 (100 people) at SU, Paris
- **Reviewer** for the DFG (Germany) and ANR (France) grants proposals
- co-organizer of the DIF-DAY 2019 (100 people) at ICM, Paris
- co-organizer of the DIF-DAY 2018 (100 people) at Collège de France
- **Elected** member of the faculty *Academic council* (CFVU - CAC) of Sorbonne University (2018-2021)
- co-organizer of the French *Drosophila* international meeting Nov 2017 (100 people)
- **Reviewer** for: PLoS One, MCB, RNA, NAR, Moll. Cell, Genes & Dev, Stem Cells, Science Advances
- co-organizer of Micro symposiums DIF DAY at Curie Institute, June 10 2015 (120 people)
- **Organizer** of the Ile de France Fly community DIF (50/60 people/ month, including in 2020-2021 virtually)
- **Elected** member of the Unit council (2014-2019; UMR7622)
- **Elected** member of the IBPS Institute council (2014-2019; FR3631)

- **Representative** and Scientific Comitee of the Doctoral School_ Complexité du Vivant_ (ED515)
- **Elected** member of the UFR927 - Administrative Council of Biology (2015-2018 & 2018-2021)
- **Expert committee** to hired new Associate Professor in 2016 Galaxy #4352 in CNU 65 & ATER in CNU64
- **Search committee** member to hired a new group at IBPS (UMR7622 - Jan, 2016)
- **co-organizer** of the Imagine Science Festival - Paris - June 2016
- **co-organizer** of the French Premiere The Fly Room by Alexi Gambis, Sept 2015
- **Organizing Committee** of *Science meet society & Cafés Cientificos Barcelona* (2007)

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COMMUNICATIONS

- 2023 - **selected** PI participant to the [Brain Epitranscriptomics - Novel Translational Perspectives](#)
- 2022 - **selected** talk at the [Jacques Monod Conférence Génétique, environnement, signalisation et plasticité synaptique dans les maladies du développement du cerveau](#). Roscoff, Brittany, France
- 2021/22 - **Scientific Committee 2021, 2022 & 2023 non-coding genome** international Curie Course, Paris
- 2021 - **invited** speaker [International COST Action EPITRAN](#) by Mary O'Connell, Brno, Czeck Republic
- 2020 - **invited** International COST Action EPITRAN course by Pr. Motorin, Lorraine University, France
- **invited** seminar at the non-coding genome international Master class, Curie Institute Paris 2019
- **invited** seminar (October) by Dr. Januschke and Pr Cowling, Dundee University - Scotland
- **selected** talk at the [Gordon Research Conference RNA Editing \(March\)](#) - Italy
- **invited** course (October) by Pr. Motorin, Lorraine University - France
- 2018 - **invited** seminar by Dr. Francesca Aguiló at Umeå University (October) - Sweden
- **invited** seminar by V. Galy & K. Wassmann, IBPS - Fundamentals in Heredity Paris - France
- 2017 - **selected** talk to the [First Symposium on Nucleic Acid modification](#) - Mainz Germany
- **Invited** seminar at the [RNA day Paris Descartes University](#)
- **selected** talk to the [CNET \(Transposable Element National Congress\)](#)
- **Invited** seminar by F. Hubé, Epigenetic & Destin Cellulaire Institute - Paris VII
- **selected** talk for [Dilyana Dimitrova](#) (PhD student) at the [EDRC Conference - London](#)
- **Selected** Talk for [Cyrinne Achour](#) - [DIF DAY - Paris](#) - Pasteur Institute -
- 2016_ - **Invited** seminar : *RNAs: more and more?* UPMC-MHNN-SU- Symposium
- *The Epitranscriptome*; EMBL Conference, Heidelberg, 20 to 22 April
- **Selected** Talk for [M. Angelova](#) PhD student - Multiple functions of PIWI proteins, EMBO meeting
- 2015 Poster. 10th microsposium on small RNA - IMBA - Vienna.
- 2014 Poster. 23rd European Drosophila Research Conference – Barcelona.
- Invited** seminar by Pr. J.Sobczak at the CDR Saint Antoine Hospital, Paris.
- 2013 **Invited** seminar by Dr. U.Ørom, Max Planck Institute for Molecular Genetics Berlin.
- Invited** seminar by Dr. D.Meffre at the École de Médecine - Paris Descartes.
- Invited** seminar by Dr. JA.Lepesant at the Institut Jacques Monod, Paris.

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PUBLICATIONS - Articles originaux les plus significatifs des 5 derniers années (team members underlined, ^c corresponding authors, *equal contribution, highlighted in blue international collaborators, in green PhD students of the lab).

A- Research articles

1. [Casier K*](#), [Autaa J*](#), Gueguen N, [Delmarre V](#), [Marie PP](#), [Ronsseray S](#), [Carré C^c](#), Brasset E, [Teyssset L^c](#), [Boivin A^c](#). **The histone demethylase Kdm3 prevents auto-immune piRNAs production in Drosophila.** *Sci Adv.* 2023 Apr 7;9(14):eade3872. doi: 10.1126/sciadv.ade3872. This study has uncovered that several genomic regions have all the requirements to be piRNA producer loci, actively maintained OFF by the histone demethylase KDM3. This result was a breakthrough in the field of piRNA studies that we could uncover because of genetic tools that we have developed along the years.
2. [Brazane M](#), [Dimitrova DG](#), Pigeon J, [Paolantoni C](#), Ye T, Marchand V, [Da Silva B](#), Schaefer E, [Angelova MT](#), [Stark Z](#), [Delatycki M](#), [Dudding-Byth T](#), [Gecz J](#), Placais PY, [Teyssset L](#), Preat T, Piton A, Hassan BA, [Roignant JY](#), Motorin Y and [Carré C^c](#). **The ribose methylation enzyme FTSJ1 has a conserved role in neuron morphology and learning performance.** 2023. *Life Sci Alliance.* Jan 31;6(4):e202201877. doi: 10.26508/lsa.202201877. This is the continuation, mostly in human cells, of our study on FTSJ1, an RNA methylases first discovered in flies. Thanks to this collaborative work, we now start to work on neurogenesis in flies and human cells.
3. Molla-Herman A^c, [Angelova MT](#), [Ginestet M](#), [Carré C](#), Antoniewski C^c and Huynh JR. tRNA Fragments Populations Analysis in Mutants Affecting tRNAs Processing and tRNA Methylation, 2020. *Front. Genet.*, doi: 10.3389/fgene.2020.518949.
4. [Angelova MT*](#), [Dimitrova DG*](#), [Da Silva B](#), Marchand V, Jacquier C, [Achour C](#), [Mira B](#), Goyenville C, Bourguignon-Igel V, [Shehzada S](#), [Khouider S](#), Lence T, Guerineau V, [Roignant JY](#), Antoniewski C, [Teyssset L](#),

Bregeon D, Motorin Y, [Schaefer MR](#) and [Carré C^c](#). tRNA 2'-O-methylation by a duo of TRM7/FTSJ1 proteins modulates small RNA silencing in *Drosophila*. 2020. *Nucleic Acids Research*, Feb 2020 28;48(4):2050-2072. This study characterises the molecular and physiological defects observed when *Drosophila* FTSJ1s are affected. This publication clearly paves the way for our ongoing RNA modification investigation performed today on both *Drosophila* and human cells (see 2, 4, 8, 9, 13 & 15) and make us today internationally recognized.

5. [Van den Beek M](#), [da Silva B](#), Pouch J, Ali Chaouche MEA, [Carré C^c](#), [Antoniewski C^c](#). Dual-layer transposon repression in heads of *Drosophila melanogaster*. 2018. *RNA*. Dec;24(12):1749-1760. doi: 10.1261/rna.067173.118.

6. [Jantsch MF](#), [Quattrone A](#), [O'Connell M](#), [Helm M](#), [Frye M](#), [Macias-Gonzales M](#), [Ohman M](#), [Ameres S](#), [Willems L](#), [Fuks F](#), [Oulas A](#), [Vanacova S](#), [Nielsen H](#), [Bousquet-Antonelli C](#), [Motorin Y](#), [Roignant JY](#), [Balatsos N](#), [Dinnyes A](#), [Baranov P](#), [Kelly V](#), [Lamm A](#), [Rechavi G...](#), [Lafontaine D](#), [David A](#), [Carre C](#), [Lyko F](#), [Schaffrath R](#), [Schwartz S](#), [Verdel A](#), ...[O Carroll D](#), [Ule J](#), [Fray R](#). Positioning Europe for the EPITRANSCRIPTOMICS challenge. Invited white paper from the COST Epitrans members. 2018. *RNA Biol.*;15(6):829-831. doi: 10.1080/15476286.2018.1460996.

7. [Genencher B](#), [Durdevic Z](#), [Hanna K](#), [Zinkl D](#), [Mobin MB](#), [Senturk N](#), [Da Silva B](#), [Legrand C](#), [Carré C](#), [Lyko F](#), [Schaefer M](#). Mutations in Cytosine-5 tRNA Methyltransferases Impact Mobile Element Expression and Genome Stability at Specific DNA Repeats. 2018. *Cell Rep*. Feb 13;22(7):1861-1874. doi: 10.1016/j.celrep.2018.01.061.

B- Reviews and book chapters

8. [Bonnet A](#), [Casier K](#), [Carré C](#), [Teyssset L](#), [Lesage](#). Transposable elements: Parasites that shape genome evolution. Chapitre du livre: Function and Evolution of Repeated DNA Sequences, *Ed. ISTE in press*

9. [Dimitrova DG](#), [Teyssset L](#), [Carré C^c](#). RNA 2'-O-Methylation (Nm) Modification in Human Diseases. 2019. *Genes*, 10, 117. Invited Review. doi:10.3390/genes10020117 (**top cited in Genes from 2019**).

14. [Casier K](#), [Boivin A](#), [Carré C](#), [Teyssset L^c](#). Environmentally-Induced Transgenerational Epigenetic Inheritance: Implication of PIWI Interacting RNAs. 2019. *Cells*. Sep 19;8(9):1108. Invited Review. doi: 10.3390/cells8091108.

10. [Angelova M](#), [Dimitrova DG](#), [Dinges N](#), [Lence T](#), [Worpenberg L](#), [Carré C^c](#) and [Roignant JY^c](#). The emerging field of epitranscriptomics in neurodevelopmental and neuronal disorders. 2018. *Front Bioeng Biotechnol*.13;6:46. Invited Review. doi: 10.3389/fbioe.2018.00046.

11. - [Antoniewski C](#) & [Carré C^c](#). New rules for regulation of genes by piRNAs in *C. elegans*. 2018. *Non-coding RNA Investig*. doi: 10.21037/ncr.2018.06.01 (Editorial)

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ADDITIONAL INFORMATION:

- Researcher ID/ORCID : Orcid # [0000-0002-9668-4288](#)

- Computer skills: Basic use of the Galaxy platform for bioinformatics analysis of transcriptomic data