Enthusiastic research scientist fascinated by host-microbe interactions, with an extensive experience in Virology and Systems Biology.

I did my PhD studying Influenza A viruses *x* cell host interactions with a focus on DExD RNA helicases and nuclear export of viral mRNAs. I then transitioned to Systems Biology and worked on microbe *x* host *x* drug interactions using the model organism *C. elegans*. I returned to the virology field with the intent of implementing a Systems Virology line of research on the Respiratory Syncytial Virus.

**Professional experience in life sciences**

*Since 2022* **Postdoctoral research on Respiratory Syncytial Virus replication** *ongoing*

M3P Unit, - Head: Marie-Anne RAMEIX-WELTI

🡪 Joint INSERM unit - UMR 1173 - Head: Pr Jean-Louis HERMANN

Pasteur Institute / Paris-Saclay & Versailles Saint-Quentin-en-Yvelines (UVSQ) Universities

Research projects:

1. Study of the dynamics of RSV viral factories
2. Study of the transport of neosynthesized RSV ribonucleoproteins

*2018-2022*  **Postdoctoral research on *C. elegans*** *x* **bacteria** *x* **drug interactions** 4 years

Systems-biology lab - Head: Pr A. J. Marian WALHOUT

University of Massachusetts Chan Medical School (UMMS), Worcester, USA

Research projects:

1. Study of *C. elegans* - bacteria interactions that modulate the host response to the estrogen-independent OFF-target effect of tamoxifen
2. Systems-level characterization of *C. elegans* *x* bacteria *x* drug interactions
3. Collaborations on studies focused on *C. elegans* fatty acid metabolism

*2016-2017*  **Postdoctoral research on RNA localization processes** 01 year

Laboratory of the RNA biology - Head: Dr Eric LÉCUYER

Montreal Clinical Research Institute (IRCM), Canada

Research projects:

1. Development of RNA-*FISH* approaches in cultured cells
2. Development of a high-throughput method to assess the impact of Nucleotide sequences on mRNA subcellular distribution

*2013-2016* **PhD - Influenza A viruses** *x* **cell host interactions** 3 years

Unit of Molecular Genetics of RNA Viruses directed by Pr Sylvie VAN DER WERF

Paris Diderot-Paris 7 University / Pasteur Institute, France

Thesis director: Dr Nadia NAFFAKH, co supervised by Dr Sandie MUNIER

Research Project:

1. Exploration of the Cellular DDX RNA Helicases – Influenza A Virus Interplay
2. Characterization of the role of DDX19 in the nuclear export of viral mRNAs

*2012-2013* **Masters internship - Influenza A viruses** *x* **cell host interactions** 10 months

Unit of Molecular Genetics of RNA Viruses - Head: Pr Sylvie VAN DER WERF

Paris Diderot-Paris 7 University / Pasteur Institute, France.

Supervision: Dr Sandie MUNIER and Dr Nadia NAFFAKH

Research Project: Cellular factors involved in the nucleo-cytoplasmic trafficking and Influenza A viruses: interactions with the viral polymerase and impact on the viral growth

*2011-2011* **Bachelor internship - meiotic disorder in *P. anserina*** 2 months

Laboratory of Genetics and Epigenetics of Fungi - Head: Pr Philippe SILAR

Paris-Sud 11 University / Institute of Genetics and Microbiology, France

Supervision: Dr Pierre GROGNET

Research Project: Meiotic drive leading to a "spore killing" phenomenon in *Podospora anserina.*

**Education**

*2016* **PhD in Fundamental Virology**

Thesis Director: Dr Nadia NAFFAKH, co supervised by Dr Sandie MUNIER

“Cellular DDX RNA Helicases – Influenza A Virus Interplay: Identification of a Major Role of DDX19 in the Nuclear Export of viral mRNAs” disserted in Paris on September 29, 2016

Paris Diderot-Paris 7 University & Pasteur Institute, France

NB: In France, exams are graded from 0 (minimal grade) to 20 (maximal grade)

*2013* **Master in Infectiology, Microbiology, Virology and Immunology (IMVI), with honors**

Specialization: Fundamental Virology - Results: 16.61/20 - Ranking: 2nd / 28

Paris Diderot-Paris 7 University, France

*2011* **Bachelor in Biochemistry and Molecular Biology (BBM), with honors**

Specialization: Chemistry in Life Sciences - Results: 14.27/20 - Ranking: 3rd / 79

Paris Diderot-Paris 7 University, France

Additional training / Workshops

*2016* **Workshop** « ***4th One Health Course* »**

Organized by the ANTIGONE FP7 consortium

Pasteur Institute & National Veterinary School of Alfort (EnvA), Alfort, France

*2014* **Workshop«*Zoonotic features of viral infections*»**

Organized by the PREDEMICS FP7 consortium

Istituto Nazionale per le Malattie Infettive «Lazzaro Spallanzani» (INMI), Roma, Italy

**Teaching and Mentoring Activities**

**Teaching**

*2023* Lectureon Virus – Host interactions, Master 1 - xxx, UVSQ

*2016-2013* Teaching Assistant at the Paris Diderot-Paris 7 University

64 hours / year - Mycology and Fundamental Genetics.

**Supervision and mentoring**

Versailles Saint-Quentin-en-Yvelines University (UVSQ), France

*Since 2022* Claire GIRY – PhD student *ongoing*

Co-supervision officially declared

*Summer 2022* Houssem CHENANE – Visiting PhD student 2 months

University of Massachusetts Medical School (UMMS), USA

*2021* Thomas LELAND – PhD student 1 year

*2021-2019* Melissa WALKER – Research assistant 1.5 years

*2020-2019* Hailey A. DOYLE – High school WPI student intern 1.5 years

*Summer 2020* Yomari RIVERA – High school WPI student intern 2 months

Pasteur Institute, France

*2014-2015* Mélanie DOS SANTOS – Master 2 student6 months

**Auxiliary scientific activities**

Versailles Saint-Quentin en Yvelines University, UVSQ, France

*Since 2022* Lab-responsibilities: management of lab orderings (includes SAFir access).

*2022* Volunteering for the yearly nation-wide event “Fête de la science”.

- 30-minutes tours of the molecular biology platforms (imaging, cytometry, mass-spectrometry) of the UVSQ, and how they are used in the science conducted on-site.

*Since 2021* Regular participation to student-scientist meetings where I share my professional journey and my experience in the academic research field (students: high school to Master level).

University of Massachusetts Medical School, USA

*2021-2018* Lab-responsibilities: receiving lab orderings.

*2021* Organization of department keynote speaker seminar

*-* Invitation of Pr Dana Pe’er, Sloan Kettering Institute, USA

*2020* Essential employee of the Programs in Systems Biology

Only individual from the department in Systems Biology allowed onsite for maintenance and logistic purposes during the Covid-19 lockdown, from March to June 2020

*2019* In charge of the organization of weekly intra-lab journal clubs

Pasteur Institute, France

*2014-2016* PhD Students representative in the Virology department of the Pasteur Institute

Peer reviewing since 2013

|  |  |  |
| --- | --- | --- |
| **Journal** | | **year** |
| Nature communication | x1 | 2020 |
| G3 | x1 | 2018 |
| eLife | x1 | 2017 |
| Neurosciences | x1 | 2017 |
| Nature Microbiology | x1 | 2016 |

**Scientific distinctions**

**Individual fellowships and fundings obtained**

|  |  |  |  |
| --- | --- | --- | --- |
| Total (EURO) : | | 45k | Foreign currencies converted to euro following exchange rates of the Sep 27th, 2022 |
| *2019-2017* | 2 years  Post-Doctoral fellowship | 30k CAD/year | “Fonds de recherche du Québec - Santé” (FRQS) |
| *2016-2013* | 3 years  Doctoral fellowship | *nd* | Paris Diderot-Paris 7 University |

**Awards, grants, travel grants etc.**

*2022* “**Seal of Excellence**” for a Marie Sklodowska-Curie Actions Postdoctoral Fellowship proposal (MSCA-PF) reaching a >85% score that could not be funded due to budget limitation (score reached: 90%)

*2020* “**Award for Research Mentoring by Postdocs***”* delivered by the Graduate School of Biomedical Sciences of the University of Massachusetts Medical School, Worcester, USA

*2016* **Award for the best oral communication** in the yearly “Virology Afternoon” seminar program organized at the Pasteur Institute, France

*2015* **Travel grant** for an oral presentation at the7th Orthomyxoviruses Research Conference organized at the National Veterinary School of Toulouse (EnvT), France

**Scientific communications**

*2021***Poster - Keystone eSymposia onMetabolic Decisions in Development and Disease**

Virtual setting due to Covid-19 traveling restrictions

*2016***Poster - Gordon Research Conference: Post-Transcriptional Gene Regulation**

Stowelflake Conference Center, Stowe (VT), USA

*2015***Talk - French speaking days of virology**

Pasteur Institute, Paris, France

**Talk - 7th Orthomyxoviruses Research Conference**

National Veterinary School of Toulouse (EnvT), Toulouse, France

Selected domestic conferences:

*2022* Talk - Seminar at the Simone Veil UFR of University of Versailles Saint-Quentin en Yvelines

*2021* Talk - *“BAWM*”,Boston Area Worm Meeting

*2020* Talk - *“WAWN*”*,* Worcester Area Worm Meeting

*2020* Talk - Programs in Systems Biology Department Seminar

*2018* Talk - UMMS PSB - Harvard CCSB departments joint retreat

*2016 & 2013* Talk - “*Club Viro*”, Virology department seminar program

**Scientific Publications (peer-reviewed)**

Citations: 183; h-index: 5 - Impact factors reported from 2021.

**Post-doc, Institut Pasteur / Paris-Saclay & UVSQ, France**

|  |  |  |
| --- | --- | --- |
| Year | Citations | Blue indicates reviews.  #, \*, etc.: equal contributions. |
| 2023 | N/A | Collaborative follow-up work on the mechanism of action of the anti-RSV drug cyclopamine.  C Diot\*, C-A Richard\*, J Risso-Ballester, D Martin, …, M-A Rameix‑Welti#, M Galloux#.  *In Preparation* |
| 2022 | 1 | C Diot, G Cosentino, M-A Rameix-Welti  *Ribonucleoprotein transport in Negative single-strand RNA viruses*  *Biology of the Cell (IF: 3.506)* |

**Post-doc, UMAss Medical School, USA**

|  |  |  |
| --- | --- | --- |
| Year | Citations | Blue boxes indicate reviews. |
| 2022 | 1 | C Diot, AP Garcia-Gonzalez, AFC Vieira, M Walker, M Honeywell, …, AJM Walhout  *Bacterial diet modulates tamoxifen-induced death via host fatty acid metabolism*  *Nature Communications (IF: 17.690)* |
| 1 | AFC Vieira, MA Xatse, H Tifeki, C Diot, AJM Walhout, CP Olsen  *Monomethyl branched chain fatty acids are critical for survival in elevated glucose conditions for C. elegans*  *Journal of Biological Chemistry (IF: 5.486)* |
| 2021 | 12 | MD Walker, GE Giese, AD Holdorf, S Bhattacharya, C Diot, …, AJM Walhout  WormPaths: Caenorhabditis elegans metabolic pathway annotation and visualization  *Genetics (IF: 4.402)* |
| 2018 | 5 | C Diot, AP Garcia-Gonzalez, AJM Walhout  C. elegans and its bacterial diet: An interspecies model to explore the effects of microbiota on drug response  *Drug Discovery Today: Disease Models (IF: 7.851 as of 2020, journal discontinued)* |

**Post-doc, IRCM, Canada**

|  |  |  |
| --- | --- | --- |
| Year | Citations |  |
| 2017 | 66 | LP Benoit Bouvrette, NAL Cody, J Bergalet, FA Lefebvre, C Diot, …, E Lécuyer  CeFra-seq reveals broad asymmetric mRNA and non-coding RNA distribution profiles in Drosophila and human cells  *RNA (IF: 3.949)* |
| 8 | C Diot, A Chin, E Lécuyer  Optimized FISH methods for visualizing RNA localization properties in Drosophila and human tissues and cultured cells  *Methods (IF: 3.641)* |

**PhD, Pasteur Institute, France**

|  |  |  |
| --- | --- | --- |
| Year | Citations |  |
| 2016 | 43 | C Diot, G Fournier, M Dos Santos, J Magnus, A Komarova, S van der Werf, S Munier, N Naffakh  Influenza A Virus Polymerase Recruits the RNA Helicase DDX19 to Promote the Nuclear Export of Viral mRNAs  *Scientific Reports (IF: 4.996)* |
| 2013 | 46 | S Munier, T Rolland, C Diot, Y Jacob, N Naffakh  *Exploration of binary virus-host interactions using an infectious protein complementation assay*, *Molecular and Cellular Proteomics (IF: 5.911)* |