

Marion ESPELI

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CURRENT POSITION

DR2 Inserm

Co-director with Dr. K. Balabanian of the Team “Lymphoid niches, chemokines & rare immuno-haematological syndromes”

Inserm U1342, Institut de Recherche Saint Louis, Paris, France.

Team affiliated to the SIRIC InSitu, the IHU Institut de la Leucémie, the Institut Carnot Opale, the FHU Prothée, the RHU SPRINT, the InIndex InFibreX and the Cancéropôle Ile de France.

BIOSKETCH

Immunologist by training, I did my PhD in Marseille and my post-doctorate in Cambridge (UK) working on B cell development and activation, respectively. Since 2019, I am codirecting a team with Karl Balabanian at the Institut de Recherche Saint Louis in Paris. Our lab aims at deciphering the dialogue established between lymphoid cells and their environment at steady state and in the frame of immune-haematological pathologies. We develop fundamental and translational projects using human samples, original mouse models, innovative 2D/3D co-culture assays and state-of-the-art omics techniques. I am directly supervising projects aiming at gaining a better understanding of the biology of normal and pathological B cells and plasma cells.

EDUCATION AND DIPLOMA

2018	HDR (French diploma for PhD holders required to officially supervise PhD students)
2007	PhD in Immunology, University Aix-Marseille II
2003	MSc in Immunology (“Diplôme d’études approfondies”), University Aix-Marseille II
2002	BSc (“Maîtrise” and “licence”) in biochemistry - University Aix-Marseille II
2000	DEUG Science de la vie et de la terre- University Aix-Marseille II

PREVIOUS POSITIONS

2014-2018	Group Leader , Chargée de recherche de première classe at Inserm UMR_S996, Clamart, France. “Integrative analysis of plasma cell biology in health and disease.”
2008-2013	Research associate , Cambridge Institute for Medical Research, Pr. Ken Smith laboratory, Cambridge, UK.
2003-2007	PhD student , Centre d’Immunologie de Marseille-Luminy (CIML), Dr. Claudine Schiff laboratory, Marseille, France.

GRANTS OBTAINED AS PRINCIPAL INVESTIGATOR

2024	Fondation ARC project grant
2023	IWMF Seed grant
2020	X4 Pharma collaborative grant (with K. Balabanian)
2019	ANR JCJC project grant
2019	“Dynamique Recherche” IdEx Université de Paris project grant
2018	Fondation ARC project grant
2017	Fondation Arthritis project grant
2014	ANR @RAAction, 5-year project grant
2013	LabEx LERMIT Junior team leader starting grant

GRANTS OBTAINED AS PARTNER

2025	INCA PLBIO project grant (coordinator Pr. D. Roos Weil, CRC, Hôp. La Pitié Salpêtrière)
2024	DIM ITAC project grant (coordinator Dr. O. Bernard, Institut Gustave Roussy)
2022	ANR PRC (coordinator Dr. C. Mueller, IBMC, Strasbourg)

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Since 2008: **16 Master Students, 10 PhD students, 3 post-docs and 3 research assistants** in UK and in France.

CURRENT INSTITUTIONAL RESPONSIBILITIES

Since 2025: Elected member of the French society of Immunology council
Since 2025: Member of the foundation ARC scientific committee
Since 2022: Elected chair and spokesperson for the EFIS study group "European B cell Network"
Since 2022: Member of the Tumor microenvironment study group of the Cancéropole IdF.
Since 2021: Member of the EFIS task force "Education"
Since 2019: Elected member of the IRSL Research Committee

COMMISSIONS OF TRUST, REVIEWING, ORGANISATION AND EDITING RESPONSABILITIES

Panel member for the Agence Nationale de la Recherche (ANR) in 2017, 2018 and 2020 (vice-president of the "Immunology, Infections" committee, CES15 in 2018).

Scientific evaluator for ANR, ARC, Fondation Arthritis, Ligue contre le cancer, Fédération Leucémie Espoir, Région Nouvelle-Aquitaine (France), MRC and UKRI (UK), Catholic University of Leuven and FWO (Belgium), DFG (Germany), EHA and ERC (Europe), International Waldenström Macroglobulinemia foundation (USA).

Academic evaluator for 44 PhD and 13 HDR defenses.

Ad Hoc reviewer for journals including Science, Science Immunology, Science advances, Nature Cell Biology, Nature Communications, PNAS, Blood, Cell Reports Medicine, the European Journal of Immunology, EMBO Molecular Medicine, Cellular Immunology, Immunology and Cell Biology.

Organization of scientific conferences: including French Germinal centre club meeting (2020), French Waldenström Macroglobulinemia consortium (2019, 2023), European B cell summer school (2023, 2025), Cancéropole Ile de France (2023, 2024, 2025, 2026), European congress of Immunology (2024, 2027), European consortium on Waldenström Macroglobulinemia (2025), IUIS conference (2025).

TEACHING ACTIVITIES

Lectures on B cell biology at the master level for Université Paris-Saclay, Université Paris Cité, Institut Pasteur and Ecole Pratique des Hautes Etudes (France). 4 to 6 hours per year.

PUBLIC OUTREACH

2024: Layman article in "the Torch" (International Waldenström Macroglobulinemia Foundation patient journal).
2023: Festival inScience: podcast (<https://inscience-inserm.lepodcast.fr/portrait-de-marion-espeli-chercheuse-dans-lame>) and poster ("PC SEC: les plasmocytes, garants de notre immunité").

PATENTS:

"Methods for generating myeloid cells" - N/REF : EP23307216
"Use of artificial marrow organoid for generating nk cells and myeloid cells" - N/REF EP23306658.8

COMMUNICATIONS over 40 oral presentations in international conferences or seminars.

Selected recent invited presentations:

2025 The Crick Institute seminar series, UK.
2025 Cancer Immunology School, University of Lausanne, Switzerland.
2024 20th B cell Forum of the German society of Immunology, Germany.
2023 30th annual Henry Kunkel society meeting, USA.
2022 11th International Waldenström Macroglobulinemia Meeting, Spain.
2021 6th European Congress of Immunology (Virtual).
2020 TRR130 annual meeting, Germany.
2019 B cell Odyssey, Miltenyi/Cochin joint meeting, France.
2018 European B cell network, Germany.

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Since 2008 I have directly supervised of **15 Master Students, 9 PhD students, 4 post-docs and 3 research assistants** both in UK and in France. The more recent staff members are detailed below.

PhD students in France:

2023-2026: **Houda Melhem**, Université de Paris, INSERM U1342, France. **Supervisor**
→ 1 paper published
2022-2025: **Pierre-Edouard Debureaux**, Université de Paris, INSERM U1160/U1342, France.
Co-supervisor with Karl Balabanian

- 2022-2026: → PhD obtained, 2 papers published
Clémentine Moulin, Université de Paris, INSERM U1160/U1342, France. Co-supervisor with **Karl Balabanian**
- 2020-2024: → 3 papers published
Mélanie Khamyath, Université de Paris, INSERM U1160, France. Supervisor
 → PhD obtained, 7 papers published and 1 in revision. Post-doc at CEA, Fontenay aux Roses.
- 2019-2023: **Zeina Abou Nader**, Université de Paris, INSERM U1160, France. Co-supervisor with **Karl Balabanian**
 → PhD obtained, 4 papers published and 1 in revision
- 2015-2019: **Naghm Alouche**, Université Paris-Saclay, INSERM UMR_S996, France. Supervisor
 → PhD obtained, 6 papers published. Post-doc at University of Lausanne.
- 2015-2017: **Jessica Natt**, Université Paris-Saclay, INSERM UMR_S996, France. Supervisor
 → PhD obtained, 2 papers published. In parental leave

Post-doctoral Fellows:

- 2024-2025: **Dr. Mélanie Khamyath**, Inserm U1342
- 2021-2023: **Dr. Lilian Roland**, Inserm UMR_1160, France. Co-supervisor with **Karl Balabanian**
 → 4 papers published. Professional reconversion
- 2015-2022: **Dr. Amélie Bonaud**, INSERM UMR_S996 and UMR_1160, France. Supervisor
 → 12 papers published and 1 in revision. Lecturer at Université de Limoges

Selected recent publications:

Debureau PE, Poulain S, Harel S, Passet M, Templé M, Friedrich C, Forgeard N, Elessa D, Plas W, Chat L, Lazarian G, Willems L, Royer B, Talbot A, Vaugeois T, Theves F, Terré A, Brignier A, Malphettes M, Krzisch D, Frenzel L, Davi F, Bravetti C, Nguyen-Khac F, Dupuis J, Cuccuini W, Bouscary D, Hermine O, Roos-Weil D, Kosmider O, Clappier E, **Espéli M***, Balabanian K*, Arnulf B*. **2025. Inflammatory Waldenström macroglobulinemia is associated with clonal hematopoiesis: a multicentric cohort. Blood.** 2025 Jan 23;145(4):450-454. doi: 10.1182/blood.2024025738. *co-last authors.

Khamyath M, Melhem H, Balabanian K, **Espéli M.** **2024. New insights into the mechanisms regulating plasma cell survival and longevity. Curr Opin Immunol.** 2024 Jun;88:102442. doi: 10.1016/j.coi.2024.102442.

Debureau PE, Forgeard N, Elessa D, Harel S, Frenzel L, Royer B, Talbot A, Choquet S, Davi F, Nguyen-Khac F, Cuccuini W, Cheminant M, Bravetti C, Lazarian G, Kaltenbach S, Hermine O, Roos-Weil D, **Espéli M***, Balabanian K*, Arnulf B*. **2023. Inflammation is predictive of outcome in Waldenström macroglobulinemia treated by Bruton tyrosine kinase inhibitors: a multicentric real-life study. Haematologica.** 2024 Jan 1;109(1):325-330. doi: 10.3324/haematol.2023.283141. *co-last authors.

Bonaud A, Larraufie P, Khamyath M, Szachnowski U, Flint SM, Brunel-Meunier N, Delhommeau F, Munier A, Lönnberg T, Toffano-Nioche C, Gautheret D, Balabanian K, **Espéli M.** **2023. Transinteractome analysis reveals distinct niche requirements for isotype-based plasma cell subsets in the bone marrow. Eur J Immunol.** 2023 Sep;53(9):e2250334. doi: 10.1002/eji.202250334.

Bonaud A, Gargowitsch L, Gilbert SM, Rajan E, Canales-Herrerias P, Stockholm D, Rahman NF, Collins MO, Taskiran H, Hill DL, Alloatti A, Alouche N, Balor S, Soldan V, Gillet D, Barbier J, Bachelier F, Smith KGC, Jellusova J, Bruhns P, Amigorena S, Balabanian K, Linterman MA, Peden AA, **Espéli M.** **2023. Sec22b is a critical and nonredundant regulator of plasma cell maintenance. Proc Natl Acad Sci U S A.** 2023 Jan 10;120(2):e2213056120. doi: 10.1073/pnas.2213056120.

Alouche N[#], Bonaud A[#], Rondeau V, Hussein-Agha R, Nguyen J, Bisio V, Khamyath M, Crickx E, Setterblad N, Dulphy N, Mahevas M, McDermott DH, Murphy P, Balabanian K*, **Espéli M***. **2021 Hematological disorder associated Cxcr4-gain-of-function mutation leads to uncontrolled extrafollicular immune response. Blood.** 2021 Jan 21;blood.2020007450. [#]co-first, *co-last authors.

Espéli M*, Bashford-Rogers R, Sowerby JM, Alouche N, Wong L, Denton AE, Linterman MA, Smith KGC. **2019. FcγRIIb differentially regulates pre-immune and germinal center B cell tolerance in mouse and human. Nat Commun.** 2019 Apr 29;10(1):1970. doi: 10.1038/s41467-019-09434-0, *corresponding author

Biajoux V, Natt J, Freitas C, Alouche N, Sacquin A, Hemon P, Gaudin F, Fazilleau N, **Espéli M***, Balabanian K*. **2016. Efficient Plasma Cell Differentiation and Trafficking Require Cxcr4 Desensitization. Cell Rep.** 2016 Sep 27;17(1):193-205. *co-last authors.