

Biosketch

Name and surname: Bachelerie Françoise

Title DR1 INSERM (PhD)

Research program description or activities of your core facilities

Our Paris-Sud/Inserm Laboratory « inflammation, chemokines and immunopathology » (UMR996), encompasses three teams composed of biologists bringing their expertise in the fields of immunology, virology, pathophysiology and toxicology and connected to the commissions 5, 7 and 8 of Inserm. Some of us are clinicians and our unit is connected to the DHU Torino and Hepatinov thus promoting the development of translational research projects. Our objectives are to analyse the pathological mechanisms of three classes of diseases: immune (autoimmunity and immunodeficiencies), cancer (associated to virus-induced cancers) and inflammatory related to chemical agents / drug or to metabolic liver disorders (due to obesity or alcoholism). We are developing therapeutic strategies in collaboration with chemists in the context of the LabEx LERMIT. Our laboratory is partner of the EquipEx project FlowCyTech dedicated to the acquisition in 2011 of the CyTOF™. We belong to the Paris-Sud Institute of Therapeutic Innovation (SFR-UMS-IPSIT), which includes 25 teams and 1 service unit of 8 technical platforms (Proteomic/transcriptomic, Lipidomic, Mass and flow cytometry, Histology, Imagery, Molecular Interactions, High-throughput screening, mouse facilities).

10 major publications:

1. **Bachelerie F**, Graham GJ, Locati M, Mantovani A, Murphy PM, Nibbs R, Rot A, Sozzani S, Thelen M. New nomenclature for atypical chemokine receptors. *Nat Immunol.* 2014 Mar;15(3):207-8.
2. McDermott DH, Gao JL, Liu Q, Siwicki M, Martens C, Jacobs P, Velez D, Yim E, Bryke CR, Hsu N, Dai Z, Marquesen MM, Stregovsky E, Kwatema N, Theobald N, Long Priel DA, Pittaluga S, Raffeld MA, Calvo KR, Maric I, Desmond R, Holmes KL, Kuhns DB, Balabanian K, **Bachelerie F**, Porcella SF, Malech HL, Murphy PM. Chromothriptic cure of WHIM syndrome. *Cell.* 2015 Feb 12;160(4):686-99.
3. Calmette J, Ellouze M, Tran T, Karaki S, Ronin E, Capel F, Pallardy M, **Bachelerie F**, Krzysiek R, Emilie D, Schlecht-Louf G, Godot V. Glucocorticoid-induced leucine zipper enhanced expression in dendritic cells is sufficient to drive regulatory T cells expansion in vivo. *J Immunol.* 2014 Dec 15;193(12):5863-72. doi: 10.4049/jimmunol.1400758.
4. Pasquet M, Bellanné-Chantelot C, Tavitian S, Prade N, Beaupain B, Laroche O, Petit A, Rohrlisch P, Ferrand C, Van Den Neste E, Poirel HA, Lamy T, Ouachée M, Mansat-De Mas V, Corre J, Récher C, Plat G, **Bachelerie F**, Donadieu J, Delabesse E. High frequency of GATA2 mutations in patients with mild chronic neutropenia evolving to MonoMac syndrome, myelodysplasia and acute myeloid leukemia. 2013 Jan 31;121(5):822-9.
5. Beaussant Cohen Sarah, Fenneteau Odile, Plouvier Emmanuel, Rohrlisch Pierre Simon, Daltroff Gerard, Plantier Isabelle, Dupuy Alain, Kerob Delphine, Beaupain Blandine,

Bordigoni Pierre, Fouyssac Fanny, Delezoide Anne Lise, Devouassoux Gilles, Nicolas François, Bensaid Phillippe, Bertrand Yves, Balabanian Karl, Bellane Chantelot Christine, **Bachelerie* Françoise**, Donadieu Jean*. Description and outcome of a cohort of 8 patients with WHIM syndrome from the French Severe Chronic Neutropenia Registry. Orphanet Journal of Rare Diseases 2012 Sep 25;7:71. *Co-corresponding author.

6. Balabanian K, Brotin E, Biajoux V, Bouchet-Delbos L, Lainey E, Fenneteau O, Bonnet D, Fiette L, Emilie D, **Bachelerie F**. Proper desensitization of CXCR4 is required for lymphocyte development and peripheral compartmentalization in mice. Blood. 2012 Jun 14; 119 (24):5722-30.

7. Chow KY, Brotin E, Ben Khalifa Y, Carthagena L, Teissier S, Danckaert A, Galzi JL, Arenzana-Seisdedos F, Thierry F, **Bachelerie F**. A pivotal role for CXCL12 signaling in HPV-mediated transformation of keratinocytes: clues to understanding HPV-pathogenesis in WHIM syndrome. Cell Host & Microbe. 2010 8(6):523-33.

8. Levoye A, Balabanian K, Baleux F, **Bachelerie F***, Lagane B. CXCR7 heterodimerizes with CXCR4 and regulates CXCL12-mediated G protein signalling. Blood. 2009, 113 (24): 6085-93. *Corresponding author

9. Balabanian K, Levoye A, Klemm L, Hermine O, Harriague J, Lagane B, Baleux F, Arenzana F, **Bachelerie F**. WHIM syndrome analysis reveals a pivotal role for GRK-3 in CXCR4 signaling. J Clin Invest, 2008, 118: 1074-1084.

10. Balabanian K*, Lagane B*, Infantino S, Chow K. Y, Harriague J, Moepps B, Arenzana F, Thelen M, & **Bachelerie F**. The chemokine SDF-1/CXCL12 binds to and signals through the orphan receptor RDC1 in T lymphocytes. J Biol Chem, 2005, 280, 35760-766.

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Biosketch (1200 letters spaces included): Françoise Bachelerie is a Virologist with a strong interest in Host/Virus interactions and a pharmacologist recognized for her expertise in the field of Chemokine and Chemokine receptors biological and pathological functions, for which she made breakthroughs regarding the CXCL12/CXCR4/CXCR7 trio. Since January 2015, FB is the chief of the Laboratory UMR996 « inflammation, chemokines and immunopathology » and the director of the SFR-IPSIT Paris-Sud Institute of Therapeutic Innovation.