



Curriculum Vitae

Sophie Ugolini

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Married, 3 children

Current position

- Research Director (DR2), Institut National de la Santé et de la Recherche Médicale (INSERM), CIML, Marseille, France

Education

1998: PhD in Immunology, Aix-Marseille University, Marseille, France

Research

- 1995-1998:** PhD work, laboratory of Quentin Sattentau, Centre d'immunologie de Marseille-Luminy (CIML), France.
- 1998-2000:** First postdoctoral position, Laboratory of Eric Vivier, CIML, France.
- 2000-2001:** Second postdoctoral position, laboratory of Nicolas Glaichenhaus, Institut de Pharmacologie Moléculaire et Cellulaire (IPMC), Sophia Antipolis, Nice, France.
- 2001-2006:** Junior scientist (CR2, INSERM) in the NK Cells and Innate Immunity Laboratory, CIML, France.
- 2006:** Visiting scientist, laboratory of Bruce Beutler, The Scripps Research Institute, La Jolla, California, USA.
- 2006:** Senior scientist (CR1, INSERM), CIML, France.
- 2010-2015:** Co-management, with Eric Vivier, of the NK Cells and Innate Immunity Laboratory, CIML.
- 2012:** Research Director (DR2, INSERM), CIML, France.
- 2013:** Visiting Scientist, laboratory of Jean-Laurent Casanova, The Rockefeller University, New York, USA.
- 2015:** Visiting Scientist, at the Walter and Elisa Hall Institute (WEHI) and the Peter Doherty Institute for Infection and Immunity, Melbourne, VIC, Australia.
- 2015-present:** Principal investigator of the ERC consolidator program "*Neural Regulation of Immunity*", CIML, Marseille, France

Teaching

- 1995-1998:** Cell biology tutor, Aix-Marseille University.
- 2002:** Immunology teaching, *Universités du Monde*, Ougadougou, Burkina Faso.
- 2005-2013:** Immunology teaching for Masters programs (M2), Aix-Marseille University
- 2007-2011:** Co-organizer of a Masters program (M1) at Marseille Medical School
- 2013:** Co-organizer of a Masters program (M2), Aix-Marseille University

Committees and responsibilities

- Member of the scientific advisory board of INSERM (2012-2017)
- Member of the scientific council of the OPECST (Office parlementaire d'évaluation des choix scientifiques et technologiques)
- Member of the scientific committee (# 1) of the *Association pour la Recherche sur le Cancer* (ARC), France (2009-2014)
- Expert for ANR (*Agence Nationale de la Recherche*)
- Expert for the FRS-FNRS (*Fonds de la Recherche Scientifique*), Belgium and for the Austrian Science Fund (FWF)
- Organization of internal seminars at CIML (2002-2015)
- Jury member for the Masters 2 course in Development and Immunology, Aix-Marseille University (2009-2010)
- Referee for Nature, Science Translational Medicine, Blood, PNAS, J. Immunol., FASEB J., Eur.J. Immunol, Int. Immunol., Scientific Report...
- Associate Editor, *Frontiers in NK Cell Biology*
- Editor, *Immunology Letters*

Selected grants (as a principal investigator)

- European Research Council (ERC) Consolidator grant (2015-2020)
- Fondation ARC (*Programme ARC*: 2014-2017)
- *Agence Nationale de la Recherche* (ANR *programme blanc*: 2014-2019)
- *Projet exploratoire région PACA* (2014-2016)
- *Ligue Nationale contre le Cancer*, *SensorImmune* (2014-2016)
- *Agence Nationale de la Recherche* (ANR *Jeune Chercheur*: 2007-2011)
- *Agence Nationale de la Recherche* (ANR-ERC starting grant: 2008-2012)

Prizes and Awards

- 1998:** Thesis award from Aix-Marseille University
- 2011:** Dandrimont-Bénicourt Award from the *Institut de France*
- 2012:** *Prix Recherche de l'INSERM* 2012 (Research award from INSERM)
- 2012-present:** *Prime d'excellence scientifique* (Scientific excellence award, INSERM)
- 2013:** *Prix Duquesne* (Duquesne Award) from *la Ligue Nationale contre le Cancer*
- 2016:** Nomination AcademiaNet – Expert Database of Outstanding Female Academics

Patent

Narni-Mancinelli, E., Vivier E. Ugolini S. NKp46-mediated NK cell tuning. Number 61/499,485

List of publications

PhD studies

- Ugolini, S., I. Mondor, P. Parren, D. Burton, S Tiley, P.J. Klasse, and Q.J. Sattentau. Inhibition of virus-cell binding is a major mechanism of HIV-1 neutralization. **J. Exp. Med.** 1997, 186: 1287-98
- Ugolini, S., M Moulard, I Mondor, N Barois, D Demandolx, J Hoxie, A Brelot, M Alizon, J Davoust, and Q J Sattentau. HIV-1 gp120 binding to CD4⁺ cells induces an interaction between CD4, gp120 and the chemokine receptor CXCR4. **J. Immunol.** 1997, 159: 3000
- Mondor I, Ugolini S., and Sattentau QJ. HIV-1 attachment to HeLa CD4 cells is CD4-independent, gp120 dependent and requires cell surface heparans. **J. Virol.** 1998; 72:3623
- Mondor I, Moulard M, Ugolini S., PJ. Klasse, J Hoxie, R Wyatt, J Sodroski, and Sattentau Q J. Interactions between human immunodeficiency virus type 1 (HIV-1) gp120 and CXCR4: gp120 specificity, V3 loop dependence and sensitivity to neutralizing antibodies. **Virology**, 1998; 248:394
- Xiao X, Wu L, Stantchev T S, Feng Y, Ugolini S., Chen H, Shen Z, Riley J L, Broder C C, Sattentau Q J and Dimitrov D. Constitutive cell surface association between CD4 and CCR5. **Proc. Natl. Acad. Sci. USA** . 1999, 96:7496
- Ugolini S., Mondor I, Sattentau QJ. HIV-1 attachment: another look. **Trends Microbiol.** 1999; 7:144-9
- Sattentau, Q. J., M. Moulard, B. Brivet, F. Botto, J. C. Guillemot, I. Mondor, P. Pognard, and S. Ugolini. Antibody neutralization of HIV-1 and the potential for vaccine design. **Immunol. Lett.** 1999, 66:143

Postdoctoral studies

- Ugolini S., C. Arpin, N. Anfossi, T. Walzer, A. Cambiaggi, R. Forster, M. Lipp, R.E.M. Toes, C. Melief, J. Marvel, E. Vivier. Involvement of inhibitory NKRs in the survival of a subset of memory-phenotype CD8⁺ T cells. **Nature Immunol.** 2001, 2: 430-435
- Ugolini S., Vivier E. Multifaceted roles of MHC class I and MHC class I-like molecules in T cell activation. **Nature Immunology.** 2001; 2:198-200
- Ugolini S., Vivier E. Regulation of T cell function by NK cell receptors for classical MHC class I molecules. **Curr Opin Immunol.** 2000, 12: 295-300
- Anfossi N, Pascal V, Vivier E, Ugolini S. Biology of T memory type 1 cells. **Immunol Rev.** 2001, 181: 269-78.
- Filippi C, Hugues S, Cazareth J, Julia V, Glaichenhaus N, Ugolini S. CD4⁺ T cell polarization in mice is modulated by strain-specific major histocompatibility complex-independent differences within dendritic cells. **J. Exp. Med.** 2003, 198: 201-9

2004-present

- Anfossi N., Robbins S. H., Ugolini S., Georgel P., Hoebe K., Bouneaud C., Ronet C, Kaser A., Di Cioccio C. B., Tomasello E., Blumberg R. S., Beutler B., Steven Reiner S., Alexopoulou L., Lantz O., Raulet D. H., Brossay L., Vivier E. Expansion and function of CD8⁺ T cells expressing Ly49 inhibitory receptors specific for MHC class I molecules. **J. Immunol.** 2004; 173 :3773-3782.
- Anfossi N., Doisne JM., Peyrat MA., Ugolini S., Bonnaud O., Bossy D., Pitard V., Merville P., Moreau JF., Delfraissy JF., Dechanet-Merville J., Marc Bonneville M., Venet A., Vivier E. Coordinated expression of Ig-like inhibitory MHC class I receptors and acquisition of cytotoxic function in human CD8⁺ T cells. **J. Immunol.** 2004; 173:7223-9.
- Stewart CA, Laugier-Anfossi F, Vely F, Saulquin X, Riedmuller J, Tisserant A, Gauthier L, Romagne F, Ferracci G, Arosa FA, Moretta A, Sun PD, Ugolini S, Vivier E. Recognition of peptide-MHC class I complexes by activating killer immunoglobulin-like receptors. **Proc Natl Acad Sci USA.** 2005, 102: 13224-9
- Baratin M, Roetyncck S, Lepolard C, Falk C, Sawadogo S, Uematsu S, Akira S, Ryffel B, Tiraby JG, Alexopoulou L, Kirschning CJ, Gysin J, Vivier E, Ugolini S. Natural killer cell and macrophage cooperation in MyD88-dependent innate responses to *Plasmodium falciparum*. **Proc Natl Acad Sci USA.** 2005, 102:14747-52
- Roetyncck S, Baratin M, Johansson S, Lemmers C, Vivier E, Ugolini S. Natural killer cells and malaria. **Immunol. Rev.** 2006; 214: 251-263
- Anfossi N, André P, Guia S, Falk C, Stewart C A, Bresó V, Roetyncck S, Frassati C, Reviron D, Middleton D, Romagné F, Ugolini S*, Vivier E*. Human NK cell education by inhibitory receptors for MHC class I. **Immunity.** 2006; 25: 331-342
- Crozat K., Hoebe K, Ugolini S, Hong NA, Janssen E, Rutschmann S, Mudd S, Sovath S, Vivier E, Beutler B. Jinx, an MCMV susceptibility phenotype caused by disruption of Unc13d: a mouse model of familial hemophagocytic lymphohistiocytosis. **J. Exp. Med.** 2007, 204, 853-863.
- Baratin M, Roetyncck S, Pouvelle B, Lemmers C, Viebig NK, Johansson S, Bierling P, Scherf A, Gysin J, Vivier E, Ugolini S. Dissection of the role of PfEMP1 and ICAM-1 in the Sensing of *Plasmodium falciparum*-infected erythrocytes by natural killer cells. **PLoS ONE**, 2007, 2: e228
- Zhang SY, Jouanguy E, Ugolini S, Smahi A, Elain G, Sancho-Shimizu V, Lorenzo L, Puel A, Picard C, Chagnier A, Plancoulaine S, Cognet C, Casrouge A, Zhang XX, Barreiro L, Titeux M, Hamilton C, Lebon P, Héron B, Vallée L, Quintana-Murci L, Hovnanian A, Rozenberg F, Vivier E, Geissmann F, Tardieu M, Abel L and Casanova JL. Herpes simplex encephalitis in human TLR3 deficiency. **Science**, 2007, 317, 1522
- Vivier E, Tomasello E, Walzer T, Ugolini S. The functions of natural killer cells. **Nature Immunology.** 2008; 9: 503-10
- Sola C., André P., Lemmers C., Fuseri N., Bonnafous C., Bléry M., Wagtmann N.R., Romagné F., Vivier E., Ugolini S. Genetic and antibody-mediated reprogramming of natural killer cell missing-self recognition *in vivo*. **Proc. Natl. Acad. Sci. USA.** 2009. 106: 12879-12884

- Ugolini S., Vivier E. Natural killer cells remember. **Nature** 2009. 457: 544-545
- Vivier E. and Ugolini S. Regulatory natural killer cells: new players in the IL-10 anti-inflammatory response. **Cell Host and Microbe**, 2009, 6: 493-5
- Crozat K., Eidenschenk C., Jaeger B.N., Krebs P., Guia S., Beutler B., Vivier E., Ugolini S. Intact *in vivo* natural killer cell function despite developmental alterations in β 2 integrin deficiency. **Blood**, 2011, 117:2874-82
- Guia S., Jaeger B.N., Piatek S., Mailfert S., Trombik T., Fenis A., Chevrier N., Walzer T., Kerdiles Y.M., Marguet D., Vivier E., Ugolini S. Activating receptor confinement at the plasma membrane controls natural killer cell tolerance. **Science Signaling**, 2011, 4(167):ra21
- Narni-Mancinelli E., Chaix J., Fenis A., Yessad N., Reynders A., Grégoire C., Ugolini S., Tomasello E., Walzer T., Vivier E. Fate mapping analysis of lymphoid cells expressing the Nkp46 cell surface receptor. **Proc. Natl. Acad. Sci. USA**. 2011, 108:18324-9
- Vivier E., Raulet D.H., Moretta A., Caligiuri M.A., Zitvogel L., Lanier L.L., Yokoyama W.M., Ugolini S. Innate or adaptive immunity? The example of natural killer cells. **Science**. 2011, 331:44-9
- Vivier E., Ugolini S. Natural killer cells: from basic research to treatments. **Front. Immun.** 2011, 2:18. doi: 10.3389/fimmu.2011.00018
- Vivier E, Ugolini S, Blaise D, Chabannon C, Brossay L. Targeting natural killer cells and natural killer T cells in cancer. **Nature Reviews Immunology** 2012, 12:239-52
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- Jaeger, B, Donadieu, J, Cognet, C, Bernat, D Ordoñez-Rueda, V Barlogis, N Malhaoui, A Fenis, B Beaupain, C Bellanné-Chantelot, M Bajénoff, B Malissen, M Malissen, Vivier E and Ugolini S. Neutrophil depletion impairs natural killer cell maturation, function and homeostasis. **J. Exp. Med.**, 2012, 209:565-80
- Matta J., Baratin M., Chiche L., Forel J-M., Cognet C., Thomas G., Farnarier C., Papazian L., Chaussabel D., Ugolini S., Vély F., Vivier E. Involvement of B7-H6, a ligand for the natural killer cell activating receptor NKp30, in inflammatory conditions. **Blood**. 2013 May 17. PMID: 23687088
- Kerdiles Y, Ugolini S, Vivier E. T cell regulation of natural killer cells. **J Exp Med**. 2013 ;210(6):1065-8
- Vivier E, Ugolini S, Nunès JA. Adapted secretion of cytokines in NK cells. **Nat Immunol**. 2013 (11):1108-10
- Kohrt HE, Thielens A, Marabelle A, Sagiv-Barfi I, Sola C, Chanuc F, Fuseri N, Bonnafous C, Czerwinski D, Rajapaksa A, Waller E, Ugolini S, Vivier E, Romagné F, Levy R, Bléry M, André P.

Anti-KIR antibody enhancement of anti-lymphoma activity of natural killer cells as monotherapy and in combination with anti-CD20 antibodies. **Blood**. 2013, 123(5):678-86

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- Sun J C, Ugolini S and Vivier E. Immunological memory within the innate immune system. **EMBO J**. 2014, doi:10.1002/embj.201387651
- Rankin LC, Girard-Madoux MJ, Seillet C, Mielke LA, Kerdiles Y, Fenis A, Wieduwild E, Putoczki T, Mondot S, Lantz O, Demon D, Papenfuss AT, Smyth GK, Lamkanfi M, Carotta S, Renauld JC, Shi W, Carpentier S, Soos T, Arendt C, Ugolini S, Huntington ND, Belz GT, Vivier E. Complementarity and redundancy of IL-22-producing innate lymphoid cells. **Nat Immunol**. 2016 (2):179-86
- Viant C, Guia S, Bernat C, Delconte R, Roger M, Simon V, Goh W, Jiao Y, Grabow S, Kile B, Strasser A, Gray D, Belz GT, Beutler B, Vivier E, Huntington ND*, Ugolini S*. Cell cycle progression dictates requirement for BCL2 in Natural Killer cell survival. **J Exp Med**. 2017. doi: 10.1084/jem.20160869.

*: equal contribution and co-corresponding authors

Other publications and book chapters

- Ugolini S, Vivier E. Les tueuses de l'immunité. **Pour la Science**, 2003, 308, 74-79.
- Cambiaggi A., Ugolini S., Vivier E. Cellular aspects of lymphoid differentiation: T and NK cells. In: Degos L., Linch D., Löwenberg, B, eds. **Textbook of Malignant Haematology**. London: Martin Dunitz, 2005; 92-102.
- Baratin M, Roetynck S, Vivier E, Ugolini S. Les cellules Natural Killer dans l'immunité innée dirigée contre *Plasmodium falciparum*. **Medecine/Sciences**, 2006
- Vivier E., Guia S., Ugolini S. Nées pour tuer? **Pour la Science** 2008. 368: 60-64.
- Vivier E. and Ugolini S. "Education and tuning of natural killer cells", in Lanier, L. (ed.), Natural Killer Cell Biology: Natural killer cell-mediated immunity to pathogens and cancer, The Biomedical & Life Sciences Collection, **Henry Stewart Talks** Ltd, London, 2009 (online at <http://www.hstalks.com/?t=BL0872235-Vivier>)
- Vivier E., Ugolini, S. Natural Killer (NK) Cells. In: **Encyclopedia of Life Sciences 2010**, John Wiley & Sons, Ltd: Chichester <http://www.els.net/> [DOI: 10.1002/9780470015902.a0001220.pub2]
- Vivier E., Ugolini, S. Poster on NK cells: receptors and functions, **Nature Reviews Immunology**, 2010, Vol 10 No 12.