

## Eric Vivier

06/04/1964

Married, 4 children

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### **Education**

- Doctor in Veterinary Medicine (1987, Ecole Nationale Vétérinaire d'Alfort and Paris 12)
- Ph. D. (1991, Paris 11)
- HDR (1992, Paris 11)

### **Current position**

- Professor of Immunology, Marseille Medical School and Assistance-Publique des Hôpitaux de Marseille (PU-PH Classe Exceptionnelle)
- Director of the Centre d'Immunologie de Marseille-Luminy (CIML), Marseille
- Head of the "NK cells and Innate Immunity" lab, CIML
- Head of the NK monitoring lab, Conception Hospital, Marseille
- Co-founder and coordinator of the Federation Hospitalo-Universitaire Marseille-Immunopole (<http://www.marseille-immunopole.org>)

### **Membership**

- 2011: European Academy of Tumor Immunology
- 2013: French National Academy of Medicine

### **Scientific appointments**

1989-1993:	Postdoctoral fellow, Harvard Medical School, Boston, MA, USA
1995-present:	Head of the "Natural Killer Cells and Innate Immunity" Lab., CIML, France
1996-2001:	Member of the Institut Universitaire de France (Junior)
2002-2004:	Associate Director of the CIML
Summer 2006	Visiting Professor, Scripps Research Institute, La Jolla, CA, USA
2007-present:	Member of the Institut Universitaire de France (Senior)
2008-present:	Director of the CIML
Summer 2013	Visiting Professor, The Rockefeller University, New York City, NY, USA
2015	Visiting Professor, The Walter and Elisa Hall Institute, Melbourne, VIC, Australia

### **Industry**

- Co-founder and member of the scientific committee of Innate-Pharma ([www.innate-pharma.fr](http://www.innate-pharma.fr))
- Consultant for Bristol-Myers Squibb France
- 14 patents

### **Publications: total 277, h-Index: 80, > 22000 citations**

(see selected publications below)

<http://scholar.google.fr/citations?user=NlmFOqMAAAAJ&hl=fr&oi=ao>

### **Selected Funding**

- European Research Council Advanced grants (2011-2016)
- Investissements d'Avenir, Coordinator of MI-mAbs (<http://www.mimabs.org>)
- Ligue Nationale contre le Cancer (Equipe Labellisée)
- Agence Nationale de la Recherche

### **Awards**

1987:	Médaille d'Argent, Ecole Nationale Vétérinaire d'Alfort
1996:	National League against Cancer Award
1999:	National Award and Tremplins Rhône-Poulenc Award for Biotech start-ups
1999:	Lucien Tartois Award, Fondation pour la Recherche Médicale
2003:	Jacques Oudin Award, French Society for Immunology
2004:	Joseph Amalric Award, National League against Cancer
2004:	Deutsche Gesellschaft für Immunologie / EFIS Award
2008:	Fondation Del Duca Award– National Academy of Sciences
2009:	Nominee for the EFIS-Schering-Plough European Immunology Prize
2010:	Grand Prix Turpin in Oncology, French National Academy of Science Award
2010:	Grand Prix Charles Oberling in Oncology, Collège de France
2013:	Prix Duquesne, Comité de Paris, National League against Cancer Avec Sophie Ugolini
2015:	Visiting Speaker Programme Award, Australasian Society for Immunology
2015	Thomson Reuters Highly Cited Researcher ( <a href="http://highlycited.com/#">http://highlycited.com/#</a> )
2015	Masters of Immunology, Cancer Immunology Essentials ( <a href="http://www.canimmessentials.aacrjournals.org/masterscrossroads_archive/#evivier">http://www.canimmessentials.aacrjournals.org/masterscrossroads_archive/#evivier</a> )

### **Others**

2013: Short-listed for the final round of selection for the position of General Director of the Institut Pasteur, Paris

### **National and international committees**

- Expert panel, European Research Council (ERC) Starting grants
- Scientific council, Institut thématique Immunology, Inflammation, Infectiology & Microbiology (I3M), AVIESAN
- Scientific Advisory Board, Ligue Nationale contre le Cancer (2008-2012)
- Scientific council, Institute of Hematology-Immunology-Pneumology – AVIESAN (2010-2015)
- Human Frontier Science Program (HFSP) CDA Review Committee (2012-2014)
- Scientific Advisory Board, Innate Immunity In Cancer, Italian Association for Cancer Research
- Quinquennial Review Committee, Cancer Research UK, Immunology groups
- Administrative board, Bouches-du-Rhône committee, Ligue Nationale contre le Cancer
- Scientific Expertise Committee, Ligue Nationale contre le Cancer IDF

- Parrain for Provence Alpes Côte d'Azur of the Science Tour  
[http://www.lespetitsdebrouillards.org/Media/prods/prod\\_6/](http://www.lespetitsdebrouillards.org/Media/prods/prod_6/)
- Committee of scientific activities, Mediterranean Institute for Advanced Research (imera.univ-amu.fr)
- Strategic and Scientific Committee, Cryostem (www.cryostem.org)
- Scientific Advisory Board, BIOASTER (www.bioaster.org)

### **Editorial Boards**

- Science Signaling (Board of Reviewing Editors)
- Nature Reviews Immunology (Highlight advisory panel 2001-2011)
- Immunology & Cell Biology
- Scientific Reports
- Biology Direct
- J. Immunol. (Associate editor, 2001-2005)
- Frontiers in NK cell biology (Speciality chief editor 2010-2014)
- Cancer Immunology Research
- Int. Immunol.
- Oncoimmunology
- Faculty 1000
- F1000 Research
- PLOS ONE

### **Referee for**

- Nature, Science, Cell, Immunity, Cell Host and Microbes, Science Signaling, Nature Immunol., J. Exp. Med., Immunity, Proc. Natl. Acad. Sci. USA, Eur. J. Immunol., J. Immunol., J. Clin. Invest., Blood and other journals,
- European Union, MRC (UK), Wellcome Trust (UK), Royal Society, Cancer Research UK, Irish National Research Funding Programme, Australian National Health and Medical Research Council, Italian Association for Cancer Research, BSF (Israel) as well as AFM, LNCC, ARC, INSERM, ANRS, ANR & INCa (France).

### **Invited speakers**

- More than 150 international meetings including Nobel Conferences, International Congresses of Immunology, Gordon conferences, Keystone meetings, EMBO Workshops, J. March conferences,
- Keynote lectures in many meetings including the First François Kourilsky lecture of the French Society for Immunology (2015),
- External lectures in more than 160 institutes.

### **Organization of 11 international meetings**

#### **Media**

1. <http://www.ciml.univ-mrs.fr/fr/les-echos-2>
2. <http://www.ciml.univ-mrs.fr/fr/france-culture>
3. <http://www.ciml.univ-mrs.fr/fr/la-provence-5>
4. <http://www.ciml.univ-mrs.fr/fr/les-echos-1>
5. <http://www.ciml.univ-mrs.fr/fr/lexpansion-0>
6. <http://www.ciml.univ-mrs.fr/fr/la-provence-4>
7. <http://www.ciml.univ-mrs.fr/fr/les-echos-0>
8. <http://www.ciml.univ-mrs.fr/fr/liberation-science>

9. <http://www.ciml.univ-mrs.fr/fr/la-provence-3>
10. <http://www.ciml.univ-mrs.fr/fr/france-inter-la-matinal>
11. <http://www.ciml.univ-mrs.fr/fr/le-monde>
12. <http://www.ciml.univ-mrs.fr/fr/lci-sante>
13. <http://www.ciml.univ-mrs.fr/fr/telegraph>
14. <http://www.ciml.univ-mrs.fr/fr/la-provence-1>
15. <http://www.ciml.univ-mrs.fr/fr/une-nouvelle-voie-pour-stimuler-le-systeme-immunitaire-et-lutter-contre-les-infections>
16. [http://www.lemonde.fr/sciences/article/2013/01/17/ces-droles-de-pieuvres-dans-notre-sang\\_1818669\\_1650684.html](http://www.lemonde.fr/sciences/article/2013/01/17/ces-droles-de-pieuvres-dans-notre-sang_1818669_1650684.html)
17. <http://www.lemonde.fr/tiny/1826554/#xtor=AL-32280270>
18. <http://www.lesechos.fr/entreprises-secteurs/grande-consommation/actu/0202563308912-immunologie-comment-les-medicaments-du-futur-se-preparent-a-marseille-538313.php>
19. [http://www.ciml.univ-mrs.fr/sites/default/files/article\\_la\\_provence-nov2013.pdf](http://www.ciml.univ-mrs.fr/sites/default/files/article_la_provence-nov2013.pdf)
20. [http://www.ciml.univ-mrs.fr/sites/default/files/20131120\\_sch-1.pdf](http://www.ciml.univ-mrs.fr/sites/default/files/20131120_sch-1.pdf)
21. <http://www.marsactu.fr/business/reorganiser-limmunologie-de-lenseignement-jusquau-medicament-32526.html>
22. [http://www.terre.tv/fr/5815\\_recherches-immunologiques-avec-les-cellules](http://www.terre.tv/fr/5815_recherches-immunologiques-avec-les-cellules)
23. <http://www.lamarseillaise.fr/marseille/sante/27833-l-immunotherapie-entre-dans-une-nouvelle-ere>
24. <http://pataclope83.com/cancer83/2014/04/06/recherche-le-comite-du-var-participe-a-lachat-dun-appareil-fondamental-pour-letude-des-cellules-tueuses-nk-reportage-tv-du-comite/>
25. <http://www.laprovence.com/article/actualites/3275325/les-50-visages-qui-feront-marseille-en-2015.html>
26. <http://treize.lif.univ-mrs.fr/videos.html>

### **Selected original publications**

1. Vivier E., Morin P., O'Brien C., Druker B., Schlossman S. F., Anderson P. Tyrosine phosphorylation of the FcγRIII(CD16):ζ complex in human natural killer cells. Induction by antibody dependent cytotoxicity but not by natural killing. **J. Immunol.** 1991; 146:206-10.
2. Vivier E., Sorrell J. M., Ackerly M., Robertson M. J., Rasmussen R. A., Levine H., Anderson P. Developmental regulation of a natural killer cell-specific mucin-like glycoprotein. **J. Exp. Med.** 1993; 178:2023-33.
3. Vignaux F., Vivier E., Malissen B., Depraetere V., Nagata S., Golstein P. TCR/CD3 coupling to Fas-based cytotoxicity. **J. Exp. Med.** 1995; 181:781-86.
4. Luesher I. F., Vivier E., Layer A., la Loue A., Godeau F., Malissen B., Romero P. CD8 modulation of T-cell antigen receptor-ligand interactions on living cytotoxic T lymphocytes. **Nature** 1995; 373:353-56.
5. Malissen M., Gillet A., Ardouin L., Bouvier G., Trucy J., Ferrier P., Vivier E., Malissen B. Altered T cell development in mice with a targeted mutation of the CD3ε gene. **EMBO. J.** 1995; 14:4641-4653.
6. Olcese L., Lang P., Vély F., Cambiaggi A., Marguet D., Bléry M., Hippen K. L., Biassoni R., Moretta A., Moretta L., Cambier J. C., Vivier E. Human and mouse natural killer cell inhibitory receptors recruit the PTP1C and PTP1D protein tyrosine phosphatases. **J. Immunol. Cutting Edge** 1996; 156:4531-4534.
7. Bléry M., Delon J., Trautmann A., Cambiaggi A., Olcese L., Biassoni R., Moretta L., Chavrier P., Moretta A., Daëron M., Vivier E. Reconstituted killer-cell inhibitory

- receptors for MHC class I molecules control mast cell activation induced via immunoreceptor tyrosine-based activation motifs. **J. Biol. Chem.** 1997; 272:8989-8996.
8. Olcese L., Cambiaggi A., Bottino C., Moretta A., Vivier E. Human killer-cell activating receptors for MHC class I molecules are included in a multimeric complex expressed by natural killer cells. **J. Immunol. Cutting Edge** 1997; 158:5083-5086.
  9. Cambiaggi A., Verthuy C., Naquet P., Romagné F., Ferrier P., Biassoni R., Moretta A., Moretta L. and Vivier E. NK-cell acceptance of H-2 mismatch bone-marrow grafts in transgenic mice expressing HLA-Cw3 specific killer-cell inhibitory receptor (CD158b). **Proc. Natl. Acad. Sci. USA.** 1997; 94:8088-8092.
  10. Bléry M., Kubagawa H., Chen C-C., Vély F., Cooper M. D., Vivier E. The paired Ig-like receptor PIR-B is an inhibitory receptor that recruits the protein-tyrosine phosphatase SHP-1. **Proc. Natl. Acad. Sci. USA.** 1998; 95: 2446-2451.
  11. Cambiaggi A., Darce S., Guia S., Kourilsky P., Abastado J-P., Vivier E. Modulation of T cell functions in KIR2DL3 (CD158b) transgenic mice. **Blood**, 1999, 94: 2396-2402.
  12. André P., Spertini O., Guia S., Rihet P., Dignat-George F., Brailly H., Sampol J., Anderson P. J., Vivier E. Modification of PSGL-1 with an NK cell-restricted sulfated lactosamine creates an alternate ligand for L-selectin. **Proc. Natl. Acad. Sci. USA.** 2000, 97: 3400-3405.
  13. Tomasello E., Desmoulins P. O., Chemin K., Guia S., Cremer H., Ortaldo J. R., Love P., Kaiserlian D., Vivier E. Combined Natural Killer Cell and Dendritic Cell Functional Deficiency in KARAP/DAP12 Loss-of-Function Mutant Mice. **Immunity** 2000, 13:345-353.
  14. Ugolini S., Arpin C., Anfossi N., Walzer T., Cambiaggi A., Förster R., Lipp M., Toes R. E. M., Melief C. J., Marvel J., Vivier E. Involvement of inhibitory NKRs in the survival of a subset of memory-phenotype CD8<sup>+</sup> T cells. **Nature Immunology.** 2001, 2: 430-435.
  15. Uehara T., Bléry M., Kang D-W., Chen C-C., Ho L. H., Gartland G. L., Liu F-T., Vivier E., Cooper M. D., Kubagawa H. Inhibition of IgE-mediated mast cell activation by the paired immunoglobulin-like receptor PIR-B. **J. Clin. Invest.**, 2001, 108: 1041-1050.
  16. Sjölin H., Tomasello E., Mousavi-Jazi M., Bartolazzi A., Kärre K., Vivier E., Cerboni C. Pivotal role of KARAP/DAP12 adaptor molecule in the resistance to murine cytomegalovirus. **J. Exp. Med.** 2002, 195:825-834.
  17. Colucci F., Schweighoffer E., Tomasello E., Turner M., Ortaldo J. R., Vivier E., Tybulewicz V., Di Santo J. Natural cytotoxicity uncoupled from the Syk and ZAP-70 intracellular kinases. **Nature Immunology** 2002, 3:288-294.
  18. Diefenbach A., Tomasello E., Lucas M., Jamieson A. M., Hsia J., Vivier E.\*, Raulet DH\*. Selective associations with signaling proteins determine stimulatory versus costimulatory activity of NKG2D. **Nature Immunology** 2002, 3:1142-1149.
  19. Saulquin X., Gastinel L., Vivier E. Crystal structure of the human natural killer cell activating receptor, KIR2DS2 (CD158j). **J. Exp. Med.** 2003, 197 :933-938.
  20. Coudert J., Zimmer J., Tomasello E., Cebeaucuer M., Colonna M., Vivier E., Held W. Altered NKG2D function in NK cells induced by chronic exposure to NKG2D-ligand expressing tumor cells. **Blood.** 2005. 106: 1711-1717.
  21. Stewart C. A., Laugier-Anfossi F., Vély F., Saulquin X., Tisserant A., Gauthier L., Romagné F., Ferracci G., Moretta A., Sun P., Ugolini S., Vivier E. Recognition of peptide-MHC class I complexes by activating Killer Ig-like Receptors. **Proc. Natl. Acad. Sci. USA.** 2005. 102: 13224-13229.
  22. Baratin M., Roetyncq S., Lépolard C., Falk C., Sawadogo S., Uematsu S., Akira S., Rytffel B., Tiraby J-G., Alexopoulou L., Kirschning C. J., 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: 14747–14752
23. Chiesa S., Mingueneau M., Fuseri N., Malissen B., Raulet D. H., Malissen M., Vivier E.\*, Tomasello E\*. Multiplicity and plasticity of Natural Killer cell signaling pathways. **Blood**, 2006. 107: 2364-237.
  24. Anfossi N., André P., Guia S., Falk C., Stewart C. A., Bresó V., Roetynck 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: 331-42.
  25. Walzer T, Bléry M., Chaix J., Fuseri N., Chasson C., Robbins S. H., Jaeger S., André P., Gauthier L., Daniel L., Chemin K., Morel Y., Dalod M., Imbert J., Pierres M., Moretta A., Romagné F., Vivier E. Identification, activation and selective *in vivo* ablation of mouse NK cells via NKp46. **Proc. Natl. Acad. Sci. USA**. 2007, 104: 3384-3389.
  26. Crozat K., Hoebe K., Ugolini S., Hong N., 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 type 3 familial hemophagocytic lymphohistiocytosis. **J. Exp. Med.** 2007. 204 853-863.
  27. Zhang S-Y., Jouanguy E., Ugolini S., Smahi A., Elain G., Romero P., Segal D., Sancho-Shimizu V., Lorenzo L., Puel A., Picard C., Chagnier A., Plancoulaine S., Titeux M., Cognet C., von Bernuth H, Ku CL, Casrouge A, Zhang XX, Barreiro L, Leonard J, Hamilton C, Lebon P, Héron B, Vallée L, Quintana-Murci L, Hovnanian A, Rozenberg F, Vivier E., Geissmann F, Tardieu M, Abel L, Casanova JL. **Science**. 2007. 317: 1522-1527.
  28. Walzer T., Chiossone L., Chaix L., Calver A., Carozzo C., Garrigue-Antar L., Jacques Y., Baratin M., Tomasello E., Vivier E. Natural killer cell trafficking *in vivo* requires a dedicated sphingosine 1-phosphate receptor. **Nature Immunology**. 2007. 8: 1337-1344.
  29. Guia S., Cognet C., de Beaucoudrey L., Tessmer M.S., Jouanguy E., Berger C., Filipe-Santos O., Feinberg J., Camcioglu Y., Levy J., Al Jumaah S., Stephan JL., Fieschi C., Abel L., Brossay L., Casanova JL., Vivier E. A role for interleukin-12/-23 in the maturation of human Natural Killer and CD56<sup>+</sup> T cells *in vivo* **Blood** 2008. 111:5008-16.
  30. Helming L., Tomasello E., Kyriakides T. R., Martinez F.O., Takai T., Gordon S. and Vivier E. Essential Role of DAP12 Signaling in Macrophage Programming into a Fusion-Competent State. **Science Signaling** 2008 **1**, ra11
  31. Luci C., Reynders A., Ivanov I.I., Cognet C., Chiche L., Chasson L., Hardwigsen J., Anguiano E., Banchereau J., Chaussabel D., Dalod M., Littman D.R., Vivier E.\*, Tomasello E\*. Influence of the transcription factor ROR $\gamma$ t on the development of NKp46<sup>+</sup> cell populations in gut and skin. **Nature Immunology** 2009 10:75-82.
  32. Brandt CS., Baratin M., Yi EC., Kennedy J., Gao Z., Fox B., Haldeman B., Ostrand CD., Kaifu T., Chabannon C., Moretta A., West R., Xu WF., Vivier E.\*, Levin SD\*. The B7 Family Member B7-H6 is a tumor cell ligand for the activating Natural Killer cell receptor NKp30 in humans. **J. Exp. Med.** 2009. 206:1495-503
  33. 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.
  34. Chauveau A., Aucher A., Eissmann P., Vivier E., Davis D.M. Membrane nanotubes facilitate long distance interactions between Natural Killer cells and target cells. **Proc. Natl. Acad. Sci. USA**. 2010. 107: 5545-5550

35. Guia S., Jaeger B.N., Piatek S., Mailfert S., Trombik T., Fenis A., Chevrier N., Walzer T., Kerdiles Y.M., Marguet D., Vivier E.<sup>\*</sup>, Ugolini S<sup>\*</sup>. Activating receptor confinement at the plasma membrane controls Natural Killer cell tolerance. **Science Signaling**, 2011, 4:ra21.
36. Reynders A., Yessaad N., Vu Manh T.P., Dalod M., Fenis A., Aubry C., Nikitas G., Escalière B., Renauld J.C., Dussurget O., Cossart P., Lecuit M., Vivier E.<sup>\*</sup>, Tomasello E<sup>\*</sup>. Differential function of NKp46<sup>+</sup>ROR $\gamma$ <sup>+</sup> and NKp46<sup>+</sup>ROR $\gamma$ <sup>-</sup> gut lymphoid cells. **EMBO J.** 2011, 30:2934-47.
37. 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: 18324–18329.
38. Narni-Mancinelli E., Jaeger B.N., Bernat C., Fenis A., Kung S., De Gassart A., Mahmood S., Gut M., Heath S., Estellé J., Bertosio E., Vély F., Gastinel L.N., Beutler B., Malissen B., Malissen M., Gut I.G., Vivier E.<sup>\*</sup>, Ugolini S<sup>\*</sup>. Tuning of Natural Killer Cell Reactivity by NKp46 and Helios Calibrates T Cell Responses. **Science**, 2012, 335: 344-348.
39. Jaeger B.N., Donadieu J., Cognet C., Ordoñez-Rueda D., Bernat C., Barlogis V., Malhaoui N., Fenis A., Beaupain B., Bellanné-Chantelot C., Bajénoff M., Malissen B., Malissen M., Vivier E.<sup>\*</sup>, Ugolini S<sup>\*</sup>. Neutrophil depletion impairs natural killer cell maturation, function, and homeostasis. **J. Exp. Med.** 2012, 209: 565-580.
40. Gineau L., Cognet C., Kara N., Lack F., Dunne J., Veturi U., Picard C., Trouillet C., Eidenschenck C., Aoufouchi S., Alcais A., Smith O., Geissmann F., Feighery C., Abel L., Smogorzewska A., Stillman B., Vivier E., Casanova J.L., Jouanguy E. Partial MCM4 deficiency in patients with growth retardation, adrenal insufficiency and natural killer cell deficiency. **J. Clin. Invest.** 2012, 122: 821-32.
41. 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, 122: 394-404.
42. Biroccio A., Cherfils-Vicini J., Augereau A., Pinte S., Bauwens S., Ye J., Simonet T., Horard B., Jamet K., Cervera L., Mendez-Bermudez A., Poncet D., Grataroli R., T'kint de Rodenbeeke C., Salvati E., Rizzo A., Zizza P., Ricoul M., Cognet C., Kuilman T., Duret H., Lépinasse F., Marvel J., Verhoeyen E., Cosset F-L., Peeper D., Smyth M.J., Londoño-Vallejo A., Sabatier L., Picco V., Pages G., Scoazec J-Y., Stoppacciaro A., Leonetti C., Vivier E., and Gilson E.. TRF2 inhibits a cell-extrinsic pathway through which Natural Killer cells eliminate cancer cells. **Nature Cell. Biol.** 2013, 15: 818–828.
43. Viaud S, Saccheri F, Mignot G, Yamazaki T, Daillère R, Hannani D, Enot DP, Pfirschke C, Engblom C, Pittet MJ, Schlitzer A, Ginhoux F, Apetoh L, Chachaty E, Woerther PL, Eberl G, Bérard M, Ecobichon C, Clermont D, Bizet C, Gaboriau-Routhiau V, Cerf-Bensussan N, Opolon P, Yessaad N, Vivier E., Ryffel B, Elson CO, Doré J, Kroemer G, Lepage P, Boneca IG, Ghiringhelli F, Zitvogel L. The intestinal microbiota modulates the anticancer immune effects of cyclophosphamide. **Science.** 2013, 342:971-6.
44. Speak A.O., Taylor te Vruchte D., Davis L.C., Morgan A. J., Smith D.A., Yanjanin N.M., Simmons L., Hartung R., Runz H., Mengel E., Beck M., Imrie J., Jacklin E., Wraith J.E., Hendriksz C., Lachman R., Cognet C., Sidhu R., Fujiwara H., Ory D.S., Galione A., Porter F.D., Vivier E., Platt F.M. Altered distribution and function of Natural Killer cells in murine and human Niemann-Pick disease type C1. **Blood**, 2013 123: 51-60.

45. Firth M.A., Madera S., Beaulieu A.M., Gasteiger G., Castillo E.F., Schluns K.S., Kubo M., Rothman P.B., Vivier E., Sun J.C. Nfil3-independent lineage maintenance of natural killer cells. **J. Exp. Med.** 2013, 210: 2981-2990.
46. Crouse J., Bedenikovic G., Wiesel M., Ibberson M., Xenarios I., Von Laer D., Kalinke U., Vivier E., Jonjic S., Oxenius A. Type I Interferons Protect T Cells against NK Cell Attack Mediated by the Activating Receptor NCR1. **Immunity**, 2014, 40: 961-973.
47. Marçais A., Cherfils-Vicini J.<sup>+</sup>, Viant C<sup>+</sup>, Degouve S., Viel S., Fenis A., Rabilloud J., Mayol K., Tavares A., Bienvenu J., Gangloff Y-G., Gilson E., Vivier E., Walzer T. The metabolic checkpoint kinase mTOR is essential for IL-15 signaling during development and activation of NK cells. **Nature Immunology**, 2014, 15:749-57.
48. Celis-Gutierrez J, Boyron M, Walzer T, Pandolfi PP, Jonjić S, Olive D, Dalod M, Vivier E., Nunès JA. Dok1 and Dok2 proteins regulate natural killer cell development and function. **EMBO J.** 2014, 33:1928-40.
49. Viant C., Fenis A., Chicanne G., Payrastra B., Ugolini S., Vivier E. SHP-1-mediated inhibitory signals promote responsiveness and anti-tumor functions of Natural Killer cells. **Nature Communications**, 2014 | 5:5108 | DOI: 10.1038/ncomms6108.
50. Deng Y. Kerdiles Y., Chu J., Yuan S., Wang Y., Chen X., Mao H., Zhang L., Zhang J., Hughes T., Deng Y., Zhang Q., Wang F., Zou X., Liu C.G., Freud A. G., Li X., Caligiuri M. A.\* , Vivier E.\* , Jianhua Yu\* J. Transcription Factor Foxo1 is a negative regulator of NK cell maturation and function. **Immunity**, 2015, 42:457–470.
51. Delconte RB., Shi W., Sathe P., Ushiki T., Seillet C., Minnich M., Kolesnik TB., Rankin LC., Mielke LA., Zhang JG., Busslinger M., Smyth MJ. , Hutchinson D., Nutt SL., Nicholson SE., Alexander W., Strasser A., Corcoran LM., Vivier E., Belz GT., Carotta S, Huntington ND. Id2 governs Natural Killer cell homeostasis by tuning their sensitivity to IL-15. **Immunity**, in press.
52. Rankin L.C., Girard-Madoux M., Seillet C., Mielke L., Kerdiles Y., Fenis A., Wieduwild E., Groom J., Putoczki T., Mondot S., Lantz O., Demon D., Papenfuss T., Lamkanfi M., Carotta S., Renauld J-C., Carpentier S., Soos T., Arendt C., Shi W., Ugolini S., Huntington N.D., Belz G.T., Vivier E. Complementarity and redundancy of IL-22-producing Innate Lymphoid cells. **Nature Immunology**, in press.

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### **Selected Reviews, Essays & News and Views**

1. Trautmann A., Vivier E. Agrin: a bridge between the nervous and the immune systems. **Science** 2001, 292: 1667-1668.
2. 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.
3. Vivier E., Biron CA. A pathogen receptor on Natural Killer cells. **Science** 2002, 296:1248-1249.
4. Vivier E., Anfossi N. Inhibitory NK cell receptors on T cells: witness of the past, actors of the future. **Nature Reviews Immunology**, 2004, 4: 190 –198.
5. Vivier E., Nunes J., Vély F. Natural killer cell signaling pathways. **Science**. 2004, 306:1517-9.
6. Vivier E., Malissen B. Innate and adaptive immunity: specificities and signaling hierarchies revisited. **Nature Immunology**. 2005, 6: 17-21.
7. Walzer T., Vivier E. NK cell development: GAS matters. **Nature Immunology**, 2006, 7:703-704.
8. Vivier E., Romagné F. Good news, bad news for missing-self recognition by NK cells: autoimmune control but viral evasion. **Immunity**. 2007. 26: 549-551.



9. Vivier E., Tomasello E., Baratin M., Walzer T., Ugolini S. Functions of Natural Killer cells. **Nature Immunology** 2008. 9: 503-510.
10. Ugolini S., Vivier E. Natural killer cells remember. **Nature** 2009. 457: 544-545.
11. Vivier E., Spits H., Cupedo T. Interleukin-22-producing innate immune cells: new players in mucosal immunity and tissue repair? **Nature Reviews Immunology** 2009, 9:229-234.
12. Vivier E., and Ugolini S. Regulatory Natural Killer cells: new players in the IL-10 anti-inflammatory response. **Cell Host and Microbe**, 6:493-5. 2009.
13. Vivier E., Ugolini, S. Poster on NK cells: receptors and functions, **Nature Reviews Immunology**, 2010, 10: 12
14. 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: 44-49.
15. Narni-Mancinelli E., Vivier E. NK genesis: a trick of the TRAIL. **Immunity**, 2012, 36: 1-3.
16. Vivier E., Ugolini S., Blaise D., Chabannon C., Brossay L. Targeting Natural killer cells and natural killer T cells in cancer. **Nature Reviews Immunol.** 2012, 12: 239-252.
17. Jaeger B.N., Vivier E. When Natural Killer cells overcome their lack of education. **J. Clin. Invest.** 2012, 122:3053.
18. Spits H., Artis D., Colonna M., Diefenbach A., Di Santo J.P., Eberl G., Koyasu S., Locksley R.M. McKenzie A.N.J., Mebius R.E., Powrie F., Vivier E. Innate Lymphoid Cells: a proposal for a uniform nomenclature. **Nature Reviews Immunol.** 2013. 13: 145-149.
19. Narni-Mancinelli E., Ugolini S., Vivier E. Tuning the threshold of Natural Killer cell responses. **Curr. Opin. Immunol.** 2013, 25:53-58.
20. Kerdiles Y., Ugolini S., Vivier E. T cell regulation of Natural Killer cells. **J. Exp. Med.** 2013, 210: 1065-1068.
21. Pradeu P., Jaeger S. Vivier E. The Speed of Change: Towards a Discontinuity Theory of Immunity. **Nature Reviews Immunol.** 2013, 13: 764-769.
22. Vivier E., Ugolini S., Nunès J.A. ADAPted cytokine secretion in Natural Killer cells. **Nature Immunology**, 2013, 14:1108-1110.
23. Daëron M, Vivier E. Coincidence detection of antibodies and interferon for sensing microbial context. **Nature Immunology**, 2014, 15: 316-317.
24. Sun J.C., Ugolini S., Vivier E. Immunological Memory within the Innate Immune System. **EMBO J.**, 2014, 33:1295-1303.
25. Narni-Mancinelli N., Vivier E. Delivering three punches to knockout intracellular Bacteria. **Cell**, 2014, 157:1251-1252.
26. Eberl G., Di Santo J., Vivier E. The brave new world of Innate Lymphoid Cells. **Nature Immunology**, 2015, 16:1-5.

#### **Monographs and Chapters in collective volumes**

- Innate Immunity. Methods in Molecular Biology, Vol. 415. Ewbank J & Vivier E. (Eds.). Human Press, 2008.
- Immunobiology of Natural Killer Cell Receptors. Vivier E. & Colonna M. (Eds), Springer Verlag, 2005.
- Leucocyte Typing VII, Edited by David Mason et al. Oxford Univ. Press, 2002.
- Immunoreceptor tyrosine-based inhibition motifs. Dæron M. & Vivier E. (Eds), Springer Verlag, 1999.

- 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.
- Participation to Natural Killer cell chapters in:
  - Immunobiology, 8<sup>th</sup> edition; K. Murphy et al.
  - Immunobiology, 7<sup>th</sup> edition; P. Travers, C. Janeway et al.
  - Immunologie, 6<sup>e</sup> édition; J-F. Bach, L. Chatenoud.