

**Current position:**

2023-present: **Principal Investigator** (Chargé de Recherche), ImmunoConcEpT, INSERM ERL 1303, CNRS 5164, Bordeaux, FR.

**Publications:**

Research articles in peer-reviewed journal:

**15-** Juliette Lesbats, Aurélia Brillac, Julie A. Reisz\$, Parnika Mukherjee\$, Charlène Lhuissier, Mónica Fernández-Monreal, Jean-William Dupuy, Angèle Sequeira, Gaia Tioli, Celia de la Calle Arregui, Benoît Pinson, Daniel Wendisch, Benoît Rousseau, Alejo Efeyan, Leif. E Sander, Angelo D'Alessandro, and **Johan Garaude**. Macrophages recycle phagocytosed bacteria to fuel immunometabolic responses. *Nature*, 2025. DOI: 10.1038/s41586-025-08629-4.

- News and Views in *Nature Immunology* by S.N. O'Carroll and L.A.J. O'Neill. DOI: 10.1038/s41590-025-02117-7

**14-** Henni Mansour AS, Ragues M, Brevier J, Borowczyk C, Grevelinger J, Laroche-Traineau J, **Garaude J**, Marais S, Jacobin-Valat MJ, Gerbaud E, Clouet-Sanchez G, Otton F. Phenotypic, Metabolic, and Functional Characterization of Experimental Models of Foamy Macrophages: Toward Therapeutic Research in Atherosclerosis. *Int J Mol Sci*. 2024 Sep 21;25(18):10146. DOI: 10.3390/ijms251810146. PMID: 39337629

**13-** Torralba D, Baixauli F, Villarroja-Beltri C, Fernández-Delgado I, Latorre-Pellicer A, Acín-Pérez R, Martín-Cófreces NB, Jaso-Tamame ÁL, Iborra S, Jorge I, González-Aseguinolaza G, **Garaude J**, Vicente-Manzanares M, Enríquez JA, Mittelbrunn M, Sánchez-Madrid F. Priming of dendritic cells by DNA-containing extracellular vesicles from activated T cells through antigen-driven contacts. *Nat Commun*. 2018. DOI: 10.1038/s41467-018-05077-9.

**12-** Khan AUH, Allende-Vega N, Gitenay D, **Garaude J**, Vo DN, Belkhala S, Gerbal-Chaloin S, Gondeau C, Daujat-Chavanieu M, Delettre C, Orecchioni S, Talarico G, Bertolini F, Anel A, Cuezva JM, Enríquez JA, Cartron G, Lecellier CH, Hernandez J, Villalba M. Mitochondrial Complex I activity signals antioxidant response through ERK5. *Science Report*, 2018. DOI: 10.1038/s41598-018-23884-4.

**11- Garaude J.**<sup>\*,§</sup>, Acín-Pérez R.<sup>\*</sup>, Martínez-Cano S., Enamorado M., Ugolini M., Nistal-Villán E., Hervás-Stubbs S, Pelegrín P., Sander L.E., Enríquez J.A.<sup>§</sup>, Sancho D.<sup>§</sup>. Mitochondrial respiratory-chain adaptations in macrophages contribute to antibacterial host defence. *Nature Immunology*, 2016. doi: 10.1038/ni.3509. (\* Equal contributions) (<sup>§</sup>corresponding authors).

- News and Views in *Nature Immunology* by M.A. Holmbeck and G. Shadel. ni.3534

- Research Highlights in *Nature Reviews Immunology* by E. Kugelberg. nri.2016.83

**10-** Comet N.R., Aguiló J.I., Rathoré M.G., Catalán E., **Garaude J.**, Uzé G., Naval J., Pardo J., Villalba M., Anel A. IFN- $\alpha$  signaling through PKC- $\theta$  is essential for anti-tumoral NK cell function. *Onc Immunology*. 2014. 14;3(8):e948705

**9-** Kaminski S., Adjali O., Jacquet C., **Garaude J.**, Keriel A., Lassaux L., Hipskind R.A., Sitbon S., Taylor N., and Villalba M. (2012) The protooncogene Vav1 regulates murine leukemia virus-induced T cell leukemogenesis. *Onc Immunology*. Aug 1;1(5):600-608

**8- Garaude J.**, Kent A., van Rooijen N., & Blander J.M. (2012) Simultaneous targeting of toll- and nod-like receptors induces effective tumor-specific immune response. *Sci. Transl. Med*. 2012 Feb 8;4(120):120ra16. Cover article + Editors choice

- Comments in *Science Translational Medicine* by J.A. Berzofsky (Vol.4 issue 120)

**7-** Torchinsky M., **Garaude J.**, Martin A.P. and Blander J.M. (2009) Innate immune recognition of infected apoptotic cells directs T(H)17 cell differentiation. *Nature*, doi:10.1038/nature07781.

- Highlights in *Nature Review Immunology*, comments in *Nature* by B. Stockinger.

**6-** Charni S.<sup>#</sup>, Aguiló J.I.<sup>#</sup>, **Garaude J.**<sup>#</sup>, de Bettignies G., Jacquet C., Hipskind R.A., Singer D., Anel A., Villalba M. (2009) ERK5 knockdown generates mouse leukemia cells with low MHC class I levels that activate NK cells and block tumorigenesis. *J. immunol.*, 182(6):3398-405. (<sup>#</sup>Equal contribution)

**5-** Aguiló J.I., **Garaude J.**, Pardo J., Villalba M., Anel A. (2009) PKC- $\theta$  is required for NK cell activation and *in vivo* control of tumor progression. *J. Immunol.*, 182(4):1972-81

**4- Garaude J.**<sup>#</sup>, Kaminski S.<sup>#</sup>, Charni S., Aguiló J.I., Jacquet C., Plays M., Hernandez J., Rodriguez F., Hipskind R.A., Anel A., Villalba M. (2008). Impaired anti-leukemic immune response in PKC $\theta$ -deficient mice. *Mol. Immunol.* 45(12):3463-9. (<sup>#</sup>Equal contribution)

**3- Garaude J.**<sup>\*</sup>, Farrás R., Bossis G., Charni S., Piechaczyk M., Hipskind R.A., Villalba M.<sup>\*</sup> (2008) SUMOylation regulates the transcriptional activity of JunB in T lymphocytes. *J. Immunol.*, 180(9):5983-90. (<sup>\*</sup>Co-corresponding authors)

**2- Garaude J.**, Cherni, S., Kaminski, S., Delepine, E., Chable-Bessia, C., Benkirane, M., Borges, J., Pandiella, A., Iniguez, M.A., Fresno, M., Hipskind, R.A. and Villalba, M. (2006) ERK5 activates NF- $\kappa$ B in leukemic T cells and is essential for their growth *in vivo*. *J. Immunol*, 177(11):7607-1

**1- Garaude J.**<sup>#</sup>, Kaminski, S.<sup>#</sup>, Cherni, S., Hipskind, R.A. and Villalba, M. (2005) The role of ERK5 in T-cell signalling. *Scand J Immunol*, 62, 515-520. (<sup>#</sup>Equal contribution)

Reviews, perspectives, author's view and comments:

**R11- Garaude J.** Reprogramming of mitochondrial metabolism by innate immunity. *Current Opinion in Immunology*, 2019. doi: 10.1016/j.coi.2018.09.010 [invited review]

**R10- Benmoussa, K., Garaude J.<sup>§</sup> and Acín-Pérez, R.<sup>§</sup>** (2017) How mitochondrial metabolism contributes to macrophage functions. *Journal of Molecular Biology*, 2018. doi: 10.1016/j.jmb.2018.07.003 (<sup>§</sup> **Corresponding authors**) [invited review]

**R9- Sander L.E.<sup>§</sup> and Garaude J.<sup>§</sup>** (2017) The mitochondrial respiratory chain: a metabolic rheostat of antibacterial immunity. *Mitochondrion*, 2017 Oct 17. pii: S1567-7249(17)30224-6 (<sup>§</sup> **Corresponding authors**) [invited review]

**R8- Sancho D.<sup>§</sup>, Enamorado M., Garaude J.<sup>§</sup>** (2017) Innate immune function of mitochondrial metabolism. *Frontiers in Immunology*, 2017 May8;8:527. (<sup>§</sup> **Corresponding authors**) [invited review]

**R7- Garaude J.**, (2013). Levée d'immunité innée dans le traitement des cancers. *Med Sci (Paris)*. Nov;29(11):985-90. [invited review]

**R6- Anel A., Aguiló J.I., Catalán E., Garaude J., Rathore M.G., Pardo J., Villalba M.** (2012). Protein Kinase C-θ (PKC- θ) in Natural Killer cell and Anti-Tumor immunity. *Front Immunol*. 2012;3:187.

**R5- Villalba M., Rathore M.G., Lopez-Royuela N., Krzywinska E., Garaude J. and Allende-Vega N,** (2012). From Tumor metabolic changes to tumor immune escape. *Int J Biochem Cell Biol*. Jan;45(1):106-13.

**R4- Garaude J.<sup>§</sup> and Blander J.M.<sup>§</sup>**, (2012). Attacking tumor cells with a dual ligand for innate immune receptors. *Oncotarget*. Apr;3(4):361-2. (<sup>§</sup> **Corresponding authors**) [invited review]

**R3- Garaude J.<sup>§</sup> and Blander J.M.<sup>§</sup>**, (2012). 'Flagellated' cancer cells propel anti-tumor immunity. *Oncolimmunology*. Sep 1;1(6):940-942. (<sup>§</sup> **Corresponding authors**) [invited review]

**R2- Garaude J.** and Blander J.M., (2012). ICOSmizing immunotherapies with T<sub>H</sub>17. *Sci. Transl. Med*. Oct 27;2(55):55ps52.

**R1- Torchinsky M., Garaude J.** and Blander J.M. (2010) Infection and apoptosis as a joint inflammatory trigger. *Curr Opin Immunol*. Feb;22(1):55-62.

### Supervision activity:

**Undergraduate students:** Marina Fioleau (MRGM, Bordeaux, 2018), Kévin Pouxvielh (MRGM, Bordeaux, 2018), Sarai Martinez-Cano (CNIC, Madrid, 2012).

**Master students:** Sarah Champilou (ImmunoConcEpT 2024), Keren Rabinowitz (MSSM New York, 2010), Andrew Kent (MSSM, New York, 2009), Katarzyna Przybylska (IGMM, France, 2006) Gaspard Cretenet (IGMM, France, 2005), Simon de Beco (ENS, IGMM France, 2004).

#### Ph.D. students:

- **N. Michel Enamorado-Escalona** (CNIC, Madrid, 2013-2017), **Publication #11**. next Postdoc at NIH (Y. Belkaid laboratory), now group leader at MSSM, New York, USA.
- **Juliette Lesbats** (MRGM, Bordeaux, 2018-2022), **Publication #15**, next Engineer in private sector.
- **Gaia Tioli** (MRGM, Bordeaux, 2018-2022, co-director: M.-L. Genova, Univ. Bologna, Italy), **Publication#15**, next staff scientist at Univ. Bologna.

#### Postdoc researchers:

- **Khaddouj Benmoussa** (MRGM, Bordeaux, 2017-2019), Publication #R10, next Postdoc at RESTORE, Toulouse (A. Coste laboratory)
- **Charlène Lhuissier** (2024-present).
- **Chloé Torres** (2025-present).

#### Engineers:

- **Sarai Martinez-Cano** (CNIC, Madrid, 2012-2017), next, Engineer in private sector (Immunotek, Spain).
- **Aurélia Brillac** (MRGM, Bordeaux, 2018-2023), next, Engineer in private sector (Merck Life Science, France).
- **Thibaut Blondy** (MRGM, Bordeaux, 2019-2020), next, Research Engineer at BRIC, Bordeaux, France (eq. TRIO2).
- **Angela Sequeira** (2024- present)
- **Célia Lamothe** (2025-present)