



Rejane RUA, PhD

Group leader:
Immunosurveillance of the central nervous system

Background

I studied at the Ecole Normale Supérieure in Paris and obtained my PhD at the Pasteur Institute under the supervision of Pr. Gessain and Pr Schwartz. My work helped understanding the physiopathology of retroviral infections and the mechanisms leading to zoonoses and viral emergence.

I then joined the team of Dr. McGavern at the National Institutes of Health in the US to pursue my work in antiviral immune responses, focusing on brain infections. Using intravital imaging, I discovered a role for meningeal cells at the surface of the brain in controlling neuroinflammation.

Awards

- 2016 F32 NINDS intramural competitive fellowship
- 2017 Fellows Award for Research Excellence (FARE)
- 2019 H2020 Marie-Curie Fellowship Reintegration Panel
- 2019 Amidex Chaire d'Excellence

Membership

- 2015-2018 Membre de l'Association Américaine d'Immunologie
- 2017-2018 Membre du comité de direction du groupe d'Immunologie du NIH

Main achievements

- I uncovered the role of innate lymphocytes at the surface of the Central Nervous System (CNS) in controlling neuroinflammation during autoimmune CNS diseases
- I also showed that inflammatory macrophages accumulating upon CNS inflammation can engraft the meninges and contribute to long-term impairment of CNS immunity.

Selected publications

- [Rua R](#), Lee JY, Silva AB, Swafford IS, Maric D, Johnson KR, McGavern DB. Infection drives meningeal engraftment by inflammatory monocytes that impairs CNS immunity. **Nat Immunol**. 2019 Apr;20(4):407-419. doi: 10.1038/s41590-019-0344-y.
- Kwong B*, [Rua R*](#), Gao Y, Flickinger J Jr, Wang Y, Kruhlak MJ, Zhu J, Vivier E, McGavern DB, Lazarevic V. Author Correction: T-bet-dependent NKp46(+) innate lymphoid cells regulate the onset of T(H)17-induced neuroinflammation. **Nat Immunol**. 2018 Aug;19(8):898. doi: 10.1038/s41590-018-0139-6.
- [Rua R](#), McGavern DB. Advances in Meningeal Immunity. **Trends Mol Med**. 2018 Jun;24(6):542-559. doi: 10.1016/j.molmed.2018.04.003. Epub 2018 May 3.
- [Rua R](#), Betsem E, Montange T, Buseyne F, Gessain A. In vivo cellular tropism of gorilla simian foamy virus in blood of infected humans. **J Virol**. 2014 Nov;88(22):13429-35. doi: 10.1128/JVI.01801-14.
- [Rua R](#), Betsem E, Calattini S, Saib A, Gessain A. Genetic characterization of simian foamy viruses infecting humans. **J Virol**. 2012 Dec;86(24):13350-9. doi:10.1128/JVI.01715-12. Epub 2012 Sep 26.