Group	Lymphocyte immunobiology
	Area Health, Coordinator Aranzazu Cruz Adalia arancruz@ucm.es
Center	Faculty of Medicine, Dpt Immunology, Ophthalmology and ENT
web	https://www.ucm.es/ioo//lymphocyte-immunobiology
Description	The research team was established in 2000 and externally evaluated by the Governmental Evaluation Agency with the highest scores among immunology teams at UCM. In the last internal evaluation, it ranked 1st of 8 immunology teams at UCM. All researchers share scientific interests, facilities, papers, projects, training programs and weekly lab seminars, as well as a strong commitment towards internationalization by supporting both PI sabbaticals and incorporation of young scientists with excellent tenure perspectives. The research team studies lymphocyte immunobiology in different diseases with cellular, molecular and bioinformatic approaches and collaborates with different academic and non-academic institutions (PI): - Immunotherapy against Sézary syndrome (Regueiro JR) - Molecular mechanisms regulating the function of ILC3 in cancer (Cruz-Adalia A) - Physiopathological consequences of the crosstalk between DCs and lymphocytes (Iborra S) - Molecular dynamics responsible for lymphocyte activation and function (Roda P) - Endoplasmic reticulum stress, inflammation and cancer (Martinez-Naves E and Cubero FJ) - Computational identification and experimental validation of immunomodulatory peptides (Lafuente EM, Reche PA) - Study of the actin cytoskeleton during cellular motility (Martinez-Quiles N) - Role of exosomes and miRNAs in peritoneal metastasis (Cabañas C) - Functional contribution of miRNAs to oncogenic B cell transformation (García-Yebenes V)
Facilities	The labs comprise 400 m2 well equipped for biochemistry, cell biology and molecular biology, including state of-the-art technology such as Odyssey (2011), Elispot (2008), Gammacell Irradiator (2007) and FACSCalibur flow cytometer (2007) (a). Central facilities include a research administration office (b), physical and online central library with free reprint request (c), informatics (d), genomics (qPCR, sequencing, microarrays), proteomics, flow cytometry, confocal microscopy (e), animal facilities, electronic microscopy, and free poster service, among others. a. https://www.ucm.es/microbiologia-1/infraestructuras b. http://www.ucm.es/servicio-de-investigacion c. http://www.ucm.es/BUCM/med/ d. http://www.ucm.es//ssii e. http://www.ucm.es/cais
Projects, PI, websites	Candidates can choose a project among the following topics (please follow each link for further info): -Novel comprehensive immunotherapy to specifically target the malignant clone in Sézary syndrome, a rare cancer of T lymphocytes. - Molecular mechanisms regulating the function of innate lymphoid cells 3, recently characterized immune cells, during the development of cancer. - Understanding how the crosstalk between dendritic cells and lymphocytes plays a role in barrier tissues, where most encounters with microbes occur -Spatial and temporal regulation of signaling networks and cell machinery during lymphocyte immune responses. -Role of JNKs in cancer development due to the regulation of the endoplasmic reticulum homeostasis and the triggering of the unfolded protein response. - Immunomodulation by peptides: Computational identification and experimental validation of Immunomodulatory peptides. - Function of the immune protein HS1 in inflammation, regulating actin cytoskeleton during cellular motility. - Role of exosomes and miRNAs in ovarian cancer patients with peritoneal metastasis, regulating the acquisition of a chemoresistant phenotype and immune evasion - Molecular mechanisms responsible of miR-28 anti-tumoral activity and impact of AID mutagenic activity on miRNA repertoire.
Keywords	lymphocytes, innate immune cells, inflammation, cancer, immunomodulation
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