

Breve CV:

Throughout her career Dr. Guallar has been interested in understanding how transcriptional and epigenetic networks collaborate in cell fate decisions, and their critical relevance both in mammalian development and in pathological contexts. During her PhD in the laboratory of Dr. Schoorlemmer (Univ. of Zaragoza) she was able to dissect novel players involved in the regulation of endogenous retroviruses, whose expression is deregulated during aging, in autoimmune disorders or cancer. Afterwards, Dr. Guallar was committed to pursue a successful research career in the Stem Cell field, where the pluripotent cells represent the paradigm of a “youthful” cellular age. Thus, she joined the newly created laboratory of Dr. Wang, at the Mount Sinai Hospital, in New York, where she was able to use and develop cut-edge proteomic and epitranscriptomic technologies and identify novel critical functions of RNA editing in somatic cell reprogramming. Significantly, from her work in Dr. Wang laboratory, she uncovered an unexpected new mode of action of the DNA epigenetic modifier TET2 on RNA epigenetics through m⁵C oxidation (Guallar et al., Nature Genetics 2018). This work has already granted her several awards (i.e. Young Investigator Competition Award, MINDICH Inst., NY; Best Poster Award, Hydra) and invitations as a speaker in prestigious conferences (ISSCR 2017, EMBO RNA meeting 2018, SEBBM 2018, etc.). Currently, after being awarded with a competitive Campus Vida’s International Postdoctoral Program, she is consolidating her training and starting her emancipation by establishing new research lines on RNA epigenetic implications in several age-related hallmarks (e.g. DNA damage) in mammalian cells, at the laboratory of Dr. González-Blanco (CiMUS, Univ. of Santiago de Compostela). From her collaborations during the postdoctoral training, to date Dr. Guallar has published in top-ranked journals (Nature Genetics, Cell Stem Cell, Molecular Cell, Elife, etc.) both as first author and as co-author. Altogether, her research has contributed to moving forward the current knowledge on transcriptional and posttranscriptional pathways in the reprogramming field and regenerative medicine. Significantly, she has obtained prestigious and highly competitive fellowships from public and private sources (e.g. Fundación Alfonso Martín Escudero, C.S.I.C., Campus Vida USC, Aragon Government) which have allowed Dr. Guallar to undertake a career in the exciting and promising field of Epitranscriptomic modifications of RNA.