

## **Curriculum Vitae:**

**Name:** Mercedes Bermejo Herrero

**Date and place of birth:** 1964, Madrid. Spain

### **Present position:**

- 2002- present Titulado Superior de Actividades Técnicas y Profesionales (RIS). AIDS Immunopathogenesis Unit. National Centre of Microbiology. Instituto de Salud Carlos III. Madrid,

### **Academic Education**

- Biological studies in Autonomía University, Madrid
- Biology degree, Madrid 1991
- PhD in Biology. Thesis entitled "Expresión de CXCR4 y SDF-1 en linfocitos y células dendríticas." Implicaciones en la infección por el VIH". Department of Immunology. Universidad Autónoma, Madrid, 2002
- Magíster en Bromatología y control de calidad de los alimentos. Universidad Complutense, Madrid. 1993-1994
- Master en Biotecnología. Universidad Autónoma de Madrid. Centro de Biología Molecular "Severo Ochoa". Madrid. 1994-1996
- Diploma de Especialización on line en Metodología de la Investigación. Escuela Nacional de Sanidad. Madrid. 2008

### **Positions and employment**

- Fellowship in Immunology. Department of Immunology. Hospital Gregorio Marañón. Madrid, 1994-1996
- Fellowship in Immunopathology. Hospital 12 de Octubre. Madrid, 1996-2000
- Fellowship in Immunopathology. Instituto de Salud Carlos III. Madrid, 2000-2005
- 2002-2005. Post-doctoral fellow. Immunopathology Unit. Instituto de Salud Carlos III, Madrid.
- 2005-present Titulado Superior de Actividades Técnicas y Profesionales (RIS). AIDS Immunopathogenesis Unit. National Centre of Microbiology. Instituto de Salud Carlos III. Madrid,

### **Consultancies and Directorships**

- 2003-present Member of Red de investigación en SIDA (RIS)

### **Teaching activity**

- Assistant professor of Virology and immunology at the European University of Madrid 2012-current.
- Assistant professor of the Master of Infectious Diseases. Instituto de Salud Carlos III- University of Alcalá 2014-current

### **Stays in Research Centers**

- Research stay at Dr Fernando Arenzana's lab in Institute Pasteur. Paris. France. 1 week, 1997

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### **Areas of research interest:**

- HIV-1 pathogenesis. Latency and reactivation.
- Regulation of CXCR4 expression and CXCL12 chemokine and their role in HIV-1 infection
- Impact of CXCL12 production by dendritic cells in HIV infection
- Restriction factors

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### **Recent Research support.**

- Regulation of CXCR4 in peripheral T lymphocytes. Role in HIV infection. FIS 1998-2000
- Mechanisms of proviral latency in HIV-infected lymphocytes. Ministry of Research. 2000-2002

- Molecular analysis of the pre and post-transcriptional regulation of the chemokine SDF-1 in producing cell lines and dendritic cells and study of the interference with HIV infection. Instituto de Salud Carlos III. 2001-2003.
- Molecular basis of the resistance to HIV progression in patients harbouring the polymorphisms G801A 3'UTR in SDF-1 $\alpha$  and V64I in CCR2. FIPSE Foundation 2001-2003
- Development of a technological platform for screening and characterization of natural products with antiviral activity" Instituto de Salud Carlos III. Ministry of Research 2004-2006
- Study of the regulation of CXCL12 / SDF-1 chemokine in human lymphocytes. Role of cellular activation and lymphotropic virus transactivating protein. Implications for tumorigenesis. SAF 2004-04258. MPY 1004/05. 2004.
- Analysis of the induction of SDF-1 expression by viral transactivators from lymphotropic viruses. Analysis of signal transduction pathways involved and their potential role in the pathogenesis of lymphoma. Potential role in virus-associated oncogenesis" Ministry of Research. 2004-2008
- Interacción virus-host: identification of new targets for antiviral activity. Red CAM VIRHOST. 2007
- Analysis of the cellular modification induced by the Tat protein and study of potential inhibitors of the TAT protein" Ministry of Health. FIPSE Foundation 2005-2009
- Design of new immunogens targeting dendritic cells for therapeutic immunisation of HIV-infected patients". Ministry of Science Ministry of Health 2004-2008
- Analysis of cellular modifications induced by human retrovirus infections: HIV-1 and HTLV-I. Role in pathogenesis of AIDS and T-cell lymphomas". Ministry of Science 2009-2012
- Red de investigación en SIDA RIS. <http://www.retic-ris.net>. MINISTERIO DE SANIDAD

## Publications

- Bermejo M, López-Huertas MR, Hedgpeth J, Mateos E, Rodríguez-Mora S, Maleno MJ, Plana M, Swindle J, Alcamí J, Coiras M. Analysis of protein kinase C theta inhibitors for the control of HIV-1 replication in human CD4+ T cells reveals an effect on retrotranscription in addition to viral transcription. *Biochem Pharmacol.* 2015 Apr 15; 94(4):241-56. doi: 10.1016/j.bcp.2015.02.009. Epub 2015 Feb 27
- González N, Bermejo M, Calonge E, Jolly C, Arenzana-Seisdedos F, Pablos JL, Sattentau QJ, Alcamí J. SDF-1/CXCL12 Production by Mature Dendritic Cells Inhibits the Propagation of X4-Tropic HIV-1 Viruses at the Dendritic Cell-T Cell Infectious Synapse. *J Virol.* 2010;84:4341-51
- Calonge E, Alonso-Lobo JM, Escandón C, González N, Bermejo M, Santiago B, Mestre L, Pablos JL, Caruz A, Alcamí J. c/EBPbeta is a mayor regulatory element driving transcriptional activation of the CXCL12 promoter. *J Mol Biol.* 2010; 396(3):463-72.
- Bedoya LM, Álvarez A, Bermejo M, González N, Beltrán M, Sánchez-Palomino S, Cruz SM, Gaitán I, del Olmo E, Escarcena R, García PA, Cáceres A, San Feliciano A, Alcamí J. "Guatemalan plants extracts as virucides against HIV-1 infection". *Phytomedicine* 2008; 15(6-7):520-524.
- Garcia-Moruja C, Alonso-Lobo JM, Rueda P, Torres C, Gonzalez N, Bermejo M, Luque F, Arenzana-Seisdedos F, Alcamí J, Caruz A. Functional characterization of SDF-1 proximal promoter *J Mol Biol.* 2005; Apr 22; 348(1):43-62.
- Rullas J, Bermejo M, Garcia-Perez J, Beltrán M, Brown S and Alcamí J. Prostratin induces HIV reactivation and downregulates HIV receptors in PBMCs. *Antiviral Therapy* 2004; 9:545-554

- Bermejo M, Sánchez-Palomino S, Usán L, Alcamí J. Dynamics of HIV Replication in Lymphocytes and consequences in the Efficacy of Protease inhibitors. Journal of Medical Virology, 2004; 73(4) 502-507
- Gil J, Bermejo M, Alcamí J. HIV and apoptosis: a complex interaction between cell death and virus survival. Viruses and Apoptosis. Alonso (Ed.) Series: Progress in Molecular and Subcellular Biology. Life Sciences Editorial, 2004
- Laín de Lera T, Folgueira L, Martín AG, Dargemont C, Pedraza MA, Bermejo M, Bonay P, Fresno M, Alcamí J. Expression of IkappaBalpha in the nucleus of human peripheral blood T lymphocytes. Oncogene. 1999 Feb 25; 18(8):1581-8.
- Bermejo M, Martín-Serrano J, Oberlin E, Pedraza MA, Serrano A, Santiago B, Caruz A, Loetscher P, Baggiolini M, Arenzana-Seisdedos F, Alcamí J. Activation of blood T lymphocytes down-regulates CXCR4 expression and interferes with propagation of X4 HIV strains. Eur J Immunol. 1998 Oct;28(10):3192-204