



## **Luisa Cervantes-Barragan**

### **Contact**

Luisa Cervantes-Barragan

### **Units**

Institute of Immunobiology

## Publications (25)

Kindler E, Karl N, Gaughan C, van Kuppeveld F, Silverman R, Keller M, Ludewig B, Bergmann C, Ziebuhr J, Weiss S, Kalinke U, Elliot R, Cervantes-Barragan L, Habjan M, Gil Cruz C, Spanier J, Li Y, Wilhelm J, Rabouw H, Züst R, Hwang M, V'kovski P, Stalder H, Marti S, Thiel V. Early endonuclease-mediated evasion of RNA sensing ensures efficient coronavirus replication. *PLoS Pathog* 2017; 13:e1006195.

Pérez Shibayama C, López-Macías C, Isibasi A, Waisman A, Regen T, Scandella E, Onder L, Chai Q, Hisaki E, Cervantes-Barragan L, Pastelin-Palacios R, Gil Cruz C, Ludewig B. IFN- $\gamma$ -producing CD4+ T cells promote generation of protective germinal center-derived IgM+ B cell memory against *Salmonella Typhi*. *J Immunol* 2014; 192:5192-200.

Pérez Shibayama C, Gil Cruz C, Nussbacher M, Allgäuer E, Cervantes-Barragan L, Züst R, Ludewig B. Dendritic cell-specific delivery of Flt3L by coronavirus vectors secures induction of therapeutic antitumor immunity. *PloS one* 2013; 8:e81442.

Ludewig B, Stein J, Sharpe J, Cervantes-Barragan L, Thiel V, Bocharov G. A global "imaging" view on systems approaches in immunology. *Eur J Immunol* 2012; 42:3116-25.

Cervantes-Barragan L, Firner S, Bechmann I, Waisman A, Lahl K, Sparwasser T, Thiel V, Ludewig B. Regulatory T cells selectively preserve immune privilege of self-antigens during viral central nervous system infection. *J Immunol* 2012; 188:3678-85.

Cervantes-Barragan L, Lewis K, Firner S, Thiel V, Hugues S, Reith W, Ludewig B, Reizis B. Plasmacytoid dendritic cells control T-cell response to chronic viral infection. *Proc Natl Acad Sci U S A* 2012; 109:3012-7.

Gil-Cruz C, Perez-Shibayama C, Firner S, Waisman A, Bechmann I, Thiel V, Cervantes-Barragan L, Ludewig B. T helper cell- and CD40-dependent germline IgM prevents chronic virus-induced demyelinating disease. *Proc Natl Acad Sci U S A* 2012; 109:1233-8.

Ludewig B, Cervantes-Barragan L. CD169(+) macrophages take the bullet. *Nat Immunol* 2011; 13:13-4.

Pastelin-Palacios R, Isibasi A, Gunn J, Bonifaz L, Alpuche-Aranda C, Becker I, García-Zepeda E, Cunningham A, Ludewig B, Arriaga-Pizano L, Cervantes-Barragan L, Moreno-Eutimio M, Pérez Shibayama C, Gil Cruz C, López-Macías C. Subversion of innate and adaptive immune activation induced by structurally modified lipopolysaccharide from *Salmonella typhimurium*. *Immunology* 2011; 133:469-81.

Züst R, Ludewig B, Siddell S, Diamond M, Barchet W, Baker S, Szretter K, Ziebuhr J, Neuman B, Maier R, Habjan M, Cervantes-Barragan L, Thiel V. Ribose 2'-O-methylation provides a molecular signature for the distinction of self and non-self mRNA dependent on the RNA sensor Mda5. *Nat Immunol* 2011; 12:137-43.

Cervantes-Barragan L, Ludewig B, Rohrlisch P, Romero P, Speiser D, Levy F, Janda J, Siervo S, Maier R, Züst R, Thiel V. Dendritic cell-specific antigen delivery by coronavirus vaccine vectors induces long-lasting protective antiviral and antitumor immunity. *MBio* 2010; 1

Lang P, Zinkernagel R, Ohashi P, Häussinger D, Harris N, Hengartner H, Ludewig B, Kalinke U, Van Rooijen N, Cervantes-Barragan L, Kulawik A, Meryk A, Krings C, Gailus N, Borkens S, Scheu S, Honke N, Recher M, Lang K. Tissue macrophages suppress viral replication and prevent severe immunopathology in an interferon- $\lambda$ -dependent manner in mice. *Hepatology* 2010; 52:25-32.

Bocharov G, Züst R, Cervantes-Barragan L, Luzyanina T, Chiglintsev E, Chereshnev V, Thiel V, Ludewig B. A systems immunology approach to plasmacytoid dendritic cell function in cytopathic virus infections. *PLoS Pathog* 2010; 6:e1001017.

Lang P, Ohashi P, Ludewig B, Honda K, Bergthaler A, Flatz L, Pellegrini M, Recher M, Navarini A, Verschoor A, Cervantes-Barragan L, Lang K. Hematopoietic cell-derived interferon controls viral replication and virus-induced disease. *Blood* 2009; 113:1045-52.

Cervantes-Barragan L, Kalinke U, Züst R, König M, Reizis B, López-Macías C, Thiel V, Ludewig B. Type I IFN-mediated protection of macrophages and dendritic cells secures control of murine coronavirus infection. *Journal of immunology (Baltimore, Md. : 1950)* 2009; 182:1099-106.

Cervantes-Barragan L, Gil Cruz C, Pastelin-Palacios R, Lang K, Isibasi A, Ludewig B, López-Macías C. TLR2 and TLR4 signaling shapes specific antibody responses to *Salmonella typhi* antigens. *Eur J Immunol* 2009; 39:126-35.

Birnberg T, Reizis B, Riethmacher D, Brockschnieder D, Ludewig B, Brenner O, Krauthgamer R, Makia D, Cervantes-Barragan L, Caton M, Sapozhnikov A, Bar-On L, Jung S. Lack of conventional dendritic cells is compatible with normal development and T cell homeostasis, but causes myeloid proliferative syndrome. *Immunity* 2008; 29:986-97.

Eriksson K, Cervantes-Barragan L, Ludewig B, Thiel V. Mouse hepatitis virus liver pathology is dependent on ADP-ribose-1"-phosphatase, a viral function conserved in the alpha-like supergroup. *Journal of virology* 2008; 82:12325-34.

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Acosta-Ramírez E, Leclerc D, Isibasi A, Becker I, Flores-Romo L, Santos-Argumedo L, Cervantes-Barragan L, Manjarrez-Orduño N, Ramírez-Saldaña M, Gil-Cruz C, Pastelin-Palacios R, Majeau N, Pérez-Flores R, López-Macías C. Translating innate response into long-lasting antibody response by the intrinsic antigen-adjuvant properties of papaya mosaic virus. *Immunology* 2007; 124:186-97.

Bocharov G, Eriksson K, Ludewig B, Cervantes-Barragan L (2007). Mathematical modelling of the antiviral type I interferon response.

Züst R, Cervantes-Barragan L, Kuri T, Blakqori G, Weber F, Ludewig B, Thiel V. Coronavirus non-structural protein 1 is a major pathogenicity factor: implications for the rational design of coronavirus vaccines. *PLoS pathogens* 2007; 10;3(8):e109:1062-1072.

Cervantes-Barragan L, Züst R, Weber F, Spiegel M, Lang K, Akira S, Thiel V, Ludewig B. Control of coronavirus infection through plasmacytoid dendritic-cell-derived type I interferon. *Blood* 2007; 109:1131-7.

Eriksson K, Makia D, Maier R, Cervantes-Barragan L, Ludewig B, Thiel V (2006). Efficient transduction of dendritic cells using coronavirus-based vectors.

Secundino I, Edmundo C, Puente J, Becker I, Villasis-Keever M, Pastelin-Palacios R, Ríos-Sarabia N, Gil-Cruz C, Cervantes-Barragan L, López-Macías C, Isibasi A. *Salmonella* porins induce a sustained, lifelong specific bactericidal antibody memory response. *Immunology* 2006; 117:59-70.

## Projects (4)

**Impact of immune regulation on virus-induced chronic CNS inflammation and demyelination**

*Fundamental Research - Aug 1, 2009 - Sep 30, 2009*

*Completed*

**TOLERAGE: Normalisation of immune reactivity in old age – from basic mechanisms to clinical application**

*Fundamental Research - Apr 1, 2008 - Sep 30, 2012*

*Completed*

**Impact of immune regulation on virus-induced chronic CNS inflammation and demyelination**

*Fundamental Research - Jan 1, 2008 - Dec 31, 2008*

*Completed*

**AIDS-CoVAC: Generation of a coronavirus-based multigene AIDS vaccine and evaluation in a preclinical SIV model**

*Fundamental Research - Dec 1, 2006 - May 31, 2009*

*Completed*