



## **Cristina Gil Cruz**

wissenschaftliche(r) Mitarbeiter/in  
Institut für Immunbiologie · Dept. Direktion

### **Kontakt**

Cristina Gil Cruz  
Switzerland

[Cristina.gil@kssg.ch](mailto:Cristina.gil@kssg.ch)

### **Bereiche**

Institut für Immunbiologie

### **Funktion**

wissenschaftliche(r) Mitarbeiter/in

## Publikationen (32)

Pérez Shibayama C, Gil Cruz C, Cadosch N, Lütge M, Cheng H, De Martin A, Frischmann K, Joachimbauer A, Onder L, Papadopoulou I, Papadopoulou C, Ring S, Krebs P, P. Vu V, P. Nägele M, Rosi V, Parianos D, Zsilavec V, Cooper L, Flammer A, Ruschitzka F, Reiner P, Schmidt D, Ludewig B. Bone morphogenic protein-4 availability in the cardiac microenvironment controls inflammation and fibrosis in autoimmune myocarditis. *Nature Cardiovascular Research* 2024; volume 3:301-316.

Lütge M, De Martin A, Gil Cruz C, Pérez Shibayama C, Stanossek Y, Onder L, Cheng H, Kurz L, Cadosch N, Soneson C, Robinson M, Stöckli S, Ludewig B, Pikor N. Conserved stromal-immune cell circuits secure B cell homeostasis and function. *Nat Immunol* 2023

Pérez Shibayama C, Gil Cruz C, Ludewig B. Fibroblasts tune myocardial inflammation and remodeling. *Nature Cardiovascular Research* 2022; 1:694-695.

Cheng H, Scandella E, Hehlhans T, Pérez Shibayama C, Gil Cruz C, Novkovic M, Onder L, Engetschwiler C, Lütge M, Mörbe U, Ludewig B. Intestinal fibroblastic reticular cell niches control innate lymphoid cell homeostasis and function. *Nat Commun* 2022; 13:2027.

Ring S, Spiegl M, Besse A, Bonilla W, Stemeseder F, Schmidt S, Orlinger K, Krebs P, Ludewig B, Wenger R, Hartmann F, Cupovic J, Onder L, Lütge M, Pérez Shibayama C, Gil Cruz C, Scandella E, De Martin A, Mörbe U, Flatz L. Viral vector-mediated reprogramming of the fibroblastic tumor stroma sustains curative melanoma treatment. *Nat Commun* 2021; 12:4734.

Prados A, Ludewig B, Koliarakis V, Pérez Shibayama C, Gil Cruz C, Lütge M, Mörbe U, Cheng H, Onder L, Kollias G. Fibroblastic reticular cell lineage convergence in Peyer's patches governs intestinal immunity. *Nat Immunol* 2021; 22:510-519.

Pérez Shibayama C, Gil Cruz C, Colston J, Novkovic M, De Martin A, Ring S, Onder L, Cheng H, Lütge M, Islander U, Ludewig B. Type I interferon signaling in fibroblastic reticular cells prevents exhaustive activation of antiviral CD8 T cells. *Sci Immunol* 2020; 5

Pikor N, Onder L, Linterman M, Nagasawa T, Nombela-Arrieta C, Cheng H, Novkovic M, Pérez Shibayama C, Gil Cruz C, Lütge M, Mörbe U, Ludewig B. Remodeling of light and dark zone follicular dendritic cells governs germinal center responses. *Nat Immunol* 2020; 21:649-659.

Valero-Pacheco N, Klenerman P, Reyes-Sandoval A, Isibasi A, Pastelin-Palacios R, Sánchez-Torres L, Gil Cruz C, Pérez Shibayama C, Kurioka A, Wong-Baeza I, Pérez-Toledo M, Kemlo P, Aldapa-Vega G, Blight J, López-Macías K. Conservation of the OmpC Porin Among Typhoidal and Non-Typhoidal Serovars. *Front Immunol* 2020; 10:2966.

Zarak-Crnkovic M, Eriksson U, Klingel K, Lüscher T, Distler O, Ludewig B, Westermann D, Bachmann M, Gil Cruz C, Lindner D, Vdovenko D, Müller-Edenborn B, Czyż J, Wijnen W, Czepiel M, Jaźwa-Kusior A, Kania G, Błyszczuk P. Heart non-specific effector CD4 T cells protect from postinflammatory fibrosis and cardiac dysfunction in experimental autoimmune myocarditis. *Basic Res Cardiol* 2019; 115:6.

Gil Cruz C, Jahns R, Wyss M, Mooser C, Lambrecht B, Maeder M, Rickli H, Flatz L, Eriksson U, Geuking M, McCoy K, Boivin-Jahns V, Slack E, Arnoldini M, Pérez Shibayama C, De Martin A, Ronchi F, Van der Borgh K, Niederer R, Onder L, Lütge M, Novkovic M, Nindl V, Ramos G, Ludewig B. Microbiota-derived peptide mimics drive lethal inflammatory cardiomyopathy. *Science* 2019; 366:881-886.

|                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rieckmann M, van der Laan A, Piek J, Koch C, Wester H, Lapa C, Bauer W, Ludewig B, Friedman N, Frantz S, Hofmann U, Krijnen P, Niessen H, Delgobo M, Gaal C, Büchner L, Steinau P, Reshef D, Gil Cruz C, Ter Horst E, Kircher M, Reiter T, Heinze K, Ramos G. Myocardial infarction triggers cardioprotective antigen-specific T helper cell responses. <i>J Clin Invest</i> 2019; 130                                |
| Argilaguet J, Heath S, Ludewig B, Bocharov G, Kaisho T, Andreu D, Casella V, Gil Cruz C, Vidal E, Riera G, Esteve-Codina A, Pedragosa M, Meyerhans A. Systems analysis reveals complex biological processes during virus infection fate decisions. <i>Genome Res</i> 2019; 29:907–919.                                                                                                                                |
| Pérez Shibayama C, Gil Cruz C, Ludewig B. Fibroblastic reticular cells at the nexus of innate and adaptive immune responses. <i>Immunol Rev</i> 2019; 289:31–41.                                                                                                                                                                                                                                                      |
| Fässler M, Jörger M, Recher M, Risch L, Güsewell S, Risch M, Speiser D, Ludewig B, Levesque M, Dummer R, Siano M, Krolík M, Diem S, Mangana J, Hasan Ali O, Berner F, Bomze D, Ring S, Niederer R, Gil Cruz C, Pérez Shibayama C, Flatz L. Antibodies as biomarker candidates for response and survival to checkpoint inhibitors in melanoma patients. <i>J Immunother Cancer</i> 2019; 7:50.                         |
| Pérez Shibayama C, Gommerman J, Scandella E, Robinson M, Soneson C, Mack M, Turley S, Buechler M, López-Macías C, Li C, Novkovic M, Mörbe U, Printz A, Onder L, Cheng H, Gil Cruz C, Ludewig B. Fibroblastic reticular cells initiate immune responses in visceral adipose tissues and secure peritoneal immunity. <i>Sci Immunol</i> 2018; 3                                                                         |
| Carreño J, Pérez Shibayama C, Gil Cruz C, López-Macías C, Vernazza P, Ludewig B, Albrich W. Evolution of <i>Salmonella</i> Typhi outer membrane protein-specific T and B cell responses in humans following oral Ty21a vaccination: A randomized clinical trial. <i>PLoS one</i> 2017; 12:e0178669.                                                                                                                   |
| Pérez-Toledo M, Bonifaz L, Isibasi A, Cunningham A, Arriaga-Pizano L, Pérez-Tapia S, Becker I, Moreno-Eutimio M, Pérez Shibayama C, Gil Cruz C, Pastelin-Palacios R, Valero-Pacheco N, López-Macías C. <i>Salmonella</i> Typhi Porins OmpC and OmpF Are Potent Adjuvants for T-Dependent and T-Independent Antigens. <i>Front Immunol</i> 2017; 8:230.                                                                |
| 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. <i>PLoS Pathog</i> 2017; 13:e1006195. |
| Gil Cruz C, Scandella E, Ikuta K, Cui G, Abe S, McCoy K, Geuking M, Lang P, Novkovic M, Cheng H, Cupovic J, Chai Q, Onder L, Pérez Shibayama C, Ludewig B. Fibroblastic reticular cells regulate intestinal inflammation via IL-15-mediated control of group 1 ILCs. <i>Nat Immunol</i> 2016; 17:1388–1396.                                                                                                           |
| Carreño J, Gander B, López-Macías C, Tanoue Y, Chariatte D, Isibasi A, Pastelin R, Printz A, Gil Cruz C, Pérez Shibayama C, Ludewig B. PLGA-microencapsulation protects <i>Salmonella typhi</i> outer membrane proteins from acidic degradation and increases their mucosal immunogenicity. <i>Vaccine</i> 2016; 34:4263–9.                                                                                           |
| Cupovic J, Onder L, Gil Cruz C, Weiler E, Caviezel-Firner S, Pérez Shibayama C, Rüllicke T, Bechmann I, Ludewig B. Central Nervous System Stromal Cells Control Local CD8(+) T Cell Responses during Virus-Induced Neuroinflammation. <i>Immunity</i> 2016; 44:622–33.                                                                                                                                                |
| Pérez Shibayama C, Gil Cruz C, Ludewig B. Plasticity and complexity of B cell responses against persisting pathogens. <i>Immunol Lett</i> 2014; 162:53–8.                                                                                                                                                                                                                                                             |

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<sup>+</sup> T cells promote generation of protective germinal center-derived IgM<sup>+</sup> 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.

Habjan M, Thiel V, Ziebuhr J, Gil Cruz C, Kindler E, Mann A, Eberl C, Holze C, Benda C, Lacerda L, Hubel P, Pichlmair A. Sequestration by IFIT1 impairs translation of 2'O-unmethylated capped RNA. *PLoS Pathog* 2013; 9:e1003663.

Chai Q, Hehlhans T, Stein J, Rülcke T, Thiel V, Luther S, Sparwasser T, Danuser R, Cupovic J, Pérez Shibayama C, Gil Cruz C, Scandella E, Onder L, Ludewig B. Maturation of lymph node fibroblastic reticular cells from myofibroblastic precursors is critical for antiviral immunity. *Immunity* 2013; 38:1013-24.

Adan M, Edmundo C, Isibasi A, Cecilia B, Marcos F, Isabel B, Rubén L, Gil Cruz C, Pérez Shibayama C, Pastelin-Palacios R, Alejandra T, López-Macías C. Salmonella Typhi OmpS1 and OmpS2 porins are potent protective immunogens with adjuvant properties. *Immunology* 2013

Ross E, Buckley C, MacLennan I, Watson S, Khan M, Henderson I, López-Macías C, Gil Cruz C, Hitchcock J, Abhyankar N, Charlesworth J, Hussain K, Marshall J, Bobat S, Flores-Langarica A, Coughlan R, Cunningham A. CD31 is required on CD4<sup>+</sup> T cells to promote T cell survival during Salmonella infection. *J Immunol* 2011; 187:1553-65.

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.

Bobat S, MacLennan I, Alexander J, Henderson I, López-Macías C, Dougan G, Chamberlain J, Chester R, Gaspal F, Letran S, Leyton D, Serre K, Gil Cruz C, Goodall M, Kingsley R, Marshall J, Hitchcock J, Flores-Langarica A, Cunningham A. Soluble flagellin, FlhC, induces an Ag-specific Th2 response, yet promotes T-bet-regulated Th1 clearance of Salmonella typhimurium infection. *Eur J Immunol* 2011; 41:1606-18.

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.

## Projekte (7)

### **Selection and education of heart-specific Th cells by thymic and lymph node stromal cells**

*Grundlagenforschung - 01.04.2013 - 31.03.2016*

*Abgeschlossen*

### **Role CCR7-ligands in virus-induced chronic CNS inflammation and demyelination**

*Grundlagenforschung - 01.01.2013 - 31.12.2013*

*Abgeschlossen*

### **Imaging-based Systems Biology Analysis of Lymph Node Structure and Function in Viral Infection**

*Grundlagenforschung - 01.08.2012 - 31.07.2016*

*Automatisch geschlossen*

### **Systems immunological analysis of lymph node structure and function in viral infection**

*Grundlagenforschung - 01.08.2012 - 31.07.2016*

*Abgeschlossen*

### **Polyvalent vaccine against Salmonellosis**

*Grundlagenforschung - 01.11.2011 - 30.04.2013*

*Abgeschlossen*

### **Mechanisms of antibody-mediated protection against virus-induced inflammatory demyelination**

*Grundlagenforschung - 01.07.2011 - 30.06.2013*

*Abgeschlossen*

### **SARS: Ökologie und Pathogenese einer archetypischen Zoonose - Identifizierung und Charakterisierung von konservierten coronaviralen Pathogenitätsfaktoren**

*Grundlagenforschung - 01.07.2010 - 30.06.2013*

*Automatisch geschlossen*