



PhD student Hung-Wei Cheng

Institute of Immunobiology · Management

Contact

PhD student Hung-Wei Cheng
9007 St.Gallen
Switzerland

T +41 714941078
Hung-Wei.Cheng@kssg.ch

Homepage

www.immunology.kssg.ch

Units

Institute of Immunobiology

Publications (26)

Wyss N, Berner F, Walter V, Jochum A, Purde M, Abdou M, Sinnberg T, Hofmeister K, Pop O, Hasan A, Bauer J, Cheng H, Lütge M, Klümper N, Diem S, Kosaloglu-Yalcin Z, Zhang Y, Sellmer L, Macek B, Karbach J, König D, Läubli H, Zender L, Meyer B, Driessen C, Schürch C, Jochum W, Amaral T, Heinzerling L, Cozzio A, Hegazy A, Schneider T, Brutsche M, Sette A, Lenz T, Walz J, Rammensee H, Früh M, Jäger E, Becher B, Tufman A, Núñez N, Jörgen M, Flatz L. Autoimmunity Against Surfactant Protein B Is Associated with Pneumonitis During Checkpoint Blockade. *Am J Respir Crit Care Med* 2024; 210:919-930.

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.

D'Rozario J, Knoblich K, Lütge M, Pérez Shibayama C, Cheng H, Alexandre Y, Roberts D, Campos J, Dutton E, Suliman M, Denton A, Turley S, Boyd R, Mueller S, Ludewig B, Heng T, Fletcher A. Fibroblastic reticular cells provide a supportive niche for lymph node-resident macrophages. *Eur J Immunol* 2023; 53:e2250355.

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

De Martin A, Stanossek Y, Lütge M, Cadosch N, Onder L, Cheng H, Brandstadter J, Maillard I, Stöckli S, Pikor N, Ludewig B. PI16 reticular cells in human palatine tonsils govern T cell activity in distinct subepithelial niches. *Nat Immunol* 2023; 24:1138-1148.

Grabherr S, Waltenspühl A, Büchler L, Lütge M, Cheng H, Caviezel-Firner S, Ludewig B, Krebs P, Pikor N. An Innate Checkpoint Determines Immune Dysregulation and Immunopathology during Pulmonary Murine Coronavirus Infection. *J Immunol* 2023; 210:774-785.

Berner F, Bomze D, Lichtensteiger C, Walter V, Niederer R, Hasan Ali O, Wyss N, Bauer J, Freudenmann L, Marcu A, Wolfschmitt E, Haen S, Gross T, Abdou M, Diem S, Knöpfli S, Sinnberg T, Hofmeister K, Cheng H, Toma M, Klümper N, Purde M, Pop O, Jochum A, Pascolo S, Jörgen M, Früh M, Jochum W, Rammensee H, Läubli H, Hölzel M, Neefjes J, Walz J, Flatz L. Autoreactive napsin A-specific T cells are enriched in lung tumors and inflammatory lung lesions during immune checkpoint blockade. *Sci Immunol* 2022; 7:eabn9644.

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.

Onder L, Cheng H, Ludewig B. Visualization and functional characterization of lymphoid organ fibroblasts. *Immunol Rev* 2021

Cupovic J, Klenerman P, Engeler D, Krebs P, Scandella E, Oxenius A, Flatz L, Provine N, De Martin A, Cheng H, Lütge M, Colston J, Onder L, Ring S, Ludewig B. Adenovirus vector vaccination reprograms pulmonary fibroblastic niches to support protective inflating memory CD8 T cells. *Nat Immunol* 2021; 22:1042-1051.

Prados A, Ludewig B, Koliaraki 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.

Pikor N, Cheng H, Onder L, Ludewig B. Development and Immunological Function of Lymph Node Stromal Cells. *J Immunol* 2021; 206:257-263.

Guendel F, Hehlhans T, Waisman A, Becher B, Giannou A, Brachs S, Ebert K, Tanriver Y, Ludewig B, Mashreghi M, Kruglov A, Pfeffer K, Herold S, Ruedl C, Kofoed-Branzk M, Gronke K, Tizian C, Witkowski M, Cheng H, Heinz G, Heinrich F, Durek P, Norris P, Ware C, Diefenbach A. Group 3 Innate Lymphoid Cells Program a Distinct Subset of IL-22BP-Producing Dendritic Cells Demarcating Solitary Intestinal Lymphoid Tissues. *Immunity* 2020; 53:1015-1032.e8.

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.

Chauveau A, Pirgova G, Cheng H, De Martin A, Zhou F, Wideman S, Rittscher J, Ludewig B, Arnon T. Visualization of T Cell Migration in the Spleen Reveals a Network of Perivascular Pathways that Guide Entry into T Zones. *Immunity* 2020

Berner F, Hartmann F, Cheng H, Hönger G, Recher M, Goldman J, Cozzio A, Früh M, Neefjes J, Driessen C, Ludewig B, Hegazy A, Jochum W, Speiser D, Zippelius A, Läubli H, Bomze D, Diem S, Ali O, Fässler M, Ring S, Niederer R, Ackermann C, Baumgaertner P, Pikor N, Cruz C, van de Veen W, Akdis M, Nikolaev S, Flatz L. Association of Checkpoint Inhibitor-Induced Toxic Effects With Shared Cancer and Tissue Antigens in Non-Small Cell Lung Cancer. *JAMA Oncol* 2019; 5:1043-1047.

Cheng H, Hehlhans T, Rülcke T, Pfeffer K, Sorg U, Tersteegen A, Miyazaki J, Robinson M, Scandella E, Pikor N, Lütge M, Soneson C, Novkovic M, Onder L, Ludewig B. Origin and differentiation trajectories of fibroblastic reticular cells in the splenic white pulp. *Nat Commun* 2019; 10:1739.

Novkovic M, Onder L, Cheng H, Bocharov G, Ludewig B. Integrative Computational Modeling of the Lymph Node Stromal Cell Landscape. *Front Immunol* 2018; 9:2428.

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. *Sci Immunol* 2018; 3

Cheng H, Brutsche M, Jochum W, Schneider T, Rodriguez R, Tarantino I, Pikor N, Novkovic M, Bösch M, Cupovic J, Onder L, Ludewig B. CCL19-producing fibroblastic stromal cells restrain lung carcinoma growth by promoting local antitumor T-cell responses. *J Allergy Clin Immunol* 2018

Emgård J, Svensson M, Scandella E, Hepworth M, Huber S, Ludewig B, Peduto L, Villablanca E, Veiga-Fernandes H, Pereira J, Flavell R, Kvedaraite E, Melo-Gonzalez F, Kammoun H, García-Cassani B, Chesné J, Parigi S, Jacob J, Cheng H, Evren E, Das S, Czarnewski P, Sleiers N, Willinger T. Oxysterol Sensing through the Receptor GPR183 Promotes the Lymphoid-Tissue-Inducing Function of Innate Lymphoid Cells and Colonic Inflammation. *Immunity* 2018; 48:120-132.e8.

Bösch M, Knauer M, Ruhstaller T, Jochum W, Gastl G, Sopper S, Mörbe U, Novkovic M, Cheng H, Onder L, Ludewig B. Interleukin 7-expressing fibroblasts promote breast cancer growth through sustenance of tumor cell stemness. *Oncoimmunology* 2018; 7:e1414129.

Onder L, Scandella E, Sawa S, Mueller C, Gommerman J, Rüllicke T, Waisman A, Becher B, Pfeffer K, Hehlhans T, Cheng H, Novkovic M, Pikor N, Mörbe U, Ludewig B. Lymphatic Endothelial Cells Control Initiation of Lymph Node Organogenesis. *Immunity* 2017; 47:80-92.e4.

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. *Nat Immunol* 2016; 17:1388-1396.

Onder L, Waisman A, Becher B, Ledermann B, Mair F, Maier R, Bomze D, Novkovic M, Caviezel-Firner S, Cheng H, Chai Q, Scandella E, Nindl V, Ludewig B. Alternative NF- κ B signaling regulates mTEC differentiation from podoplanin-expressing presursors in the cortico-medullary junction. *Eur J Immunol* 2015

Projects (4)

Deciphering the molecular landscape of the stromal cells in human lymph nodes at the single-cell level

Fundamental Research - Sep 1, 2019 - Mar 31, 2025

Ongoing

Ontogeny and functional characterization of splenic fibroblastic reticular cells (FRCs) and their mesenchymal precursors during homeostasis, immune-activation and infection

Fundamental Research - Sep 1, 2015 - Aug 31, 2018

Automatically Closed

Stromal Cell - Immune Cell Interactions in Health and Disease

Fundamental Research - Jan 1, 2012 - Jan 31, 2015

Completed

Stroma Cell- Immune Cell Interactions in Health and Disease

Fundamental Research - Jan 1, 2012 - Dec 31, 2015

Completed