



## PhD Natalia Pikor

Group Leader Neuroimmunology,  
Institute of Immunobiology, Medical Research Center, KSSG, CH

Assistant Professor Neuroimmunology,  
Institute of Microbiology, D-BIOL, ETH Zurich, CH  
scientist (group leader)  
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### Units

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### Position

Group Leader Neuroimmunology,  
Institute of Immunobiology, Medical Research Center, KSSG, CH

Assistant Professor Neuroimmunology,  
Institute of Microbiology, D-BIOL, ETH Zurich, CH

### Former Positions

10.2015 – 08.2019: Post-doc; Prof. Burkhard Ludewig, KSSG, CH  
07.2014 – 09.2015: Post-doc Prof. Dr. Jen Gommerman, University of Toronto, CA  
09.2008 – 06.2014: PhD, Immunology, University of Toronto, CA

### Profile Function

scientist (group leader)

## **Research Area**

Immunology, Stromal cell biology, Lymphotoxin, Neuroimmunology

## Publications (20)

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.

Schmiedeberg K, Abela I, Pikor N, Vuilleumier N, Schwarzmueller M, Epp S, Pagano S, Grabherr S, Patterson A, Nussberger M, Trkola A, Ludewig B, von Kempis J, Rubbert-Roth A. Postvaccination anti-S IgG levels predict anti-SARS-CoV-2 neutralising activity over 24 weeks in patients with RA. *RMD Open* 2022; 8

Lütge M, Pikor N, Ludewig B. Differentiation and activation of fibroblastic reticular cells. *Immunol Rev* 2021; 302:32-46.

Grabherr S, Ludewig B, Pikor N. Insights into coronavirus immunity taught by the murine coronavirus. *Eur J Immunol* 2021; 51:1062-1070.

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

Cosgrove J, Ugucioni M, Legler D, Lacey C, Coatesworth A, Polak W, Cupedo T, Manoury B, Thelen M, Stein J, Wolf M, Leake M, Timmis J, Ludewig B, Heller M, Venetz D, Taylor E, Novkovic M, Albrecht S, Pikor N, Zhou Z, Onder L, Mörbe U, Cupovic J, Miller H, Alden K, Thuery A, O'Toole P, Pinter R, Jarrett S, Coles M. B cell zone reticular cell microenvironments shape CXCL13 gradient formation. *Nat Commun* 2020; 11:3677.

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.

Lercher A, Pikor N, Reil D, Ozsvár-Kozma M, Kalinke U, Ludewig B, Moriggl R, Bennett K, Menche J, Cheng P, Schabbauer G, Trauner M, Klavins K, Orlova A, Genger J, Bhattacharya A, Popa A, Caldera M, Schlapansky M, Baazim H, Agerer B, Gürtl B, Kosack L, Májek P, Brunner J, Vitko D, Pinter T, Bergthaler A. Type I Interferon Signaling Disrupts the Hepatic Urea Cycle and Alters Systemic Metabolism to Suppress T Cell Function. *Immunity* 2019; 51:1074-1087.e9.

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, Rüllicke T, Pfeffer K, Sorg U, Tersteegen A, Miyazaki J, Robinson M, Scandella E, Pikor N, Lütge M, Sonesson 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.

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

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.

Pikor N, Cupovic J, Onder L, Gommerman J, Ludewig B. Stromal Cell Niches in the Inflamed Central Nervous System. *J Immunol* 2017; 198:1775-1781.

Galicia G, Boulianne B, Pikor N, Martin A, Gommerman J. Secondary B cell receptor diversification is necessary for T cell mediated neuro-inflammation during experimental autoimmune encephalomyelitis. *PloS one* 2013; 8:e61478.

Galicia-Rosas G, Pikor N, Schwartz J, Rojas O, Jian A, Summers-Deluca L, Ostrowski M, Nuesslein-Hildesheim B, Gommerman J. A sphingosine-1-phosphate receptor 1-directed agonist reduces central nervous system inflammation in a plasmacytoid dendritic cell-dependent manner. *J Immunol* 2012; 189:3700-6.

Boulianne B, Porfilio E, Pikor N, Gommerman J. Lymphotoxin-sensitive microenvironments in homeostasis and inflammation. *Front Immunol* 2012; 3:243.

Pikor N, Gommerman J. B cells in MS: Why, where and how?. *Mult Scler Relat Disord* 2012; 1:123-30.

deLuca L, Osborne L, Ousman S, Finlay T, Defreitas D, Ward L, Galicia-Rosas G, O'Leary J, Pikor N, Gommerman J. Substrain differences reveal novel disease-modifying gene candidates that alter the clinical course of a rodent model of multiple sclerosis. *J Immunol* 2010; 184:3174-85.

## Projects (6)

### **Entschlüsselung der krebsassoziierten Fibroblastenlandschaft bei malignen Erkrankungen des ZNS**

*Fundamental Research - Jan 1, 2023 - Dec 31, 2023*

*Automatically Closed*

### **Elucidating mechanisms of disease pathogenesis in a coronavirus-induced model of Multiple Sclerosis**

*Fundamental Research - Nov 1, 2021 - Dec 31, 2022*

*Automatically Closed*

### **Transcriptomic analysis of fibroblasts in brain tumors – an exploratory study**

*Fundamental Research - Jun 19, 2020 - Aug 2, 2024*

*Completed*

### **Transcriptomic analysis of the B and T cell repertoire in Multiple Sclerosis – an exploratory study**

*Fundamental Research - Jan 1, 2019 - Jan 31, 2019*

*Automatically Closed*

### **Identification and manipulation of immune-stimulating fibroblastic stromal cell niches in the inflamed CNS**

*Fundamental Research - Jan 1, 2019 - Jun 30, 2023*

*Automatically Closed*

### **Role of activated fibroblastic stromal cells in relapsing-remitting experimental autoimmune encephalomyelitis**

*Fundamental Research - Oct 1, 2015 - Nov 1, 2016*

*Automatically Closed*