

Prof. Sven Wehner, PhD

Department of Surgery



new Member since 2015

Rheinische Friedrich-Wilhelms-University Bonn, Department of Surgery, Immune Pathophysiology

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Research Expertise

The aim of our research is to identify (neuro)-immunological mechanisms contributing to acute (postoperative) and chronic functional disturbances of the GI tract. In a series of publications our group demonstrated that interactions of resident immune cells and the enteric nervous system trigger postoperative bowel wall inflammation. This local neuroinflammation can be effectively modified by intrinsic and extrinsic neurotransmitters. With international collaborators we also investigate the neuroimmunology of chronic inflammatory bowel diseases. Currently, we are aiming to understand the initial trigger mechanisms of intestinal inflammation as well as to identify novel neuro-immune modulatory pathways. This will help us to gather a comprehensive understanding of acute and chronic intestinal inflammatory disorders.

Education / Training

University of Bonn, Molecular Medicine, *venia legendi*, 2012

University of Bonn, Cell Biology, PhD thesis, 2003

University of Bonn, Biology, Diploma, 1999

Appointments / Positions Held

2016 - present

Full Professor for Immune Pathophysiology, University of Bonn, Germany

2013 - 2015

Associate Professor, AMC, Amsterdam, Netherlands

2006 - 2013

Independent workgroup leader and laboratory head, Department of Surgery, University Bonn, Germany

2003 - 2006

Postdoctoral Fellow, Department of Surgery, University of Bonn, Germany

1999 - 2003

Research Scientist at Celonic GmbH, Research Center Jülich; Doctoral Student, Institute of Cell Biology, University of Bonn, Germany

Honors / Awards

2013

'Poster of Distinction; Digestive Disease Week, May 19-22 San Diego

2007

Best of Abstracts, Detusche Gesellschaft für Chirurgie

2005

Best of Abstracts, Deutsche Gesellschaft für Chirurgie'

10 Most Relevant Publications for Prof. Sven Wehner

1. Ochoa-Cortes F, Turco F, Linan-Rico A, Soghomonyan S, Whitaker E, Wehner S, Cuomo R, Christofi FL. Enteric Glial Cells: A New Frontier in Neurogastroenterology and Clinical Target for Inflammatory Bowel Diseases. 2016 Feb;22(2):433-49
2. Stein K, Stoffels M, Lysson M, Schneiker B, Dewald O, Krönke G, Kalff JC, Wehner S. A role for 12/15-lipoxygenase-derived proresolving mediators in postoperative ileus: protectin DX-regulated neutrophil extravasation. J Leukoc Biol. 2016 Feb;99(2):231-9.
3. Hong GS, Schwandt T, Stein K, Schneiker B, Kummer MP, Heneka MT, Kitamura K, Kalff JC, Wehner S. Effects of macrophage-dependent peroxisome proliferator-activated receptor γ signalling on adhesion formation after abdominal surgery in an experimental model. Br J Surg. 2015 Nov;102(12):1506-16.
4. Stoffels B, Hupa KJ, Snoek A, van Bree A, Stein K, Schwandt T, Vilz T, Lysson M, van't Veer, Hornung V, Kalff JC, de Jonge WJ, Wehner S. Interleukin-1 receptor signaling contributes to postoperative ileus by targeting enteric glial cells. Gastroenterology 2014, 146(1): 176-87.
5. Glowka TR, Steinebach A, Schwandt T, Kranz A, Kalff JC, Wehner S. CGRP release during abdominal surgery mediates small bowel inflammation and postoperative ileus in a macrophage dependent Neurogastroenterol Motil, 2015, 27(7):1039-49.
6. Vilz TO, Sommer MD, Kahl P, Pantelis D, Kalff JC, Wehner S. Oral CPSI-2364 treatment prevents postoperative ileus in swine without impairment of anastomotic healing. Cell. Physiol.Biochem, 2013;32(5):1362-1373.
7. Schwandt T, Schumak B, Jüngerkes F, Gielen G, Schmidbauer P, Klocke K, Staratscheck-Jox A, van Rooijen N, Kraal G, Ludwig-Portugall I, Wehner S, Kalff JC, Kirschning, Coch C, Kalinke U, Wenzel J, Kurts C, Zawatzky R, Holzmann B, Layland L, Schultze J, Burgdorf S, Haan J, Knolle J, Franken L, Weber O, Limmer A. Expression of type I interferon by splenic macrophages suppresses adaptive immunity during sepsis. EMBO J, 2012; 31(1):201-13.
8. Engel DR, Koscielny A Wehner S, Maurer J, Schiwon M, Franken L, Schumak B, Limmer A, Sparwasser T, Hirner T, Knolle PA, Kalff JC KurtsC. T helper type 1 memory cells disseminate postoperative ileus over the entire intestinal tract. Nature Medicine 2010, 16(12), 1407-13.
9. Wehner S, Straesser S, Pantelis D, Sielecki T, de la Cruz VF, Hirner A, Kalff JC. Inhibition of p38 MAP kinase pathway as a target for prophylaxis of postoperative ileus in mice. Gastroenterology 2009;136(2):619-629.
10. Wehner S, Behrendt FF, Lyutenski B, Lysson M, Bauer AJ, Kalff JC. Inhibition of Macrophage Function Prevents Intestinal Inflammation and Postoperative Ileus in Rodents. Gut 2007; 56(2):176-85.