

## 1 General information

Name: Prof. Dr. rer. nat. Sabine Steffens  
Date of Birth: \*25.07.1973  
Address: Institute for Cardiovascular Prevention, Department of Medicine  
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Position: Associate Professor (W2, permanent position)  
Children: 2 (2005, 2009)

## 2 Academic education

1992 - 1997 Faculty of Sciences (Diplom-Biologie), University of Giessen

## 3 Scientific degrees

10/1997 Diploma thesis, Identification of an RNA-dependent RNA polymerase in pestiviruses, University Giessen (mentor: Prof. S.E. Behrens)  
12/2001 PhD thesis, Development of a tumorspecific suicide gene therapy for neuroblastomas, University of Düsseldorf (mentor: Prof. C.M. Kramm)  
3/2012 Habilitation, The role of the endocannabinoid system in the pathogenesis of atherosclerosis, Medical Faculty of Geneva, Switzerland

## 4 Academic and research appointments

1997 - 2002 PhD student and Postdoc, Pediatric Oncology, Medical Faculty, University of Düsseldorf (mentor: Prof. C.M. Kramm)  
2002 Visiting Scientist for 6 months at the Children´s Hospital in Philadelphia, USA (mentor: Prof. M. Sena-Estevés)  
2003-2006 Postdoctoral Investigator at the Division of Cardiology, University of Geneva, Switzerland (mentor: Prof. F. Mach)  
2006 - 2013 Senior scientist/group leader, at the Division of Cardiology, University of Geneva, Switzerland  
2013 - Professor (W2) for Clinical Pathobiochemistry, Institute for Cardiovascular Prevention (IPEK), Klinikum der Universität München, Ludwig-Maximilians-University (LMU) Munich

## 5 Functions and awards

2005 Swiss Society of Cardiology Research Award  
2012 Nomination for Academia-Net (network of leading female scientists, Robert-Bosch-Foundation)  
2012-2016 European Society of Cardiology Working Group Atherosclerosis & Vascular Biology Nucleus Member  
2013 Denber Pinard Award of the Medical Faculty of Geneva  
2014 Co-Organizer of ESC Frontiers in Cardiovascular Biology Satellite symposium „Novel Biomarkers in Atherosclerosis“

2014 - 2018	SFB1123 Women´s Representative
2014 - 2017	DZHK Scientist (Deutsches Zentrum für Herz-Kreislaufforschung, Partnerseite München „Munich Heart Alliance“)
2016	European Society of Cardiology, Outstanding Achievement Award
2017 -	DZHK Principal Investigator
2018 -	German Cardiac Society (DGK) Working Group Vascular Biology nucleus member
2018 -	SFB1123 Integrated Graduate School Speaker
2018 -	ESC Working Group Cellular Biology of the Heart Nucleus Member
2019 -	DGK commission member Experimental Cardiology (KEK)
2019	Award for the best abstract in translational science (Meeting of the ESC Working Groups on Myocardial Function and Cellular Biology of the Heart; Naples, May 2019)
2020	Co-Organizer of the “9th Cardiac Regeneration and Vascular Biology”, San Servolo, June 2020

## 6 Publications (10 selected original papers)

**Steffens, S.**, Veillard, N.R., Arnaud, C., Pelli, G., Burger, F., Staub, C., Karsak, M., Zimmer, A., Frossard, J.L., and Mach, F. (2005). Low dose oral cannabinoid therapy reduces progression of atherosclerosis in mice. *Nature* 434, 782-786.

**Steffens, S.**, Burger, F., Pelli, G., Dean, Y., Elson, G., Kosco-Vilbois, M., Chatenoud, L., and Mach, F. (2006). Short-term treatment with anti-CD3 antibody reduces the development and progression of atherosclerosis in mice. *Circulation* 114, 1977-1984.

Montecucco, F.\*, Di Marzo, V.\*, Da Silva, R.F., Vuilleumier, N., Capettini, L., Lenglet, S., Pagano, S., Piscitelli, F., Quintao, S., Bertolotto, M., Pelli, G., Galan, K., Pilet, L., Kuzmanovic, K., Burger, F., Pane, B., Spinella, G., Braunersreuther, V., Gayet-Ageron, A., Pende, A., Viviani, G. L., Palombo, D., Dallegrì, F., Roux-Lombard, P., Santos, R. A., Stergiopoulos, N., **Steffens, S.** #, Mach, F. # (2011). The activation of the cannabinoid receptor type 2 reduces neutrophilic protease-mediated vulnerability in atherosclerotic plaques. *Eur Heart J* 33, 846-856. \*shared first/#shared senior authors

Lenglet, S., Thomas, A., Soehnlein, O., Montecucco, F., Burger, F., Pelli, G., Galan, K., Cravatt, B., Staub, C., and **Steffens, S.** (2013). Fatty acid amide hydrolase deficiency enhances intraplaque neutrophil recruitment in atherosclerotic mice. *Arterioscler Thromb Vasc Biol* 33, 215-223.

Schloss, M.J., Horckmans, M., Nitz, K., Duchene, J., Drechsler, M., Bidzhekov, K., Scheiermann, C., Weber, C., Soehnlein, O., and **Steffens, S.** (2016). The time-of-day of myocardial infarction onset affects healing through oscillations in cardiac neutrophil recruitment. *EMBO Mol Med* 8, 937-948.

Horckmans, M., Ring, L., Duchene, J., Santovito, D., Schloss, M.J., Drechsler, M., Weber, C., Soehnlein, O., and **Steffens, S.** (2017). Neutrophils orchestrate post-myocardial infarction healing by polarizing macrophages towards a reparative phenotype. *Eur Heart J* 38, 187-197.

Rinne, P., Rami, M., Nuutinen, S., Santovito, D., van der Vorst, E.P.C., Guillamat-Prats, R., Lyytikainen, L.P., Raitoharju, E., Oksala, N., Ring, L., Cai, M., Hruby, V.J., Lehtimaki, T., Weber, C., **Steffens, S.** (2017). Melanocortin 1 Receptor Signaling Regulates Cholesterol Transport in Macrophages. *Circulation* 136, 83-97.

Schloss MJ; Hilby M, Nitz K, Guillamat Prats R, Ferraro B, Leoni G, Soehnlein O, Kessler T, Horckmans M, Luckow B, Weber C, Duchene J, **Steffens S** (2017). Ly6C<sup>high</sup> monocytes oscillate in the heart during homeostasis and after myocardial infarction. *Arteriosclerosis, Thrombosis and Vascular Biology*, 37(9):1640-1645.

Horckmans M, Bianchini M, Santovito D, Megens RTA, Springael JY, Negri I, Vacca M, Eusanio M, Moschetta A, Weber C, Duchene J, **Steffens S** (2018). Pericardial adipose tissue regulates granulopoiesis, fibrosis and cardiac function after myocardial infarction. *Circulation*, 137(9):948-960.

Schloss MJ\*, Horckmans M\*, Guillamat-Prats R, Hering D, Lauer E, Lenglet S, Weber C, Thomas A, **Steffens S** (2019). *2-arachidonoylglycerol mobilizes myeloid cells and worsens heart function after acute myocardial infarction*. *Cardiovascular Research*. 115(3):602-613 \*Equal first author contribution



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Sabine Steffens