

Curriculum Vitae

Dr. med. Leo Johannes **Nicolai**
Medizinische Klinik und Poliklinik I
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*12.07.1989 in Munich

Clinical Career

[Since 2/2018]

Cardiology Fellow at Medizinische Klinik und Poliklinik I, Klinikum der Universität München (LMU)

[Since 10/2018]

Clinician Scientist of the German Center of Cardiovascular Research (DZHK) excellence programme with the topic: „The role of platelet migration in thrombosis and atherosclerosis“

Medical studies

[2011- 2017]

Medical studies at the LMU medical faculty, Munich, Germany

[2016]

Passed American licensing exam ECFMG Step 1

[November 2016-
October 2017]

Working experience
- Tygerberg Hospital, Western Cape, South Africa: Trauma Unit
- University Hospital Zürich, Switzerland, Anesthesiology
- LMU Munich, Cardiology
- Weill Cornell Medical School, New York City, Hematology and Oncology

Scientific career

[Oktober 2013 –2/2018]

Research on platelet (patho-)physiology, Massberg group

Stipend of the IRTG 914 programme, research curriculum with *basic principle seminars* und *advanced method courses*

PhD Thesis: “The role of platelet-fibrin(ogen) interaction in platelet migration” – summa cum laude

[2016]

Lab rotation at the La Jolla Institute of Allergy and Immunology (LIAI) San Diego, USA, in the group of Prof. Klaus Ley, atherosclerosis research

[since 2019]

Post-Doc and clinician scientist in the Massberg lab, Klinikum der Universität München (LMU)

Scholarships and Awards

[2015]

Reception of the “GMA-Preis zur Weiterentwicklung der Lehre 2015“- “GMA reward for the advancement of teaching” for the MeCuM-SiGma course

[February 2016 – March
2016]

Awardee of the US-EU-MEE (Medical Education Exchange) program at Weill Cornell Medical School in New York; Clinical Neuroradiology rotation and participation in Public-Health course

[May 2017–June 2016] Awardee of the MeCuM-StEP program (Student Excellence Program) of the LMU Munich. Clinical rotation at Weill Cornell Medical School and project work on „Skills curriculum 2.0“

[Winter term 2010/11 – Summer term 2017] Sponsorship as an awardee of the Max-Weber-Foundation
Final admission Sept. 2012

Memberships

[since 2016] member of the German Society of Medical Education (GMA)
[since 2016] member of the German Center for Cardiovascular Research (DZHK)
[since 2018] member of the German Society of Cardiology (DGK)
[since 2020] elected Young DZHK speaker Munich

Important scientific contributions

- First time evidence of the ability of platelets to migrate in vivo (***Cell***)
- Detection of directed migration of blood platelets along substrate gradients in vivo and identification of the physiological function of this effector function (***Nature Communications***)
- Identification of Immunothrombosis – the interplay of neutrophils, platelets and the coagulation cascade, as pathognomonic factor in severe COVID-19 (***Circulation*** und ***Journal of Thrombosis and Hemostasis***)

Research publications

Average impact factor (original research only):

12.18 (109.65 cumulative)

Average impact factor (all publications):

11.42 (125.69 cumulative)

Total number of citations:

244

H-index:

7

(data retrieved 5.12.2020, data derived from *google scholar*)

ORIGINAL RESEARCH

1. Immunothrombotic Dysregulation in COVID-19 Pneumonia is Associated with Respiratory Failure and Coagulopathy **Nicolai L**, Leunig A, Brambs S, et al. *Circulation*, 2020 (IF 2019: **23.603**)
2. Vascular surveillance by haptotactic blood platelets in inflammation and infection. **Nicolai L**, Schiefelbein K, Lipsky S, ... Massberg S & Gaertner F. *Nature communications*, 2020, (IF 2019: **12.121**)

3. Migrating platelets are mechanosensing scavengers that collect and bundle bacteria. Gärtner F, Ahmad Z, Rosenberger G, Fan S, **Nicolai L** et al. *Cell* 2017 (IF 2017: **31.398**)
4. Vascular neutrophilic inflammation and immunothrombosis distinguish severe COVID-19 from influenza pneumonia. **Nicolai L, Leunig A, Brambs S**, et al. *Journal of Thrombosis and Hemostasis*, 2020 (IF 2018: **4.662**)
5. Eosinophil-platelet interactions promote atherosclerosis and stabilize thrombosis by eosinophil extracellular traps. Marx C, Novotny J, Salbeck D, Zellner R, **Nicolai L**, et al. *Blood* 2019 (IF 2018: **16.601**)
6. Rivaroxaban reduces arterial thrombosis by inhibition of FXa driven platelet activation via protease activated receptor 1. Petzold T, Thienel M, Dannenberg L, ... **Nicolai L** et al. *Circulation Research*, 2019 (IF 2018: **15.862**)
7. Facebook and Faculty – Facebook groups as a powerful and dynamic tool in study-related use of social media. **Nicolai L** et al. *J Med Int Res* 2017 (IF 2017: **4.671**)
8. The Doktabörse - an innovative online platform for research projects at the medical faculty of the LMU Munich. **Nicolai L**, Gradel M, Antón S, Pander T, Kalb A, Köhler L, Fischer MR, Dimitriadis K, von der Borch P. *GMS J Med Educ.* 2017 (IF 2017 **0.34**)
9. How undergraduate medical students use Facebook as a peer mentoring platform. Pinilla S. †, **Nicolai L**. †, Gradel M., Pander T., Fischer MR, von der Borch P., Dimitriadis K.: *JMIR Medical Education* 2015 (no IF computed)
10. Simulation Gesundheitsmanagement – der Arzt als Gesundheitsmanager: Ein innovativer Kurs zur Ausbildung der Managerrolle. Gradel M, Moder S, Pander T, **Nicolai L**, Hoppe B, Pinilla S, von der Borch P, Fischer MR, Dimitriadis K. *GMS Z Med Ausbild.* 2016 (IF 2016: **0.399**)

†contributed equally

REVIEW ARTICLES (invited)

1. Platelets in host defense: experimental and clinical insights. **Nicolai L**, Gaertner F, Massberg S. *Trends in Immunology*, 2019 (IF 2019: **13.000**)
2. Platelets as key players in inflammation and infection. **Nicolai L** & Massberg S. 2019, *Current Opinion in Hematology*, 2020 (IF 2019: **3.030**)

CONFERENCE CONTRIBUTIONS

1. Migrating platelets safeguard vascular integrity in inflammation. **Nicolai L**, Schiefelbein K, Lipsky S, Pircher J, Ehrlich A, Gaertner F, Massberg S *Gordon Research Conference Cell Biology of Megakaryocytes & Platelets 2019*
2. Vascular surveillance by migrating platelets. **Nicolai L**, *Fondation Leducq Transatlantic Networks of Excellence in Cardiovascular Research Clonal hematopoiesis and atherosclerosis meeting, 2020*
3. The role of platelet migration in thrombosis and atherosclerosis. **Nicolai L**, *Young DZHK Retreat 2020*
4. Effects of COVID-19 on thrombosis, **Nicolai L**, *DZHK Covid-19 Webinar 2020*
5. Facebook & Faculty - Supplement, Complement or Replacement? **Nicolai L**, Schmidbauer M, Gradel M, Pander S, Fischer M, Dimitriadis K *AMEE Conference 2016*
6. Single Cell Tracking Reveals Autonomous Locomotion as a Platelet Function Facilitating Thrombus Reorganization. Gaertner F, Zerkah A, Yavuz G, Lorenz M, **Nicolai L**, Chandraratne S, Pincus Z, Sixt M, Massberg S *Gordon Research Seminar Cell Biology of Megakaryocytes & Platelets*