

## Curriculum Vitae

### Daniel Robert Engel

#### Personal Data

Title	Prof. Dr. rer. nat.
First name	Daniel Robert
Name	Engel
Current position	Professor of Immunodynamics (W2, permanent)
Current institution(s)/site(s), country	University Hospital Essen & University Duisburg-Essen, Institute of Experimental Immunology & Imaging Department of Immunodynamics Germany Telephone number +49 201 723 6055 E-mail address: danielrobert.engel@uni-due.de
Identifiers/ORCID	0000-0001-7301-353X

#### Qualifications and Career

Stages	Periods and Details
Degree programme	1998–2003 Biology (Diploma), Rheinische Friedrich-Wilhelms-University Bonn, Germany; Universidade Estadual de Londrina, Londrina, Brazil; University of Graz, Austria, and University of Bern, Switzerland
Doctorate	2003–2007 Doctorate (PhD), Rheinische Friedrich-Wilhelms-University Bonn
Stages of academic/professional career	Since 2014 W2 Professor of <i>Immunodynamics</i> , University Hospital Essen, Institute of Experimental Immunology and Imaging Since 2022 Head of the Core Facility <i>Mass Spectrometry Imaging</i> , University Hospital Essen, Imaging Center Essen 2013-2014 Junior research group leader within the Excellence Cluster <i>ImmunoSensation</i> , University Hospital Bonn, Institute of Experimental Immunology 2010-2013 Bonfor-funded Junior research group leader <i>Cellular and molecular mechanisms of the innate immune response against Uropathogenic E.coli</i> , University Clinic Bonn, Institute of Experimental Immunology

	2007-2010	Postdoctoral Research Fellow, University Clinic Bonn, Institute of Molecular Medicine and Experimental Immunology and Monash University, Department of Medicine, Melbourne, Australia
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### Supplementary Career Information

3 children, born 2007, 2010 and 2017

### Activities in the Research System

#### *Editorships*

Since 2012 Editorial board member of *Frontiers in Immunology* and *Antigen Presenting Cell Biology*

#### *Service on Scientific Advisory Boards*

Since 2021 Member of the German Consortium for Translational Cancer Research (DKTK) as “DKTK Investigator”

2021-2022 Advisor for Junior research group for artificial intelligence, ISAS, Dortmund

Since 2015 Head of the Committee of Translational Research & Biobanking of the Leader of the BIOME Core “*Infectious Diseases*” – DFG-funded Graduate School at the University Duisburg-Essen

Since 2015 Spokesman of the Medical Research Center at the University Hospital Essen

#### *Organization of Academic Events*

Since 2019 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Conference “*Bioimage Informatics Graduate Seminar*”

2014-2020 Research Seminar of the Medical Research Center, University Hospital Essen

Since 2014 Annual Medical Research Day, University Hospital Essen (Reviewer)

#### *Expert activities for*

- German Research Foundation (DFG)
- Agence Nationale de la Recherche (France)
- Wellcome Trust (UK)
- Medical Research Council, UK

#### *Ad hoc journal reviewer for (selection)*

- Am Soc Nephrol
- J Clin Invest
- J Leukoc Biol
- Kidney Int
- Mucosal Immunol
- Nat Commun
- Proc Nat Acad Sci (PNAS)
- Science Advances
- Science

## Scientific Results

### Category A

- Spangenberg P, Bessler S, Widera L, Bottek J, Richter M, Thiebes S, Siemes D, Krauß SD, Migas LG, Kasarla SS, Phapale P, Kleesiek J, Führer D, Moeller LC, Heuer H, Van Daniel Engel Plas R, Gunzer M, Soehnlein O, Soltwisch J, Shevchuk O, Dreisewerd K, **Engel DR**. msiFlow: Automated Workflows for Reproducible and Scalable Multimodal Mass Spectrometry Imaging and Microscopy Data Analysis. *Nature Commun* Accepted (2024)
- Zec K, Thiebes S, Bottek J, Siemes D, Spangenberg S, Trieu DV, Kirstein N, Subramaniam N, Christ R, Klein D, Jendrossek V, Loose M, Wagenlehner F, Jablonska J, Bracht T, Sitek B, Budeus B, Klein-Hitpass L, Theegarten D, Shevchuk O, **Engel DR**. Comparative transcriptomic and proteomic signature of lung alveolar macrophages reveals the integrin CD11b as a regulatory hub during pneumococcal pneumonia infection, *Front Immunol* 14, 1227191 (2023)
- Varaljai R, Zimmer L, Al-Matary Y, Kaptein P, Albrecht LJ, Shannan B, Brase JC, Gusenleitner D, Amaral T, Wyss N, Utikal J, Flatz L, Rambo F, Reinhardt HC, Dick J, **Engel DR**, Horn S, Ugurel S, Sondermann W, Livingstone E, Sucker A, Paschen A, Zhao F, Placke JM, Klose JM, Pender WP, Thommen D, Helfrich I, Schadendorf D, Roesch A. Interleukin-17 signaling supports clinical benefit of dual CTLA-4 and PD-1 checkpoint inhibition in melanoma, *Nat Cancer*, Published Online 2023 (2023)
- Lill JK, Thiebes S, Pohl JM, Bottek J, Subramaniam N, Christ R, Soun C, Gueler F, Zwanziger D, Hoffmann F, Eggeling F, Bracht Th, Sitek B, Hickey M. J., Hofnagel O, **Engel DR**. Tissue-resident macrophages mediate neutrophil recruitment and kidney injury in shiga toxin-induced hemolytic uremic syndrome, *Kidney Int*, 100, 349-363 (2021).
- Subramaniam N, Bottek J, Thiebes S, Zec K, Kudla M, Soun C, de Dios Panal E, Lill JK, Pfennig A, Herrmann R, Bruderek K, Rahmann S, Brandau S, Johansson P, Reinhardt H C, Dürig J, Seiffert M, Bracht T, Sitek B, **Engel DR**. Proteomic and bioinformatic profiling of neutrophils in CLL reveals functional defects that predispose to bacterial infections. *Blood Advances*, 5, 1259–1272 (2021).
- Bottek J, Soun C, Lill JK, Dixit A, Thiebes S, Beerlage AL, Horstmann M, Urbanek A, Heuer H, Uszkoreit J, Eisenacher M, Bracht Th, Sitek B, Hoffmann F, Vijitha N, Eggeling F, **Engel DR** Spatial proteomics revealed a CX3CL1-dependent crosstalk between the urothelium and relocated macrophages through IL-6 during an acute bacterial infection in the urinary bladder. *Mucosal Immunol*, 13, 702-714 (2020).
- Pohl JM, Volke JK, Thiebes S, Brenzel A, Fuchs K, Beziere N, Ehrlichmann W, Pichler BJ, Squire A, Gueler F, **Engel DR**. CCR2-dependent Gr1<sup>high</sup> monocytes promote kidney injury in shiga toxin-induced hemolytic uremic syndrome in mice. *Eur J Immunol*, 48, 990-1000 (2018).
- Dixit A, Bottek J, Beerlage AL, Schuettpeitz J, Thiebes S, Brenzel A, Garbers C, Rose-John S, Mittrücker HW, Squire A, **Engel DR**. Proliferation of Ly6C<sup>+</sup> monocytes during urinary tract infections is regulated by IL-6 trans-signaling. *J Leukoc Biol*, 1, 13-22 (2018).
- Schiwon M, Weisheit C, Franken L, Gutweiler S, Dixit A, Meyer-Schwesinger C, Pohl JM, Maurice NJ, Thiebes S, Lorenz K, Quast T, Fuhrmann M, Baumgarten G, Lohse MJ, Opendakker G, Bernhagen J, Bucala R, Panzer U, Kolanus W, Grone HJ, Garbi N, Kastenmuller W, Knolle PA, Kurts C, **Engel, DR**. Crosstalk between Sentinel and Helper Macrophages Permits Neutrophil Migration into Infected Uroepithelium. *Cell*, 156, 456-68 (2014).
- **Engel DR**, Koscielny A, Wehner S, Maurer J, Schiwon M, Franken L, Schumak B, Limmer A, Sparwasser T, Hirner A, Knolle PA, Kalff JC, Kurts C. T helper type 1 memory cells disseminate postoperative ileus over the entire intestinal tract. *Nat Med*, 16, 1407-13 (2010).

## Category B

Articles on preprint servers

1. <https://www.biorxiv.org/content/10.1101/649137v1>
2. <https://www.biorxiv.org/content/10.1101/2023.09.14.557715v1>
3. <https://www.biorxiv.org/content/10.1101/2024.08.24.609403v1>

## Academic Distinctions

Awards and prizes received

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|-----------|---|
| 2022      | Nominee for the Galenus-von-Pergamon Preis  |
| 2013      | Young Research Group Award, University Hospital Bonn  |
| 2012      | Bonfor Junior Research Group  |
| 2011      | German Society of Immunology: Fritz und Ursula Melchers Award   |
| 2009      | DAAD scholarship at the Center for Inflammatory Diseases, Monash University, Department of Medicine, Melbourne, Australia |
| 2001-2003 | Research Fellowship from the Bayer AG   |

## Data protection and consent to the processing of optional data

I expressly consent to the processing of the voluntary (optional) information, including “special categories of personal data”<sup>1</sup> in connection with the DFG’s review and decision-making process regarding my proposal. This also includes forwarding my data to the external reviewers, committee members and, where applicable, foreign partner organisations who are involved in the decision-making process. To the extent that these recipients are located in a third country (outside the European Economic Area), I additionally consent to them being granted access to my data for the above-mentioned purposes, even though a level of data protection comparable to EU law may not be guaranteed. For this reason, compliance with the data protection principles of EU law is not guaranteed in such cases. In this respect, there may be a violation of my fundamental rights and freedoms and resulting damages. This may make it more difficult for me to assert my rights under the General Data Protection Regulation (e.g. information, rectification, erasure, compensation) and, if necessary, to enforce these rights with the help of authorities or in court.

I may **revoke** my consent in whole or in part at any time – with effect for the future, freely and without giving reasons – vis-à-vis the DFG ([postmaster@dfg.de](mailto:postmaster@dfg.de)). The lawfulness of the processing carried out up to that point remains unaffected. Insofar as I transmit “special categories of personal data” relating to third parties, I confirm that the necessary legitimation under data protection law exists (e.g. based on consent).

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<sup>1</sup> Special categories of personal data are those “revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and (...) genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person’s sex life or sexual orientation” (Article 9(1) GDPR).