

Curriculum Vitae**Personal Data**

Title	Dr. (M.D., Ph.D.)
First name	Rald
Name	Groven
Current position	Surgical Resident
Current institution(s)/site(s), country	Department of Orthopedic, Trauma- and Reconstructive Surgery, RWTH Aachen University Hospital, Aachen, Germany
Identifiers/ORCID	0000-0001-8733-289X

Qualifications and Career

Stages	Periods and Details
Degree programme	<u>Bachelor and Master of Medicine (cum laude),</u> 2017 – 2023, Maastricht University, Maastricht, The Netherlands <u>Bachelor of Biomedical Sciences,</u> 2016 - 2019 Maastricht University, Maastricht, The Netherlands
Doctorate (Ph.D.)	<u>Ph.D. in Trauma Surgery and Regenerative Medicine,</u> 2020 - 2024, MERLN Institute for Technology Inspired Regenerative Medicine, Maastricht University, Maastricht, The Netherlands
Stages of academic/professional career	<u>Surgical Residency,</u> Department of Orthopedic, Trauma- and Reconstructive Surgery, 2024 – present, RWTH Aachen University Hospital, Aachen, Germany <u>Ph.D. Candidate,</u> 2020 - 2024, Maastricht University, Maastricht, The Netherlands <u>Electives and observerships,</u> - Mar 2025, Trauma and Acute Care Surgery, University Hospital Chicago, Chicago, IL (Prof. Dr. S.O. Rogers) - Feb 2023 – May 2023, Traumatology Department, University Hospital Zurich, Zurich, Switzerland (Prof. Dr. Hans-Christoph Pape)

Activities in the Research System**A) Reviewer Activities:**

- Langenbeck's Archives of Surgery
- European Journal of Trauma and Emergency Surgery
- Journal of Orthopaedic Surgery and Research
- European Journal of Medical Research

B) Memberships:

- German Surgical Society, Section of Surgical Science
- Deutsche Gesellschaft für Orthopädie und Unfallchirurgie
- European Society for Trauma and Emergency Surgery

- Dutch Trauma Association

C) Supervision of Researchers in Early Career Phases:

Tutoring courses in the fields of biomedical sciences and medicine as well as >10 supervisions of early career students and scientists (Internships, B.Sc., M.Sc., Dr. med. Theses) in interdisciplinary fields including biology, biotechnology, biomedical engineering, and medicine.

Scientific Results

Category A

1. Fangzhou Lu, **Rald VM Groven**, Dennis M Meesters, Albert Bitorina, Martijn Poeze, Shan Tang, Martijn van Griensven, Taco J Blokhuis, Ronit Shiri-Sverdlov. Cathepsin D and G expression correlates with human fracture healing phases and specific neutrophil N1 and N2 phenotypes. *Bone*. 2025; 199: 117574. doi: 10.1016/j.bone.2025.117574
2. **Rald VM Groven**, Ümit Mert, Johannes Greven, Klemens Horst, Virginie Joris, Lara Bini, Martijn Poeze, Taco J Blokhuis, Markus Huber-Lang, Frank Hildebrand, Martijn van Griensven. Early total care and damage control orthopedics result in partially contrasting microRNA expression patterns at the fracture site and in the systemic circulation. *The Bone and Joint Journal*. 2025; 107 (2): 193-203. doi: 10.1302/0301-620X.107B2
3. Ümit Mert, **Rald VM Groven**, Johannes Greven, Zhizhen He, Mohamad Agha Mahmoud, Martijn van Griensven, Markus Huber-Lang, Tom Eirik Mollnes, Elizabeth Rosado Balmayor, Klemens Horst, Frank Hildebrand. Damage Control Orthopaedics Induced Less Trauma-Induced Coagulopathy than Early Total Care in a Porcine Polytrauma Model. *European Surgical Research*. 2024; 65 (1); 115-22. DOI: 10.1159/000541399
4. Nan Zhou, **Rald VM Groven**, Klemens Horst, Ümit Mert, Johannes Greven, Tom Eirik Mollnes, Markus Huber-Lang, Martijn van Griensven, Frank Hildebrand, Elizabeth R. Balmayor. Pulmonary miRNA expression after polytrauma depends on the surgical invasiveness and displays an anti-inflammatory pattern by the combined inhibition of C5 and CD14. *Frontiers in immunology*. 2024; 15; 1402571. DOI: 10.3389/fimmu.2024.1402571
5. **Rald VM Groven**, Christel Kuik, Johannes Greven, Ümit Mert, Freek G Bouwman, Martijn Poeze, Taco J Blokhuis, Frank Hildebrand, Berta Cillero-Pastor, Martijn van Griensven. Fracture hematoma proteomics. *Bone and Joint Research*. 2024; 13(5); 214-25. DOI: 10.1302/2046-3758.135.BJR-2023-0323.R1
6. Fangzhou Lu, **Rald VM Groven**, Martijn van Griensven, Martijn Poeze, Jan AP Geurts, Shan S Qiu, Taco J Blokhuis. Polytherapy versus monotherapy in the treatment of tibial non-unions: a retrospective study. *Journal of Orthopaedics and Traumatology*. 2024; 25(1); DOI: 10.1186/s10195-024-00763-5
7. **Rald VM Groven**, Johannes Greven, Ümit Mert, Klemens Horst, Qun Zhao, Taco Johan Blokhuis, Markus Huber-Lang, Frank Hildebrand, Martijn van Griensven. Circulating miRNA expression in extracellular vesicles is associated with specific injuries after multiple trauma and surgical invasiveness. *Frontiers in Immunology*. 2023; 14; 1273612. doi: 10.3389/fimmu.2023.1273612
8. **Rald VM Groven**, Job T Blokhuis, Martijn Poeze, Martijn van Griensven, Taco J Blokhuis. Surgical suction filter derived bone graft displays osteogenic miRNA and mRNA patterns. *European Journal of Trauma and Emergency Surgery*. 2023; 1-12. doi: 10.1007/s00068-023-02350-5
9. **Rald VM Groven**, Carlos J Peniche Silva, Elisabeth R Balmayor, Bart NJ van der Horst, Martijn Poeze, Taco J Blokhuis, Martijn van Griensven. Specific miRNAs are associated with fracture healing phases, patient age and multi-trauma. *Journal of Orthopaedic Translation*. 2022; 37; 1-11. doi: 10.1016/j.jot.2022.07.002
10. **Rald VM Groven**, Sylvia P Nauta, Jane Gruisen, Britt SR Claes, Johannes Greven, Martijn van Griensven, Martijn Poeze, Ron MA Heeren, Tiffany Porta-Siegel, Berta Cillero-Pastor, Taco J Blokhuis. Specific lipids are associated to bone fracture healing over time: lipid analysis of fracture hematoma with MALDI-MSI. *Frontiers in Chemistry*. 2022; (9). doi: 10.3389/fchem.2021.780626

Academic Distinctions

2025 **Best oral presentation**, ESTES Euroscience Contest, 24th European Congress of Trauma and Emergency Surgery, Aachen, Germany

- 2025 **Best European Resident Trauma Paper of ATLS Region 15**, American College of Surgeons, 100th Committee on Trauma and ATLS annual meeting, Chicago, USA.
- 2024 Nominated for the **German Society for Orthopaedics and Trauma Wilhelm Roux award**, German Congress for Orthopaedics and Traumatology, Berlin, Germany
- 2024 **DGOU OUMN Publication prize**, German Society for Orthopaedics and Trauma, Berlin, Germany.
- 2022 **Travel grant & best oral presentation**, 17th Biennial Meeting of the Orthopaedic Research Society and the International Section of Fracture Repair, Edinburgh, United Kingdom.
- 2022 **Best Poster Prize**, 17th Biennial Meeting of the Orthopaedic Research Society and the International Section of Fracture Repair, Edinburgh, United Kingdom.
- 2022 **Best Poster Prize**, 21st European Congress of Trauma and Emergency Surgery, Oslo, Norway.
- 2022 – 2024 **University fund Limburg research grant** (€15,050), Maastricht University, Maastricht University

Data protection and consent to the processing of optional data

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