

Curriculum Vitae

Date Prepared: 02/20/2025

Name: Benjamin Rolles

Office Address: Stanford University, Division of Hematology, Stanford, USA

Brigham and Women's Hospital, Department of Medicine, Hematology Division,
Boston, USA

Work Email: brolles@stanford.edu; brolles@bwh.harvard.edu

Work FAX: /

Date of Birth: 6th March

Education

2018	Physician	Medicine	RWTH Aachen University, Aachen, Germany
2018	MD	Medicine/Immunology	University Hospital RWTH Aachen, Aachen, Germany

Postdoctoral Training

09/2018- 06/2019	Resident	Hematology/Oncology (Normal ward)	University Hospital RWTH Aachen, Aachen, Germany
07/2019- 02/2021	Resident	Hematology/Oncology (Stem cell transplantation)	University Hospital RWTH Aachen, Aachen, Germany
03/2021- 10/2021	Research Fellow	Hematology/Oncology/Immunology (Clinical research unit 344, funded by the German Research Foundation)	University Hospital RWTH Aachen, Aachen, Germany
11/2021- ongoing	PostDoc/Research Fellow	Department of Medicine, Hematology Division	Brigham and Women's Hospital, Boston, USA
11/2021- ongoing	Research Fellow		Harvard Medical School
12/2021- ongoing	Research Affiliate		Broad Institute

01/2022-ongoing	Research Affiliate		Boston Children's Hospital
08/2023-ongoing	Research Affiliate		Dana-Farber Cancer Institute
12/2024-ongoing	Research Affiliate		Palo Alto VA Hospital
01/2025-ongoing	PostDoc/Research Fellow		Stanford University

Appointments at Hospitals/Affiliated Institutions

09/2018-10/2021	Assistant Physician	Medicine (Department of Hematology Oncology, Hemostaseology and Stem Cell Transplantation)	University Hospital RWTH Aachen, Aachen, Germany
11/2021-ongoing	Research Fellow	Department of Medicine, Hematology Division	Brigham and Women's Hospital, Boston, USA
11/2021-ongoing	Research Fellow		Harvard Medical School
12/2021-ongoing	Research Affiliate		Broad Institute
01/2022-ongoing	Research Affiliate		Boston Children's Hospital
08/2023-ongoing	Research Affiliate		Dana-Farber Cancer Institute
12/2024-ongoing	Research Affiliate		Palo Alto VA Hospital
01/2025-ongoing	PostDoc/Research Fellow		Stanford University

Professional Societies

- 2018-present German Society of Hematology and Oncology (DGHO)
- 2022-present American Society of Hematology (ASH)
- 2024-present Sigma Xi – The Scientific Research Honor Society
- 2024-present European Hematology Association (EHA)

Editorial Activities

Reviewer

- Food & Function (Royal Society of Chemistry) (since 2020)
- International Journal of Molecular Sciences (MDPI) (since 2022)
- Biomedicines (MDPI) (since 2022)
- Aging (Impact Journals) (since 2022)
- Frontiers in Nutrition (Frontiers Media) (since 2022)
- Healthcare (MDPI) (since 2022)
- Gefässchirurgie (Springer) (since 2022)
- Journal of Clinical Medicine (MDPI) (since 2023)
- Current Oncology (MDPI) (since 2023)
- Journal of Personalized Medicine (MDPI) (since 2023)
- Diagnostics (MDPI) (since 2023)
- Microorganisms (MDPI) (since 2023)
- Future Pharmacology (MDPI) (since 2023)
- Medicina (MDPI) (since 2023)
- Cancers (MDPI) (since 2023)
- Genes (MDPI) (since 2023)
- Children (MDPI) (since 2023)
- Clinical and Experimental Medicine (Springer) (since 2023)
- International Journal of Obesity (Nature-Publishing Group) (since 2023)
- Nutrients (MDPI) (since 2023)
- Frontiers in Medicine (Frontiers Media) (since 2023)
- Immunity, Inflammation and Disease (Wiley) (since 2024)
- Hematology Reports (MDPI) (since 2024)
- American Journal of Case Reports (since 2024)
- Computational and Structural Biotechnology Journal (Elsevier) (since 2024)
- Human Immunology (Elsevier) (since 2024)
- Heliyon (Cell Press) (since 2024)
- British Journal of Haematology (Wiley) (since 2024)
- Gene Reports (Elsevier) (since 2024)
- Annals of Hematology (Springer Nature) (since 2024)
- Hematology (Taylor & Francis) (since 2024)
- HemaSphere (Wiley) (since 2024)
- Immunotherapy (Taylor & Francis) (since 2024)

- Journal of Intellectual Disability Research (Wiley) (since 2024)
- Leukemia (Nature-Publishing Group) (since 2025)

Topical Advisory Panel

- International Journal of Molecular Sciences (MDPI) (since 2024)

Associate Editor

- Frontiers in Nutrition (Frontiers Media) (since 2023) (Section: Clinical Nutrition)

Guest Editor

- Special Issue: “Zinc in Health and Disease Management” (2022) (Frontiers in Nutrition/Frontiers in Immunology (Frontiers Media SA))

Honors and Prizes

2011	GDCh prize	German Chemical Society (GDCh)	Academic achievement
2016	Dean’s List Member	RWTH Aachen University	Upper 5% of performance (Medical studies)
2019	Abstract Achievement Award	American Society of Hematology (ASH)	
2020	Borchers badge	RWTH Aachen University	Medical thesis with distinction (“summa cum laude”)
2024	Nomination for Membership	Sigma Xi	Full Membership
2024	Abstract Achievement Award	American Society of Hematology (ASH)	

Report of Funded and Unfunded Projects

Training Grants and Mentored Trainee Grants

Current

Past

- 2021 Clinical Research Unit 344 (CRU 334) (Project ID: 428857858)
(Deutsche Forschungsgemeinschaft)
- 2021-2023 Investigating the role of monocytes in myeloproliferative neoplasms and in individuals
with clonal hematopoiesis
German Cancer Aid (German: "Deutsche Krebshilfe")
Mildred Scheel postdoctoral program (fellowship for Benjamin Rolles)
Investigator (PI: Ann Mullally)

Report of Local Teaching and Training

Teaching of Students in Courses

RWTH Aachen University

- 2019-2021 Clinical examination course (Internal Medicine) University Hospital RWTH Aachen
Two courses for respective 2 hours every year

Clinical Supervisory and Training Responsibilities

- 2018-2021 Bed-side teaching One hour per week

Report of Clinical Activities and Innovations

Current Licensure and Certification

- 2018 Medical License in Germany
2019 Good Clinical Practice (GCP) basic module (AMG/MPG)
2019 Good Clinical Practice (GCP) advanced course (AMG)
2024 Innovating in Health Care (Harvard T.H. Chan School of Public Health/Harvard
Business School/HarvardX)

Report of Scholarship

- 2021 - 2023 Mildred-Scheel (German Cancer Aid)

Peer-reviewed publications

Research articles

1. **Rolles B**, Maywald M, Rink L. Influence of zinc deficiency and supplementation on NK cell cytotoxicity. *Journal of Functional Foods*. September 2018; 48:322-28. doi:10.1016/j.jff.2018.07.027
2. Vieri M, Kirschner M, Tometten M, Abels A, **Rolles B**, Isfort S, Panse J, Brümmendorf TH, Beier F. Comparable Effects of the Androgen Derivatives Danazol, Oxymetholone and Nandrolone on Telomerase Activity in Human Primary Hematopoietic Cells from Patients with Dyskeratosis Congenita. *Int J Mol Sci*. September 2020; 21(19):7196. doi:10.3390/ijms21197196.
3. Schumacher D, Curaj A, Staudt M, Cordes F, Dumitraşcu AR, **Rolles B**, Beckers C, Soppert J, Rusu M, Simseyilmaz S, Kneizeh K, Ramachandra CJA, Hausenloy DJ, Liehn EA. Phosphatidylserine Supplementation as a Novel Strategy for Reducing Myocardial Infarct Size and Preventing Adverse Left Ventricular Remodeling. *April 2021; 22(9):4401*. doi:10.3390/ijms22094401.
4. Kirschner M, Vieri M, Kricheldorf K, Ventura Ferreira MS, Wlodarski MW, Schwarz M, Balabanov S, **Rolles B**, Isfort S, Koschmieder S, Höchsmann B, Panse J, Brümmendorf TH, Beier F. Androgen derivatives improve blood counts and elongate telomere length in adult cryptic dyskeratosis congenita. *Br J Haematol*. May 2021; 193(3):669-673. doi:10.1111/bjh.16997.
5. **Rolles B**, Gorgulho J, Tometten M, Roderburg C, Vieri M, Abels A, Vucur M, Heymann F, Tacke F, Brümmendorf TH, Luedde T, Beier F, Loosen SH. Telomere Shortening in Peripheral Leukocytes Is Associated With Poor Survival in Cancer Patients Treated With Immune Checkpoint Inhibitor Therapy. *Front Oncol*. August 2021; 11:729207. doi:10.3389/fonc.2021.729207.
6. **Rolles B**, Maywald M, Rink L. Intracellular zinc during cell activation and zinc deficiency. *J Trace Elem Med Bio*. September 2021; 126864. doi:10.1016/j.jtemb.2021.126864.
7. **Rolles B**, Wessels I, Doukas P, Kotelis D, Rink L, Vieri M, et al. Retrospective observational study evaluating zinc plasma level in patients undergoing thoracoabdominal aortic aneurysm repair and its correlation with outcome. *Scientific reports 2021; 11: 24348*.
8. **Rolles B**, Caballero-Oteyza A, ProieP M, Goldacker S, Warnatz K, Camacho-Ordonez N, et al. Telomere biology disorders may manifest as common variable immunodeficiency (CVID). *Clinical immunology (Orlando, Fla.) 2023; 257: 109837*.
9. Jutzi JS, Marneth AE, Jiménez-Santos MJ, Hem J, Guerra-Moreno A, **Rolles B**, et al. CALR-mutated cells are vulnerable to combined inhibition of the proteasome and the endoplasmic reticulum stress response. *Leukemia 2023; 37: 359–369*.
10. **Rolles B**, Ferreira MSV, Vieri M, Rheinwalt KP, Schmitz SM, Alizai PH, et al. Telomere length dynamics measured by flow-FISH in patients with obesity undergoing bariatric surgery. *Scientific reports 2023; 13: 304*.
11. **Vieri M***, **Rolles B***, Crocioni M, Schemionek-Reinders M, Isfort S, Panse J, et al. Eltrombopag Preserves the Clonogenic Potential of Hematopoietic Stem Cells During Treatment With Antithymocyte Globulin in Patients With Aplastic Anemia. *HemaSphere 2023; 7: e906*.
12. Görg R, Büggenbach A, Jakobs J, Kurtoğlu Babayev FH, **Rolles B**, Rink L, et al. Leukemia cells accumulate zinc for oncofusion protein stabilization. *The Journal of nutritional biochemistry 2023; 123: 109482*.
13. Kirschner M, **Rolles B**, Crysandt M, Röllig C, Stölzel F, Kramer M, et al. Impaired Overall Survival in Young Patients With Acute Myeloid Leukemia and Variants in Genes Predisposing for Myeloid Malignancies. *HemaSphere 2022; 6: e787*.

*Shared first authorship

Review articles

1. Wessels I*, **Rolles B***, Rink L. The Potential Impact of Zinc Supplementation on COVID-19 Pathogenesis. *Frontiers in Immunology*. July 2020; 11:1712. doi:10.3389/fimmu.2020.01712.
2. Wessels I, **Rolles B**, Slusarenko AJ. Zinc deficiency as a possible risk factor for increased susceptibility and severe progression of COVID-19. *Br J Nutr*. March 2021; 1-19. doi:10.1017/S0007114521000738.
3. **Rolles B**, Mullally A. Molecular Pathogenesis of Myeloproliferative Neoplasms. *Current hematologic malignancy reports* 2022; 17: 319–329.
4. **Rolles B**, Tometten M, Meyer R, Kirschner M, Beier F, Brümmendorf TH. Inherited Telomere Biology Disorders: Pathophysiology, Clinical Presentation, Diagnostics, and Treatment. *Transfus Med Hemother* 2024: 1–18.

*Shared first authorship

Editorials

1. González-Iglesias H, Lengyel I, **Rolles B**. Editorial: Zinc in health and disease management. *Frontiers in nutrition* 2023; 10: 1242840.

Letters to the Editor and Commentaries

1. **Rolles B**, Meyer R, Begemann M, Elbracht M, Jost E, Stelljes M, et al. DDX41 germline variants causing donor cell leukemia indicate a need for further genetic workup in the context of hematopoietic stem cell transplantation. *Blood cancer journal* 2023; 13: 73.
2. Atakhanov S, Christen D, **Rolles B**, Schüler HM, Panse J, Chatain N, et al. Towards personalized medicine with iPS cell technology: a case report of advanced systemic mastocytosis with associated eosinophilia. *Annals of hematology* 2022; 101: 2533–2536.

Case Reports

1. Hess PP, Ventura Ferreira MS, Rolles B, Kirschner M, Holtbernd F, Tometten M, et al. Effective treatment of advanced Hodgkin lymphoma with a modified BEACOPP regimen for a patient with demyelinating hereditary motor and sensory neuropathy type 1 (HMSN1). *Clinical case reports* 2022; 10: e05766.

Non-peer reviewed scientific or medical publications

1. **Rolles B**, Lothar R. Zink im Immunsystem. *Ernährung & Medizin*. December 2015; 30(4):156-160. doi:10.1055/s-0035-1558535.
2. **Rolles B**, Uciechowski P, Rink L. Grundlagen der Tumormunologie. *Der Onkologe*. August 2021. doi:10.1007/s00761-021-01010-w

Thesis (MD)

Rolles B. Influence of zinc deficiency and supplementation on NK cell cytotoxicity [MD dissertation]. RWTH Aachen University; 2018.

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings

1. **Rolles B**, Bulashevskaya A, Proietti M, Goldacker S, Warnatz K, Camacho-Ordonez N, Vieri M, Kirschner M, Brümmendorf TH, Grimbacher B, Beier F. Common Variable Immunodeficiency (CVID) in Adults As First Manifestation of (cryptic) Dyskeratosis Congenita. American Society of Hematology (ASH) Annual Meeting 2019. Blood (2019) 134 (Supplement_1): 1217.
2. **Rolles B**, Crysandt M, Brümmendorf TH, Jost E, Beier F. Transient thrombocytopenia in an adult patient with TAR-syndrome efficiently treated with prednisone. Annual Meeting of the German Society of Hematology and Oncology 2019 (DGHO 2019).
3. Kirschner M, **Rolles B**, Crysandt M, Röllig C, Stolzel F, Bornhäuser M, Müller-Tidow C, Kricheldorf K, Vieri M, Begemann M, Maurer A, Panse J, Isfort S, Wlodarski M, Sahoo SS, Brümmendorf TH, Jost E, Beier F. Prevalence of Inherited Predisposition Syndromes in Young Patients with Acute Myeloid Leukemia and Aberrant Karyotype. American Society of Hematology (ASH) Annual Meeting 2020. Blood (2020) 136 (Supplement 1): 41–42.
4. Vieri M, **Rolles B**, Crocioni M, Isfort S, Panse J, Brümmendorf TH, et al. P804: Ex vivo treatment with Eltrombopag rescues hematopoietic stem cells from anti-thymocyte globulin-related damage during immunosuppressive therapy in patients with aplastic anemia. HemaSphere 2022; 6: 698–699.
5. Frumm SM, Kim HT, Kelkar AH, Ho VT, Gooptu M, Gibson CJ,...**Rolles B**...et al. A Simple Prediction Model of Outcomes after Allogeneic Hematopoietic Stem Cell Transplant (HCT) in Myelodysplastic Syndromes Using HCT-Comorbidity Index, Cytogenetic Risk, and Platelet Count. Blood 2023; 142: 2246.
6. Bewersdorf JP, Kewan T, Blaha O, Stahl M, Al Ali NH, DeZern AE,...**Rolles B**...et al. Validation of the Composite Complete Response (cCR) Definitions in the International Working Group (IWG) 2023 Criteria in Patients (Pts) with Higher-Risk Myelodysplastic Syndromes/Neoplasms (HR-MDS) Treated with Hypomethylating Agents (HMA) - a Large, Multicenter, Retrospective Analysis from the Validate Database. Blood 2023; 142: 324.
7. Kewan T, Bewersdorf JP, Blaha O, Stahl M, Al Ali NH, DeZern AE,...**Rolles B**...et al. Validation of the Molecular International Prognostic Scoring System (IPSS-M) in Patients (Pts) with Myelodysplastic Syndromes/Neoplasms (MDS) Who Underwent Allogeneic Stem Cell Transplantation (HSCT). Blood 2023; 142: 4980.
8. Kewan T, Bewersdorf JP, Blaha O, Stahl M, Al Ali NH, DeZern AE,...**Rolles B**...et al. Validation of the Molecular International Prognostic Scoring System (IPSS-M) in Patients (Pts) with Myelodysplastic Syndromes/Neoplasms (MDS) Who Were Treated with Hypomethylating Agents (HMA). Blood 2023; 142: 3240.
9. Kewan T, Bewersdorf JP, Blaha O, Stahl M, Al Ali NH, DeZern AE,...**Rolles B**...et al. Clinical Implications of TP53 Mutations/Allelic State in Patients (Pts) with Myelodysplastic Syndromes/Neoplasms (MDS) Treated with Hypomethylating Agents (HMA)- a Multicenter, Retrospective Analysis from the Validate Database. Blood 2023; 142: 1002.
10. **Rolles B**, Martins De Oliveira Filho C, Keating J, Lusk MR, DeAngelo DJ, Lindsley C, et al. TP53 mutations and Their Impact on Survival in Patients with Myeloproliferative Neoplasms. Blood 2023; 142: 3160.
11. Kewan T, Bewersdorf JP, Blaha O, Stahl M, Al Ali NH, DeZern AE,...**Rolles B**...et al. Evaluation of the Molecular International Prognostic Scoring System (IPSS-M) in Patients (Pts) with Myelodysplastic Syndromes/Neoplasms (MDS) with Missing Molecular Data. Blood 2023; 142: 4607.

12. Frumm SM, Kim HT, Kelkar AH, Ho VT, Goptu M, Gibson CJ,...**Rolles B**...et al. Post Allogeneic Stem Cell Transplant Outcomes Following Response to Hypomethylating Agent Therapy in Myelodysplastic Syndromes Are Predicted By Persistent International Prognostic Scoring System- Molecular Risk. *Blood* 2023; 142: 3618.
13. Walter J, **Rolles B**, Schumacher Y, Theis F, Hansmann L, Heudobler D, et al. Analysis of the Impact of Body Mass Index (BMI) on the Durability of Response in Patients with Aplastic Anemia Treated with Weight-Adjusted Horse Anti-Thymocyte Globulin (hATG). *Blood* 2023; 142: 5641.
14. Bewersdorf JP, Kewan T, Blaha O, Stahl M, Al Ali NH, DeZern AE,...**Rolles B**...et al. Impact of Type of Hypomethylating Agent (HMA) Used on Outcomes of Patients (Pts) with Higher-Risk Myelodysplastic Syndromes/Neoplasms (HR-MDS) - a Large, Multicenter, Retrospective Analysis. *Blood* 2023; 142: 4613.
15. Aguirre LE, Kim HT, Elmariah H, Frumm SM, Kelkar AH, Ho VT,...**Rolles B**...et al. Redefining Clinical Response Criteria in Myelodysplastic Syndromes to Better Forecast Post-Transplant Outcomes. *Blood* 2024; 144: 4938.
16. **Rolles B**, Chatain N, Görg R, Vieri M, Tillmann-Tröster N, Bourgeois MG, et al. ZIP10 (SLC39A10) Is an Important Transport Protein in Acute Myeloid Leukemia. *Blood* 2024; 144: 5737.
17. Walter J, **Rolles B**, Schumacher Y, Theis F, Hansmann L, Radsak MP, et al. The Impact of Body Mass Index (BMI) in Patients with Aplastic Anemia Receiving Weight-Adjusted Horse Anti-Thymocyte Globulin (hATG) on Outcome, Response and Relapse Rate. *Blood* 2024; 144: 4082.
18. Zhang J, Shimony SO, Liu Y, Inyang E, Chen EC, Aguirre LE,...**Rolles B**...et al. Impact of Molecular Ontogeny on Hematological Recovery in AML Patients Treated with Hypomethylating Agent Plus Venetoclax Therapy. *Blood* 2024; 144: 5175.
19. Getz TM, Kewan T, Bewersdorf JP, Stempel JM, Lanino L, Wei W,...**Rolles B**...et al. Clinical Outcomes and Variability Based on Baseline Cytogenetic Risk of Patients with MDS Treated with Hypomethylating Agents: An Analysis from the International Consortium for MDS (icMDS) Validate Database. *Blood* 2024; 144: 3219.
20. **Rolles B**, Sekar A, Serrano-Ron L, Ameerul Faiz NM, Perry A, Hillerbrandt AC, et al. Mutation-Specific Differences in the Relationship between Obesity and Clonal Hematopoiesis, with a Focus on JAK2V617F and MPN Prevention. *Blood* 2024; 144: 872. **(Oral Abstract)**
21. **Rolles B**, Bewersdorf JP, Kewan T, Blaha O, Stempel JM, Lanino L, et al. Impact of Response to Hypomethylating Agent-Based Therapy on Survival Outcomes in the Context of Baseline Clinical-Molecular Risk and Transplant Status in Patients with Myelodysplastic Syndromes/Neoplasms (MDS): An Analysis from the International Consortium for MDS (icMDS) Validate Database. *Blood* 2024; 144: 664. **(Oral Abstract)**