

Florian B. Mayr

Associate Professor of Critical Care Medicine

VA Pittsburgh Healthcare System, University of Pittsburgh

florian.mayr@pitt.edu | ccm.pitt.edu/people/florian-b-mayr-md-mph | 0000-0002-2298-9011 | mayrfb | mayrfb

Summary

Board-certified intensivist and physician-scientist with expertise in critical care outcomes research, clinical trial methodology, and health services research. Principal investigator on NIH- and VA-funded studies focused on improving long-term outcomes after sepsis and critical illness. Active investigator in the REMAP-CAP international platform trial. Research interests span precision medicine approaches to post-ICU care, health equity in critical illness, and the intersection of critical illness and accelerated aging. Track record of high-impact publications in JAMA, New England Journal of Medicine, and Nature Communications.

Education

Medical University of Vienna — *Vienna, Austria*
Doctor of Medicine (M.D.) — *1995–2002*

University of Pittsburgh, Graduate School of Public Health — *Pittsburgh, PA*
Master of Public Health (M.P.H.) — *2007–2009*

Postgraduate Training

University of Pittsburgh / UPMC — *Pittsburgh, PA*
Clinical Fellow, Critical Care Medicine — *2014–2016*

University of Pittsburgh / UPMC — *Pittsburgh, PA*
Resident, Internal Medicine — *2011–2014*

University of Pittsburgh (Mentors: D. Angus, M. Pinsky) — *Pittsburgh, PA*
T-32 Research Fellow, Critical Care Medicine — *2007–2010*

Medical University of Vienna — *Vienna, Austria*
Resident, Clinical Pharmacology and Emergency Medicine — *2003–2007*

Academic Appointments

Dept. of Critical Care Medicine, University of Pittsburgh — *Pittsburgh, PA*
Associate Professor — *2023–present*

Dept. of Critical Care Medicine, University of Pittsburgh — *Pittsburgh, PA*
Assistant Professor — *2018–2023*

Dept. of Critical Care Medicine, University of Pittsburgh — *Pittsburgh, PA*
Clinical Instructor — *2016–2018*

Dept. of Medicine, Medical University of Vienna — *Vienna, Austria*
Venia Docendi (Habilitation) — *2011*

Clinical and Administrative Appointments

Critical Care Service Line, VA Pittsburgh Healthcare System — *Pittsburgh, PA*
Assistant VP for Education and Research — *2025–present*

Critical Care Service Line, VA Pittsburgh Healthcare System — *Pittsburgh, PA*
Staff Physician and ICU Informatics Strategist — *2016–present*

Dept. of Critical Care Medicine, UPMC Presbyterian/Montefiore — *Pittsburgh, PA*
Staff Physician — *2016–present*

Board Certification and Licensure

American Board of Internal Medicine
Diplomate, Internal Medicine — *2014–2034*

American Board of Internal Medicine
Diplomate, Critical Care Medicine — *2016–2036*

American Board of Preventive Medicine
Board Eligible, Clinical Informatics — *2025*

Commonwealth of Pennsylvania
Medical License — *2011–present*

Honors and Awards

NIH/NIGMS
Ruth L. Kirschstein NRSA Fellowship (T32/F32) — *2007–2010*

Veterans Health Administration
VHA Diffusion of Excellence Semifinalist (Post-Acute Recovery Center) — *2024*

VA Pittsburgh Healthcare System
VA Pittsburgh Best Practice Conference Innovation Award — *2021*

European Union
European Union INTERREG Scholarship — *2003–2006*

American Society of Hematology
Travel Grant — *2006*

University of Vienna
Medical Student Achievement Award — *2000–2002*

Research Funding

Active

R35 GM166313, NIH/NIGMS | Role: PI — *$1,913,632 total*
Recovery, EPigenetics and Inflammaging Research after Critical Illness (REPAIR-ICU) — *2026–2031*

I01 BX006614, U.S. Department of Veterans Affairs (PI: Bain) | Role: Co-I *$704,601 total*
Complement Factor H Protection During Severe Pneumonia *2026–2029*

Completed (as PI)

K23 GM132688, NIH/NIGMS | Role: PI (75% effort) *$693,597 total*
A precision medicine framework to improve long-term outcomes in Sepsis Survivors *2019–2024*

VHA Office of Health Equity | Role: PI *$50,000 total*
ICU-LATER: Learning Attributes Affecting Equity and Resource Allocation *2022–2023*

VHA HSR&D Dr. Eugene Marsh CHERP Pilot | Role: PI *$49,337 total*
Scaling Post-Acute Recovery Care (SPARC) Pilot *2023*

VA VISN-4 Competitive Career Development Fund | Role: PI *$57,206 direct costs*
VISN-4 Career Development Award *2018–2020*

Completed (as Co-Investigator)

IHS-2019C1-16055, PCORI | Role: Co-I (Site PI) *$67,584 direct costs*
Comparative Effectiveness of Readmission Reduction Interventions (ACCOMPLISH) *2020–2024*

Publications

38 h-index **71** i10-index **6,044+** citations **141+** publications

Source: OpenAlex, 2026-11-01. Complete list: Google Scholar | ORCID

Selected Most-Cited

1. REMAP-CAP Investigators, Gordon AC, Mouncey PR, Al-Beidh F, Rowan KM, Nichol AD, Arabi YM, Annane D, Beane A, …, **Mayr FB**, et al. Interleukin-6 Receptor Antagonists in Critically Ill Patients with Covid-19. *N Engl J Med*. 2021;384(16):1491-1502. PMID: 33631065. **(2,143 citations)**.
2. **Mayr FB**, Yende S, Angus DC. Epidemiology of severe sepsis. *Virulence*. 2014;5(1):4-11. PMID: 24335434. **(1,759 citations)**.
3. **Mayr FB**, Yende S, Linde-Zwirble WT, Peck-Palmer OM, Barnato AE, Weissfeld LA, Angus DC. Infection rate and acute organ dysfunction risk as explanations for racial differences in severe sepsis. *JAMA*. 2010;303(24):2495-503. PMID: 20571016. **(1,001 citations)**.
4. Hotchkiss RS, Colston E, Yende S, Angus DC, Moldawer LL, Crouser ED, Martin GS, Coopersmith CM, Brakenridge S, **Mayr FB**, et al. Immune Checkpoint Inhibition in Sepsis: A Phase 1b Randomized, Placebo-Controlled, Single Ascending Dose Study of Antiprogrammed Cell Death-Ligand 1 Antibody (BMS-936559). *Crit Care Med*. 2019;47(5):632-642. PMID: 30747773. **(248 citations)**.
5. Spiel AO, **Mayr FB**, Firbas C, Quehenberger P, Jilma B. Validation of rotation thrombelastography in a model of systemic activation of fibrinolysis and coagulation in humans. *J Thromb Haemost*. 2006;4(2):411-6. PMID: 16420574. **(234 citations)**.

Peer-Reviewed Publications (103, PubMed-indexed)

1. Yende S, Talisa VB, Mayes K, Williams K, Malito A, **Mayr FB**, Angus DC, Awdish R, Liang Q, Rak KJ, et al. Remote Monitoring Approaches to Reduce Readmissions After Infection and Sepsis: A Randomized Clinical Trial. *JAMA Netw Open*. 2026;9(6):e2616641. PMID: 42275060.
2. Hahn Z, Tyler B, Atwood C, Hotchkiss JR, **Mayr FB**. Post-Intensive Care Fragmentation Among Rural Veterans: Transitions Between VA and Community Health Systems. *J Rural Health*. 2026;42(2):e70174. PMID: 42233317.
3. Hashmi M, Haniffa R, Jayakumar D, Beane A, Lorenzi E, Berry LR, Nasir Khoso M, Ain Khan Q, Kumar A, Altaf Kidwai A, et al. Ivermectin for Critically and Noncritically Ill Hospitalized Patients With COVID-19: Randomized, Embedded, Multifactorial Adaptive Platform Trial for Community-Acquired Pneumonia (REMAP-CAP). *Crit Care Med*. 2026;54(7):1546-1562. PMID: 42101205.
4. Venkatesan N, Shah FA, Bain W, Yang Z, Dela Cruz CS, Baron RM, Zuchelkowski B, Rizzo AN, Joshi S, …, **Mayr FB**, et al. Risk heterogeneity within hypoinflammatory acute respiratory failure: continuous probabilities identify high-risk patients masked by binary classification. *Intensive Care Med*. 2026;52(4):673-686. PMID: 42043553.
5. Olszewski AE, Butler RA, Ashana DC, Carson S, Cox CE, Hough CL, Hwang DY, Maloney D, **Mayr F**, Menon V, et al. Protocol for a randomized trial of a scalable, interactive tool to support surrogate decision-makers of critically ill patients. *Contemp Clin Trials*. 2026;164:108262. PMID: 41730449.
6. Naiditch H, Talisa VB, Magnani JW, Nouraie SM, Yende S, **Mayr FB**. Racial and Ethnic Inequalities Among Survivors of Critical Illness in the MIMIC-IV Database. *J Intensive Care Med*. 2026;41(2):128-138. PMID: 41295887.

7. Hahn Z, Naiditch H, Brucato MF, Talisa V, Tyler B, Hotchkiss JR, Yende S, McVerry BJ, **Mayr FB**. Post-ICU Care Trajectories and Outcomes Among Veterans: Comparing Veterans Affairs and Community Hospital Discharges. *Chest*. 2026;169(5):1228-1239. PMID: 41110691.
8. Hahn Z, Naiditch H, Talisa V, Tyler B, Hotchkiss JR, McVerry BJ, Yende S, **Mayr FB**. Intensive Care Unit Admissions Purchased or Delivered by Veterans in the VA Health Care System. *JAMA Health Forum*. 2025;6(12):e255605. PMID: 41385207.
9. Naiditch H, Talisa VB, Magnani JW, Nouraie SM, Yende S, **Mayr FB**. Identifying racial inequalities in long-term outcomes among survivors of critical illness with sepsis in a US cohort: a retrospective cohort study. *BMJ Open*. 2025;15(11):e102801. PMID: 41290296.
10. Inman K, Chernus J, Lee M, Alder JK, Shah FA, **Mayr FB**, Dempsey T, Nouraie SM, Dela Cruz C, Ferreira VP, et al. Genetic Variation in the Alternative Complement Pathway Contributes to Individual Susceptibility to Bacteremia and Sepsis. *Crit Care Explor*. 2025;7(11):e1339. PMID: 41165296.
11. Talisa VB, Yende SP, Angus DC, Bellomo R, Chang CH, Cooper GF, Harrison DA, Higgins A, Kennedy JN, **Mayr FB**, et al. Relationship Between Phenotyping and Individualized Absolute Risk Differences in Sepsis: A Secondary Analysis of Two Approaches in Two Multicenter Trials. *Crit Care Explor*. 2025;7(10):e1332. PMID: 41098209.
12. Brunner-Ziegler S, Staudacher M, Schörgenhofer C, Strasser-Marsik C, Derhaschnig U, **Mayr FB**, Steiner S, Jilma B. A randomized placebo-controlled trial in healthy volunteers examining the effects of acetaminophen and NO-acetaminophen NCX 701 in human endotoxemia. *Sci Rep*. 2025;15(1):33612. PMID: 41023080.
13. Schnaubelt S, Kornfehl A, Eibensteiner F, Schriefl C, **Mayr FB**, Aigner P, Gatterbauer M, Girsa M, Grassmann D, Zajicek A, et al. Comprehensive pre- and in-hospital near-infrared-spectroscopy (NIRS) monitoring after return of spontaneous circulation predicts neurological outcome following out-of-hospital cardiac arrest: a prospective observational study and literature review. *Front Med (Lausanne)*. 2025;12:1590908. PMID: 40893906.
14. Mayes K, Talisa VB, Malito A, **Mayr FB**, Williams K, Char K, Wadas R, Lorenzi E, Viele K, Awdish R, et al. Corrigendum to "Design and methods of an adaptive trial to test comparative effectiveness of readmission reduction approaches following infection and sepsis hospitalizations (ACCOMPLISH)" [Contemp. Clinic. Trials Commun. 46 (2025) 101504]. *Contemp Clin Trials Commun*. 2025;46:101520. PMID: 40727928.
15. Mayes K, Talisa VB, Malito A, **Mayr FB**, Williams K, Char K, Wadas R, Lorenzi E, Viele K, Awdish R, et al. Design and methods of an adaptive trial to test comparative effectiveness of readmission reduction approaches following infection and sepsis hospitalizations (ACCOMPLISH). *Contemp Clin Trials Commun*. 2025;46:101504. PMID: 40642111.
16. Angus DC, Yende SP, Shah FA, Yealy DM, Protocolized Resuscitation in Sepsis Meta-Analysis (PRISM) Investigators. The authors reply. *Crit Care Med*. 2025;53(7):e1524-e1525. PMID: 40590651.
17. Derde L, Gordon AC, Mouncey PR, Al-Beidh F, Rowan KM, Nichol AD, Arabi YM, Annane D, Beane A, …, **Mayr FB**, et al. Tocilizumab, sarilumab and anakinra in critically ill patients with COVID-19: a randomised, controlled, open-label, adaptive platform trial. *Thorax*. 2025;80(8):530-539. PMID: 40360262.
18. Umberger RA, Cao X, Reynolds RB, Kilgannon AR, **Mayr FB**, Yende S. National Analysis of Preexisting Immunosuppressive Conditions and Infection-Related Readmissions Among Sepsis Survivors. *Dimens Crit Care Nurs*. 2025;44(1):48-57. PMID: 39570724.
19. Shah FA, Talisa VB, Chang CH, Triantafyllou S, Tang L, **Mayr FB**, Higgins AM, Peake SL, Mouncey P, Harrison DA, et al. Heterogeneity in the Effect of Early Goal-Directed Therapy for Septic Shock: A Secondary Analysis of Two Multicenter International Trials. *Crit Care Med*. 2025;53(1):e4-e14. PMID: 39440873.
20. **Mayr FB**, Angus DC. Three Decades of Sepsis in the United Kingdom: Tracing the Tides of Time. *Am J Respir Crit Care Med*. 2024;209(5):468-469. PMID: 38285007.
21. Butt AA, Yan P, Shaikh OS, Talisa VB, Omer SB, **Mayr FB**. Nirmatrelvir/Ritonavir Use and Hospitalizations or Death in a Previously Uninfected Nonhospitalized High-Risk Population With COVID-19: A Matched Cohort Study. *J Infect Dis*. 2024;229(1):147-154. PMID: 37711076.
22. Schott CK, Devore JA, Kelly MY, **Mayr FB**. Asynchronous training for ultrasound-guided peripheral IV placement among critical care nurses. *J Vasc Access*. 2024;25(3):883-891. PMID: 36474322.
23. Seymour CW, Urbanek KL, Nakayama A, Kennedy JN, Powell R, Robinson RAS, Kapp KL, Billiar TR, Vodovotz Y, …, **Mayr F**, et al. A Prospective Cohort Protocol for the Remnant Investigation in Sepsis Study. *Crit Care Explor*. 2023;5(11):e0974. PMID: 38304708.
24. REMAP-CAP Investigators, Hills TE, Lorenzi E, Berry LR, Shyamsundar M, Al-Beidh F, Annane D, Arabi Y, Aryal D, Au C, et al. Simvastatin in Critically Ill Patients with Covid-19. *N Engl J Med*. 2023;389(25):2341-2354. PMID: 37888913.
25. LOVIT-COVID Investigators, on behalf of the Canadian Critical Care Trials Group, and the REMAP-CAP Investigators, Adhikari NKJ, Hashmi M, Tirupakuzhi Vijayaraghavan BK, Haniffa R, Beane A, Webb SA, Angus DC, Gordon AC, Cook DJ, et al. Intravenous Vitamin C for Patients Hospitalized With COVID-19: Two Harmonized Randomized Clinical Trials. *JAMA*. 2023;330(18):1745-1759. PMID: 37877585.
26. Butt AA, Yan P, Shaikh OS, Omer SB, **Mayr FB**, Talisa VB. Molnupiravir Use and 30-Day Hospitalizations or Death in a Previously Uninfected Non-hospitalized High-risk Population With COVID-19. *J Infect Dis*. 2023;228(8):1033-1041. PMID: 37260359.
27. Writing Committee for the REMAP-CAP Investigators, Lawler PR, Derde LPG, van de Veerdonk FL, McVerry BJ, Huang DT, Berry LR, Lorenzi E, van Kimmenade R, Gommans F, et al. Effect of Angiotensin-Converting Enzyme Inhibitor and Angiotensin Receptor Blocker Initiation on Organ Support-Free Days in Patients Hospitalized With COVID-19: A Randomized Clinical Trial. *JAMA*. 2023;329(14):1183-1196. PMID: 37039790.
28. Wang TY, Wahed AS, Morris A, Kreuziger LB, Quigley JG, Lamas GA, Weissman AJ, Lopez-Sendon J, Knudson MM, Siegal DM, et al. Effect of Thromboprophylaxis on Clinical Outcomes After COVID-19 Hospitalization. *Ann Intern Med*. 2023;176(4):515-523. PMID: 36940444.
29. Writing Committee for the REMAP-CAP Investigators, Higgins AM, Berry LR, Lorenzi E, Murthy S, McQuilten Z, Mouncey PR, Al-Beidh F, Annane D, Arabi YM, et al. Long-term (180-Day) Outcomes in Critically Ill Patients With COVID-19 in the REMAP-CAP Randomized Clinical Trial. *JAMA*.

2023;329(1):39-51. PMID: 36525245.

30. Talisa VB, **Mayr FB**, Butt AA. Reply to Wirth et al. *Clin Infect Dis*. 2023;76(1):177-178. PMID: 36041003.
31. Castro AD, **Mayr FB**, Talisa VB, Shaikh OS, Omer SB, Yende S, Butt AA. Variation in Clinical Treatment and Outcomes by Race Among US Veterans Hospitalized With COVID-19. *JAMA Netw Open*. 2022;5(10):e2238507. PMID: 36282499.
32. **Mayr FB**, Talisa VB, Shaikh OS, Omer SB, Butt AA, Yende S. Comparative COVID-19 Vaccine Effectiveness Over Time in Veterans. *Open Forum Infect Dis*. 2022;9(7):ofac311. PMID: 35880233.
33. **Mayr FB**, Talisa VB, Castro AD, Shaikh OS, Omer SB, Butt AA. COVID-19 disease severity in US Veterans infected during Omicron and Delta variant predominant periods. *Nat Commun*. 2022;13(1):3647. PMID: 35752687.
34. Butt AA, Talisa VB, Shaikh OS, Omer SB, **Mayr FB**. Relative Vaccine Effectiveness of a Severe Acute Respiratory Syndrome Coronavirus 2 Messenger RNA Vaccine Booster Dose Against the Omicron Variant. *Clin Infect Dis*. 2022;75(12):2161-2168. PMID: 35511586.
35. REMAP-CAP Writing Committee for the REMAP-CAP Investigators, Bradbury CA, Lawler PR, Stanworth SJ, McVerry BJ, McQuilten Z, Higgins AM, Mouncey PR, Al-Beidh F, Rowan KM, et al. Effect of Antiplatelet Therapy on Survival and Organ Support-Free Days in Critically Ill Patients With COVID-19: A Randomized Clinical Trial. *JAMA*. 2022;327(13):1247-1259. PMID: 35315874.
36. Butt AA, Talisa VB, Yan P, Shaikh OS, Omer SB, **Mayr FB**. Vaccine Effectiveness of 3 Versus 2 Doses of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) mRNA Vaccines in a High-Risk National Population. *Clin Infect Dis*. 2022;75(1):e579-e584. PMID: 35245940.
37. **Mayr FB**, Talisa VB, Shaikh O, Yende S, Butt AA. Effectiveness of Homologous or Heterologous Covid-19 Boosters in Veterans. *N Engl J Med*. 2022;386(14):1375-1377. PMID: 35139265.
38. Butt AA, Talisa VB, Yan P, Shaikh OS, Omer SB, **Mayr FB**. Real-World Effectiveness of the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) mRNA Vaccines in Preventing Confirmed Infection in Patients on Chronic Hemodialysis. *Clin Infect Dis*. 2022;75(1):e617-e622. PMID: 35139175.
39. Schnaubelt S, **Mayr FB**, Losert H, Domanovits H, Sulzgruber P, Holzer M, Sterz F, Uray T. Very long-term survivors of in-hospital and out-of-hospital cardiac arrest show considerable impairment of daily life. *Resuscitation*. 2022;173:192-200. PMID: 35131405.
40. Butt AA, Yan P, Shaikh OS, **Mayr FB**, Omer SB. Rate and Risk Factors for Severe/Critical Disease Among Fully Vaccinated Persons With Breakthrough Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Infection in a High-Risk National Population. *Clin Infect Dis*. 2022;75(1):e849-e856. PMID: 34893812.
41. Writing Committee for the REMAP-CAP Investigators, Estcourt LJ, Turgeon AF, McQuilten ZK, McVerry BJ, Al-Beidh F, Annane D, Arabi YM, Arnold DM, Beane A, et al. Effect of Convalescent Plasma on Organ Support-Free Days in Critically Ill Patients With COVID-19: A Randomized Clinical Trial. *JAMA*. 2021;326(17):1690-1702. PMID: 34606578.
42. Butt AA, Yan P, Shaikh OS, **Mayr FB**. Outcomes among patients with breakthrough SARS-CoV-2 infection after vaccination in a high-risk national population. *EClinicalMedicine*. 2021;40:101117. PMID: 34476395.
43. REMAP-CAP Investigators, ACTIV-4a Investigators, ATTACC Investigators, Goligher EC, Bradbury CA, McVerry BJ, Lawler PR, Berger JS, Gong MN, Carrier M, et al. Therapeutic Anticoagulation with Heparin in Critically Ill Patients with Covid-19. *N Engl J Med*. 2021;385(9):777-789. PMID: 34351722.
44. ATTACC Investigators, ACTIV-4a Investigators, REMAP-CAP Investigators, Lawler PR, Goligher EC, Berger JS, Neal MD, McVerry BJ, Nicolau JC, Gong MN, et al. Therapeutic Anticoagulation with Heparin in Noncritically Ill Patients with Covid-19. *N Engl J Med*. 2021;385(9):790-802. PMID: 34351721.
45. Butt AA, Omer SB, Yan P, Shaikh OS, **Mayr FB**. SARS-CoV-2 Vaccine Effectiveness in a High-Risk National Population in a Real-World Setting. *Ann Intern Med*. 2021;174(10):1404-1408. PMID: 34280332.
46. Arabi YM, Gordon AC, Derde LPG, Nichol AD, Murthy S, Beidh FA, Annane D, Swaidan LA, Beane A, Beasley R, et al. Lopinavir-ritonavir and hydroxychloroquine for critically ill patients with COVID-19: REMAP-CAP randomized controlled trial. *Intensive Care Med*. 2021;47(8):867-886. PMID: 34251506.
47. **Mayr FB**, Prescott HC. Identifying Survivors of Sepsis at Risk for Adverse Cardiovascular Outcomes. *Am J Respir Crit Care Med*. 2021;204(5):500-501. PMID: 34139144.
48. Butt AA, Khan T, Yan P, Shaikh OS, Omer SB, **Mayr F**. Rate and risk factors for breakthrough SARS-CoV-2 infection after vaccination. *J Infect*. 2021;83(2):237-279. PMID: 34052241.
49. REMAP-CAP Investigators, Gordon AC, Mouncey PR, Al-Beidh F, Rowan KM, Nichol AD, Arabi YM, Annane D, Beane A, …, **Mayr FB**, et al. Interleukin-6 Receptor Antagonists in Critically Ill Patients with Covid-19. *N Engl J Med*. 2021;384(16):1491-1502. PMID: 33631065.
50. UPMC REMAP-COVID Group, on behalf of the REMAP-CAP Investigators. Implementation of the Randomized Embedded Multifactorial Adaptive Platform for COVID-19 (REMAP-COVID) trial in a US health system-lessons learned and recommendations. *Trials*. 2021;22(1):100. PMID: 33509275.
51. **Mayr FB**, Plowman JL, Blakowski S, Sell-Shemansky K, Young JM, Yende S. Feasibility of a Home-Based Palliative Care Intervention for Elderly Multimorbid Survivors of Critical Illness. *Am J Crit Care*. 2021;30(1):e12-e31. PMID: 33385209.
52. **Mayr FB**, Yende S. Size matters! Peripheral blood leukocyte telomere length and survival after critical illness. *Eur Respir J*. 2020;55(1). PMID: 31949102.
53. Hotchkiss RS, Colston E, Yende S, Crouser ED, Martin GS, Albertson T, Bartz RR, Brakenridge SC, Delano MJ, …, **Mayr FB**, et al. Immune checkpoint inhibition in sepsis: a Phase 1b randomized study to evaluate the safety, tolerability, pharmacokinetics, and pharmacodynamics of nivolumab.

Intensive Care Med. 2019;45(10):1360-1371. PMID: 31576433.

54. Hotchkiss RS, Yende S, Angus DC, Moldawer LL, Crouser E, Martin G, Coopersmith CM, Brakenridge S, **Mayr FB**, Park PK. The authors reply. *Crit Care Med*. 2019;47(9):e788-e789. PMID: 31415323.
55. Schriefl C, **Mayr FB**, Poppe M, Zajicek A, Nürnberger A, Clodi C, Herkner H, Sulzgruber P, Lobmeyr E, Schober A, et al. Time of out-of-hospital cardiac arrest is not associated with outcome in a metropolitan area: A multicenter cohort study. *Resuscitation*. 2019;142:61-68. PMID: 31326405.
56. Hotchkiss RS, Colston E, Yende S, Angus DC, Moldawer LL, Crouser ED, Martin GS, Coopersmith CM, Brakenridge S, **Mayr FB**, et al. Immune Checkpoint Inhibition in Sepsis: A Phase 1b Randomized, Placebo-Controlled, Single Ascending Dose Study of Antiprogrammed Cell Death-Ligand 1 Antibody (BMS-936559). *Crit Care Med*. 2019;47(5):632-642. PMID: 30747773.
57. Prout AJ, Talisa VB, Carcillo JA, **Mayr FB**, Angus DC, Seymour CW, Chang CH, Yende S. Children with Chronic Disease Bear the Highest Burden of Pediatric Sepsis. *J Pediatr*. 2018;199:194-199.e1. PMID: 29753542.
58. Jilma-Stohlawetz P, Kliegel T, Kantner-Schlifke I, Strasser-Marsik C, **Mayr FB**, Jilma B. Upregulation of cytokine mRNA in circulating leukocytes during human endotoxemia. *Eur Cytokine Netw*. 2017;28(1):19-26. PMID: 28840841.
59. **Mayr FB**, Talisa VB, Balakumar V, Chang CH, Fine M, Yende S. Proportion and Cost of Unplanned 30-Day Readmissions After Sepsis Compared With Other Medical Conditions. *JAMA*. 2017;317(5):530-531. PMID: 28114505.
60. **Mayr FB**, Yende S. Understanding the complex host response in sepsis: is diabetes the key?. *Crit Care*. 2016;20(1):321. PMID: 27729067.
61. Kopterides P, **Mayr FB**, Yende S. Understanding the sepsis mortality belt: time to buckle down!. *Ann Transl Med*. 2016;4(16):319. PMID: 27668239.
62. Uray T, **Mayr FB**, Fitzgibbon J, Rittenberger JC, Callaway CW, Drabek T, Fabio A, Angus DC, Kochanek PM, Dezfulian C. Socioeconomic factors associated with outcome after cardiac arrest in patients under the age of 65. *Resuscitation*. 2015;93:14-9. PMID: 26003812.
63. Uray T, Sterz F, Weiser C, Schreiber W, Spiel A, Schober A, Stratil P, **Mayr FB**. Quality of post arrest care does not differ by time of day at a specialized resuscitation center. *Medicine (Baltimore)*. 2015;94(14):e664. PMID: 25860211.
64. Uray T, **Mayr FB**, Stratil P, Aschauer S, Testori C, Sterz F, Haugk M. Prehospital surface cooling is safe and can reduce time to target temperature after cardiac arrest. *Resuscitation*. 2015;87:51-6. PMID: 25447355.
65. Derhaschnig U, Testori C, Riedmueller E, Hobl EL, **Mayr FB**, Jilma B. Decreased renal function in hypertensive emergencies. *J Hum Hypertens*. 2014;28(7):427-31. PMID: 24430711.
66. Wenisch JM, **Mayr FB**, Spiel AO, Radicioni M, Jilma B, Jilma-Stohlawetz P. Androgen deprivation decreases prostate specific antigen in the absence of tumor: implications for interpretation of PSA results. *Clin Chem Lab Med*. 2014;52(3):431-6. PMID: 24423580.
67. **Mayr FB**, Yende S, Angus DC. Epidemiology of severe sepsis. *Virulence*. 2014;5(1):4-11. PMID: 24335434.
68. Rella JM, Jilma B, Fabry A, Kaynar AM, **Mayr FB**. MMP-8 genotypes influence the inflammatory response in human endotoxemia. *Inflammation*. 2014;37(2):451-6. PMID: 24170307.
69. Wallmüller C, Domanovits H, **Mayr FB**, Laggner AN. Cardiac arrest in a 35-year-old pregnant woman with sarcoidosis. *Resuscitation*. 2012;83(6):e151-2. PMID: 22370006.
70. **Mayr FB**, Domanovits H, Laggner AN. Hypokalemic paralysis in a professional bodybuilder. *Am J Emerg Med*. 2012;30(7):1324.e5-8. PMID: 21871759.
71. Yende S, D'Angelo G, **Mayr F**, Kellum JA, Weissfeld L, Kaynar AM, Young T, Irani K, Angus DC, GenIMS Investigators. Elevated hemostasis markers after pneumonia increases one-year risk of all-cause and cardiovascular deaths. *PLoS One*. 2011;6(8):e22847. PMID: 21853050.
72. **Mayr FB**, Yende S, Linde-Zwirble WT, Peck-Palmer OM, Barnato AE, Weissfeld LA, Angus DC. Infection rate and acute organ dysfunction risk as explanations for racial differences in severe sepsis. *JAMA*. 2010;303(24):2495-503. PMID: 20571016.
73. **Mayr FB**, Knöbl P, Jilma B, Siller-Matula JM, Wagner PG, Schaub RG, Gilbert JC, Jilma-Stohlawetz P. The aptamer ARC1779 blocks von Willebrand factor-dependent platelet function in patients with thrombotic thrombocytopenic purpura ex vivo. *Transfusion*. 2010;50(5):1079-87. PMID: 20070617.
74. **Mayr FB**, Yende S, D'Angelo G, Barnato AE, Kellum JA, Weissfeld L, Yealy DM, Reade MC, Milbrandt EB, Angus DC. Do hospitals provide lower quality of care to black patients for pneumonia?. *Crit Care Med*. 2010;38(3):759-65. PMID: 20009756.
75. **Mayr FB**, Spiel AO, Leitner JM, Firbas C, Schnee J, Hilbert J, Derendorf H, Jilma B. Influence of the Duffy antigen on pharmacokinetics and pharmacodynamics of recombinant monocyte chemoattractant protein (MCP-1, CCL-2) in vivo. *Int J Immunopathol Pharmacol*. 2009;22(3):615-25. PMID: 19822078.
76. Spiel AO, **Mayr FB**, Ladani N, Wagner PG, Schaub RG, Gilbert JC, Jilma B. The aptamer ARC1779 is a potent and specific inhibitor of von Willebrand Factor mediated ex vivo platelet function in acute myocardial infarction. *Platelets*. 2009;20(5):334-40. PMID: 19637097.
77. Spiel AO, Kliegel A, Janata A, Uray T, **Mayr FB**, Laggner AN, Jilma B, Sterz F. Hemostasis in cardiac arrest patients treated with mild hypothermia initiated by cold fluids. *Resuscitation*. 2009;80(7):762-5. PMID: 19406552.
78. Reade MC, Yende S, D'Angelo G, Kong L, Kellum JA, Barnato AE, Milbrandt EB, Dooley C, **Mayr FB**, Weissfeld L, et al. Differences in immune response may explain lower survival among older men with pneumonia. *Crit Care Med*. 2009;37(5):1655-62. PMID: 19325487.
79. Spiel AO, Frossard M, **Mayr FB**, Kliegel A, Janata A, Uray T, Wandaller C, Sterz F, Jilma B. Pronounced platelet hyperfunction in patients with cardiac arrest achieving restoration of spontaneous circulation. *Crit Care Med*. 2009;37(3):975-9. PMID: 19237906.
80. **Mayr FB**, Spiel AO, Leitner JM, Firbas C, Jilma-Stohlawetz P, Chang JY, Key NS, Jilma B. Racial differences in endotoxin-induced tissue factor-

triggered coagulation. *J Thromb Haemost*. 2009;7(4):634-40. PMID: 19187081.

81. Leitner JM, **Mayr FB**, Spiel AO, Firbas C, Savulsky C, Mis R, Corrado ME, Jilma B. The pharmacokinetics and pharmacodynamics of a new sustained-release leuprolide acetate depot compared to market references. *Int J Clin Pharmacol Ther*. 2008;46(8):407-14. PMID: 18793582.
82. **Mayr FB**, Firbas C, Leitner JM, Spiel AO, Reiter RA, Beyer D, Meyer M, Wolff G, Jilma B. Effects of the pan-selectin antagonist bimosiamose (TBC1269) in experimental human endotoxemia. *Shock*. 2008;29(4):475-82. PMID: 18598003.
83. Spiel AO, **Mayr FB**, Leitner JM, Firbas C, Sieghart W, Jilma B. Simvastatin and rosuvastatin mobilize Endothelial Progenitor Cells but do not prevent their acute decrease during systemic inflammation. *Thromb Res*. 2008;123(1):108-13. PMID: 18433844.
84. **Mayr FB**, Spiel AO, Leitner JM, Firbas C, Kliegel T, Jilma-Stohlawetz P, Derendorf H, Jilma B. Duffy antigen modifies the chemokine response in human endotoxemia. *Crit Care Med*. 2008;36(1):159-65. PMID: 18007272.
85. **Mayr FB**, Spiel AO, Leitner JM, Firbas C, Sieghart W, Jilma B. Effects of low dose endotoxemia on endothelial progenitor cells in humans. *Atherosclerosis*. 2007;195(1):e202-6. PMID: 17490672.
86. Leitner JM, Jilma B, **Mayr FB**, Cardona F, Spiel AO, Firbas C, Rathgen K, Stähle H, Schühly U, Graefe-Mody EU. Pharmacokinetics and pharmacodynamics of the dual FII/FX inhibitor BIBT 986 in endotoxin-induced coagulation. *Clin Pharmacol Ther*. 2007;81(6):858-66. PMID: 17410124.
87. Leitner JM, **Mayr FB**, Firbas C, Spiel AO, Steinlechner B, Novellini R, Jilma B. Reparixin, a specific interleukin-8 inhibitor, has no effects on inflammation during endotoxemia. *Int J Immunopathol Pharmacol*. 2007;20(1):25-36. PMID: 17346425.
88. **Mayr FB**, Spiel AO, Leitner JM, Firbas C, Kliegel T, Jilma B. Ethnic differences in plasma levels of interleukin-8 (IL-8) and granulocyte colony stimulating factor (G-CSF). *Transl Res*. 2007;149(1):10-4. PMID: 17196517.
89. **Mayr FB**, Jilma B. Coagulation interventions in experimental human endotoxemia. *Transl Res*. 2006;148(5):263-71. PMID: 17145572.
90. **Mayr FB**, Jilma B. Current developments in anti-platelet therapy. *Wien Med Wochenschr*. 2006;156(17-18):472-80. PMID: 17041802.
91. Boos CJ, **Mayr FB**, Lip GY, Jilma B. Endotoxemia enhances circulating endothelial cells in humans. *J Thromb Haemost*. 2006;4(11):2509-11. PMID: 16907929.
92. Spiel AO, **Mayr FB**. NO-synthase inhibition in sepsis. *Thromb Haemost*. 2006;95(4):591-2. PMID: 16601826.
93. Spiel AO, **Mayr FB**, Firbas C, Quehenberger P, Jilma B. Validation of rotation thrombelastography in a model of systemic activation of fibrinolysis and coagulation in humans. *J Thromb Haemost*. 2006;4(2):411-6. PMID: 16420574.
94. Leitner JM, Firbas C, **Mayr FB**, Reiter RA, Steinlechner B, Jilma B. Recombinant human antithrombin inhibits thrombin formation and interleukin 6 release in human endotoxemia. *Clin Pharmacol Ther*. 2006;79(1):23-34. PMID: 16413239.
95. Spiel AO, Firbas C, **Mayr FB**, Leitner JM, Schmidt B, Knöbl P, Varadi K, Jilma B. The effects of supra-normal protein C levels on markers of coagulation, fibrinolysis and inflammation in a human model of endotoxemia. *Thromb Haemost*. 2005;94(6):1148-55. PMID: 16411386.
96. **Mayr FB**, Spiel A, Leitner J, Marsik C, Germann P, Ullrich R, Wagner O, Jilma B. Effects of carbon monoxide inhalation during experimental endotoxemia in humans. *Am J Respir Crit Care Med*. 2005;171(4):354-60. PMID: 15557136.
97. Marsik C, **Mayr F**, Cardona F, Schaller G, Wagner OF, Jilma B. Endotoxin down-modulates P-selectin glycoprotein ligand-1 (PSGL-1, CD162) on neutrophils in humans. *J Clin Immunol*. 2004;24(1):62-5. PMID: 14997035.
98. Endler G, Marsik C, Joukhadar C, Marculescu R, **Mayr F**, Mannhalter C, Wagner OF, Jilma B. The interleukin-6 G(-174)C promoter polymorphism does not determine plasma interleukin-6 concentrations in experimental endotoxemia in humans. *Clin Chem*. 2004;50(1):195-200. PMID: 14709647.
99. Marsik C, Halama T, Cardona F, Wlassits W, **Mayr F**, Pleiner J, Jilma B. Regulation of Fas (APO-1, CD95) and Fas ligand expression in leukocytes during systemic inflammation in humans. *Shock*. 2003;20(6):493-6. PMID: 14625471.
100. Reiter R, Derhaschnig U, Spiel A, Keen P, Cardona F, **Mayr F**, Jilma B. Regulation of protease-activated receptor 1 (PAR1) on platelets and responsiveness to thrombin receptor activating peptide (TRAP) during systemic inflammation in humans. *Thromb Haemost*. 2003;90(5):898-903. PMID: 14597986.
101. Reiter RA, **Mayr F**, Blazicek H, Galehr E, Jilma-Stohlawetz P, Domanovits H, Jilma B. Desmopressin antagonizes the in vitro platelet dysfunction induced by GPIIb/IIIa inhibitors and aspirin. *Blood*. 2003;102(13):4594-9. PMID: 12920042.
102. Marsik C, **Mayr F**, Cardona F, Derhaschnig U, Wagner OF, Jilma B. Endotoxaemia modulates Toll-like receptors on leucocytes in humans. *Br J Haematol*. 2003;121(4):653-6. PMID: 12752109.
103. Jilma B, Marsik C, **Mayr F**, Graninger MT, Taylor FB, Ribel MC, Erhardtsen E, Handler S, Eichler HG. Pharmacodynamics of active site-inhibited factor VIIa in endotoxin-induced coagulation in humans. *Clin Pharmacol Ther*. 2002;72(4):403-10. PMID: 12386642.

Teaching

Current

Dept. of Anesthesiology and Perioperative Medicine, University of Pittsburgh

Adaptive Trial Design Lecture — Anesthesiology Professional Practice (APP) Rotation *2023–present*

PGY-1 anesthesiology residents; ~20 residents annually

VA Pittsburgh Healthcare System (4E ICU)
Clinical Bedside Teaching — ICU Rounds and Night Shifts *2016–present*
Internal medicine residents; 2-3 nights/month, 1 week rounding/year

UPMC Presbyterian/Montefiore (MUH TICU)
Clinical Bedside Teaching — Transplant ICU *2016–present*
CCM fellows; 2-3 nights/month, 1 week service every other month

UPMC and VA Pittsburgh
M&M Conferences and Journal Club *2016–present*
CCM fellows; ongoing throughout academic year

University of Pittsburgh
CCM 5430 Medical Student Procedure Workshop *2017–present*
2nd-year medical students; 10-15 students per session

Prior (Medical University of Vienna)

Medical University of Vienna
Science and Medicine (SSM 1): Systemic Inflammation *2003–2004*
1st-year medical students, 30 students

Medical University of Vienna
Resuscitation and Emergency Management *2004–2006*
3rd and 4th-year medical students, 10-30 students

Medical University of Vienna
Introduction to the Physical Exam *2005*
1st-year medical students, 10 students

Medical University of Vienna
SSM 1: Evidence-Based Sepsis Therapy *2005–2006*
1st-year medical students, 30 students

Medical University of Vienna
Resuscitation Simulation Exercises I and II *2005–2007*
2nd and 3rd-year medical students, 10-30 students

Medical University of Vienna
Course in Clinical Trial Design *2011*
4th-year medical students, 30 students

Medical University of Vienna
Case-Based Learning (CBL) *2011*
2nd-year medical students, 10 students

Graduate Student Supervision

Xinhui Ran *Dept. Biostatistics, University of Pittsburgh*
MSc Thesis Committee Member / Essay Reader *2019*

Ruishen Lyu *Dept. Biostatistics, University of Pittsburgh*
MSc Thesis Committee Member / Essay Reader *2020*

Mentoring

Primary Mentor
Haim Naiditch, MD MHS (Pulmonary/CCM Fellow) *2022–present*
F32 MD019534 NIH Grant Awardee (2024)

Primary Mentor
Martha Brucato, MD PhD (CCM Fellow, Research Track) *2023–2024*

Primary Mentor
Alexander Castro, MD (Medical Student) *2020–2023*
ATS Minority Trainee Development Scholarship (2021); now Internal Medicine Resident

Secondary Mentor
Yang Ou, PhD (Graduate Student Researcher) *2020–2023*
Funded by K23 GM132688

Primary Mentor
Joleene Young, CRNP *2020–present*
Selected for VHA QUERI Leading Healthcare Improvement Program

Mentor
Chukwudi A. Onyemekwu, DO (Critical Care Medicine) *2026–present*
VA CDA-2 (IK2) application: Kynurenine Pathway Sensitization as a Mediator of Sepsis-Associated Delirium in Veterans with Chronic TBI and PTSD; guidance on VA cohort infrastructure and causal mediation design

Co-Sponsor
Jooseob Lee, MD (Critical Care Medicine) *2026–present*
NIH F32 application: corticosteroid comparative effectiveness in severe pneumonia (target trial emulation in VA data)

Invited Presentations

University of Washington *Seattle, WA*
"Beyond the Brink" — Medicine Grand Rounds *April 3, 2026*

posit::conf(2026) *Houston, TX*
ICU Quality Dashboards — Invited Presentation *September 14–16, 2026*

UPMC McKeesport *McKeesport, PA*
Grand Rounds (scheduled) *April 6, 2027*

Professional Memberships

Society of Critical Care Medicine (SCCM)
2014–present

American Thoracic Society (ATS)
2018–present

American Medical Association (AMA)
2015–present

International Society for Rapid Response Systems
2020–present

International Forum for Acute Care Trialists
2023–present

Editorial Activities

Editorial Boards

PLOS One
2018–present

Trends in Anesthesia and Critical Care
2021–present

Frontiers in Medicine
2023–present

Peer Review

Ad hoc reviewer: New England Journal of Medicine, JAMA, JAMA Network Open, Nature, Annals of Internal Medicine, BMJ, Critical Care Medicine, American Journal of Respiratory and Critical Care Medicine, Annals of the American Thoracic Society, Chest, Critical Care, BMJ Open

Grant Review

Department of Defense, FY24 Military Health System Research Award

2024

European Society of Intensive Care Medicine Research Award Program

2022

University of Pittsburgh CTSI Trans-Disciplinary Collaboration Pilot

2021–present

VA Center for Innovation, Kidney Disease Concept Paper Review

2017

Service and Leadership

National and International

REMAP-CAP Investigators
Deputy Chair and Medical Monitor, Immunomodulatory Domain Working Group — *2020–present*

REMAP-COVID Trial
Member, US Regional Management Committee — *2020–present*

REMAP-CAP Investigators
Investigator, Influenza Domain Working Group — *2020–present*

Baxter Healthcare
Member, Racial Disparities in Critical Illness Advisory Group — *2022–present*

International Forum for Acute Care Trialists
Member — *2023–present*

VA Pittsburgh Healthcare System

Director, Post-Acute Recovery Center (PARC)

2021–present

Chairman, CPR Committee

2018–present

Member, Critical Care Steering Committee

2016–present

Member, Sepsis Working Group

2023–present

Member, Sepsis Review Committee

2024–present

Member, Aging at Home Working Group

2023–present

University

CCM Adult MCCTP Fellowship Recruitment Committee

2018–present

CCM Adult MCCTP Clinical Competency Committee

2018–present

Research Interests

Innovative Clinical Trial Design in Acute Care — Platform trials (REMAP-CAP), adaptive randomization, Bayesian methods, pragmatic trial implementation in learning health systems

Precision Medicine After Critical Illness — Predictive modeling for post-ICU adverse outcomes, heterogeneity of treatment effect, causal inference methods, racial and socioeconomic disparities in acute care processes and outcomes

Biology of Recovery and Accelerated Aging — Stress-induced cellular senescence, inflammaging after critical illness, intersection of ICU survivorship and longevity research, biomarkers of biological age

Clinical Informatics and Implementation Science — EHR-embedded predictive models (sepsis, readmission), ICU quality dashboards, remote patient monitoring for post-ICU care, human-centered design for clinical decision support