CURRICULUM VITAE

MATTHEW G. BLANGO, PhD

Address

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Education

PhD 2012-Microbiology & Immunology, Department of Pathology, University of Utah, Salt Lake City, Utah

B.A. 2006-Biology with a specialization in Biochemistry & Molecular Biology, Boston University, Boston, Massachusetts

Positions

2020-Present **Independent Junior Group Leader** (RNA Biology of Fungal Infections), Leibniz Institute for Natural Product Research and Infection Biology: Hans Knöll Institute, Jena, Germany.

2016-2020 **Scientific Co-worker** (Postdoctoral Fellow, Small-Group Leader), Laboratory of Axel Brakhage PhD, Department of Molecular and Applied Microbiology, Leibniz Institute for Natural Product Research and Infection Biology: Hans Knöll Institute, Jena, Germany.

2012-2016 **Postdoctoral Fellow**, Laboratory of Brenda L. Bass PhD, Biochemistry Department, University of Utah, Salt Lake City, UT.
Second Mentor (for Postdoc Guidance): Nels Elde, PhD; Department of Human Genetics

2006-2012 **Graduate Student**, Laboratory of Matthew A. Mulvey PhD, Pathology Department, University of Utah, Salt Lake City, UT.

2004-2006 **Undergraduate Researcher**, Laboratory of Caroline A. Genco PhD, Department of Medicine, Section of Infectious Disease, Boston University, Boston, MA.

Research Grant / Travel Support

2020 Federal Ministry of Education and Research (BMBF) – Project FKZ 01K12012 "RFIN – RNA Biologie von Pilzinfektionen" - 1,970,090.27€

2015 Travel Scholarship for Keystone Mechanisms of Pro-Inflammatory Diseases Symposia

2014-2015 **NIAID T32 AI055434** Microbial Pathogenesis Training Grant Postdoc Trainee

2010-2012 **NIAID T32 AI055434** Microbial Pathogenesis Training Grant Graduate Trainee

Publications

1. Brakhage AA*, Zimmermann AK, Rivieccio F, Visser C, **Blango MG***. Host-derived extracellular vesicles for antimicrobial defense. microLife 2021, **Accepted**.

2. Jia L, Krüger T, **Blango MG**, von Eggeling F, Kniemeyer O, Brakhage AA. Biotinylated surfome profiling identifies potential biomarkers for diagnosis and therapy of *Aspergillus fumigatus* infection. mSphere 2020, doi: 10.1128/mSphere.00535-20

3. Hassan MIA, Kruse JM, Krüger T, Dahse HM, Cseresnyés Z, **Blango MG**, Slevogt H, Hörhold F, Ast V, König R, Figge MT, Kniemeyer O, Brakhage AA, Voigt K. Functional surface proteomic profiling reveals the host heat-shock protein A8 as a mediator of *Lichtheimia corymbifera* recognition by murine alveolar macrophages. Environmental Microbiology 2020, doi: 10.1111/1462-2920.15140

4. **Blango MG**, Pschibul A, Rivieccio F, Krüger T, Muhammad R, Jia L, Zheng T, Goldmann M, Votersen V, Li J, Panagiotou G, Kniemeyer O, Brakhage AA. Dynamic Surface Proteomes of Allergenic Fungal Conidia. Journal of Proteome Research 2020, doi: 10.1021/acs.jproteome.0c00013

5. Shopova IA, Belyaev I, Dasari P, Jahreis S, Stroe MC, Cseresnyés Z, Zimmermann AK, Medyukhina A, Svensson CM, Krüger T, Szeifert V, Nietzsche S, Conrad T, **Blango MG**, Kniemeyer O, von Lilienfeld-Toal M, Zipfel PF, Ligeti E, Figge MT, Brakhage AA. Human neutrophils produce antifungal extracellular vesicles against *Aspergillus fumigatus*. mBio 2020, doi: 10.1128/mBio.00596-20

6. **Blango MG***, Kniemeyer O, Brakhage AA. Conidial surface proteins at the interface of fungal infections. PLOS Pathogens, 2019, doi: 10.1371/journal.ppat.1007939 * = *corresponding author*

7. Bacher P, Hohnstein T, Beerbaum E, Röcker M, **Blango MG**, Kaufmann S, Röhmel J, Eschenhagen P, Grehn C, Seidel K, Rickerts V, Lozza L, Stervbo U, Nienen M, Babel N, Milleck J, Assenmacher M, Cornely OA, Ziegler M, Wisplinghoff H, Heine G, Worm M, Siegmund B, Maul J, Creutz P, Tabeling C, Ruwwe-Glösenkamp, Sander LE, Knosalla C, Brunke S, Hube B, Kniemeyer O, Brakhage AA, Schwarz C, Scheffold A. Human Anti-fungal Th17 Immunity and Pathology Rely on Cross-Reactivity against *Candida albicans*. Cell 2019, doi: 10.1016/j.cell.2019.01.041

8. Voltersen V*, **Blango MG***, Herrman S, Schmidt F, Heinekamp T, Strassburger M, Krueger T, Bacher P, Lother J, Weiss E, Huenniger K, Liu H, Hortschansky P, Scheffold A, Loeffler J, Krappmann S, Nietzsche S, Kurzai O, Einsele H, Kniemeyer O, Filler SG, Reichard U, Brakhage AA. Proteome Analysis reveals the Conidial Surface Protein CcpA Essential for Virulence of the Pathogenic Fungus *Aspergillus fumigatus*. mBio 2018, doi: 10.1128/mBio.01557-18 ** = equal contribution*

9. Žukovskaja O, Kloß S, **Blango MG**, Ryabchykov O, Kniemeyer O, Brakhage AB, Bocklitz T, Cialla-May D, Weber K, Popp J. UV-Raman spectroscopic identification of fungal spores important for respiratory diseases. Analytical Chemistry 2018, doi: 10.1021/acs.analchem.8b01038

10. Erman A, Križan Hergouth V, **Blango MG**, Kerec Kos M, Mulvey MA, Veranic P. Repeated treatments with chitosan in combination with antibiotics completely eradicate uropathogenic *Escherichia coli* from infected mouse urinary bladders. Journal of Infectious Disease 2017, doi: 10.1093/infdis/jix023

11. **Blango MG,** Bass BL. Identification of the long, edited dsRNAome of LPS-stimulated immune cells. Genome Research 2016, doi: 10.1101/gr.203992.116

12. **Blango MG**, Ott EM, Erman A, Veranic P, Mulvey MA. Forced Resurgence and targeting of Uropathogenic *Escherichia coli* Reservoirs. PLOS ONE 2014, doi: 10.1371/journal.pone.0093327

13. Erman A, Lakota K, Mrak-Poljsak K, **Blango MG**, Krizan-Hergouth V, Mulvey MA, Sodin-Semrl S, Veranic P. Uropathogenic Escherichia coli Induces Serum Amyloid A in Mice following Urinary Tract and Systemic Inoculation. PLOS ONE 2012, doi: 10.1371/journal.pone.0032933

14. **Blango MG**, Mulvey MA. Persistence of Uropathogenic *Escherichia coli* in the Face of Multiple Antibiotics. Antimicrobial Agents and Chemotherapy 2010, doi: 10.1128/AAC.00014-10

15. **Blango MG**. Mulvey MA. Bacterial landlines: contact-dependent signaling in bacterial populations. Current Opinion in Microbiology 2009, doi: 10.1016/j.mib.2009.01.011

Preprints

1. **Blango MG***, Fleming BA*, Kincannon WM, Tran A, Lewis AJ, Russell CW, Zhou Q, Baird LM, Brannon JR, Beebout CJ, Bandarian V, Hadjifrangiskou M, Howard MT, Mulvey MA. Balanced Input from the tRNA Prenyltransferase MiaA Controls the Stress Resistance and Virulence Potential of Extraintestinal Pathogenic *Escherichia coli*. bioRxiv 2021, doi: 10.1101/2021.02.02.429414 * *= equal contribution*

Selected Talks & Invited Seminars

2021 **Medical Mycology Trainee Seminar Series**, virtual event
Invited Seminar entitled "Laying the foundation for RNA-based therapeutics against human fungal pathogens."
Link = https://www.youtube.com/watch?v=gWAbQ6fxeyo

2020 **European Conference on Fungal Genetics, Rome, Italy**
Short Talk & Flash Talk in "Animal - Fungi Interactions" section: *Aspergillus fumigatus* elicits host-derived extracellular vesicles upon infection (poster presented in tandem)

2018 **Clemson University - Department of Biological Sciences**, Clemson, SC
Invited Seminar entitled "Host-fungal pathogenesis in *A. fumigatus* is mediated by both close contact and long-range signaling"

2018 **7th International Conference on Microbial Communication for Young Scientists: MiCom 2018**, Jena, Germany
Invited Workshop Seminar entitled "How to Apply for Grants"

2018 **8th Advances Against Aspergillosis**, Lisbon, Portugal
Short Talk in "*Aspergillus*: Entering the Host and Beyond" section: Insight into the surface proteome of *A. fumigatus* through comparative analysis with multiple allergy-inducing fungi (poster presented in tandem)

2017 **Microbiology and Infection – 5th Joint Conference of the DGHM & VAAM**, Würzburg, Germany
Short Talk in "Fungi, in silico!" section: Surface-exposed Proteome of the Opportunistic Pathogen *Aspergillus fumigatus*

2015 **Keystone Conference on Mechanisms of Pro-Inflammatory Diseases**, Squaw Valley, CA
Short Talk in "Sterile Nucleic Acid Sensing" section: Identification of Hyper-Edited, Immune-Relevant RNA in Activated Macrophages (poster presented in tandem)

Selected Poster Presentations

2019 **RNA 2019 | RNA Society,** Krakow, Poland

Poster: *Aspergillus fumigatus* elicits host-derived extracellular vesicles during infection

2014 **Keystone Conference on Macrophages in Human Diseases**, Santa Fe, NM
Poster: Dynamics of dsRNA during the Macrophage LPS Response

2011 **Microbial Pathogenesis & Host Response**, Cold Spring Harbor, NY
Poster: Balanced Input from the tRNA prenyltransferase MiaA Regulates the Virulence Potential of UPEC

2011 **Molecular Genetics of Bacteria & Phage**, Madison, WI
Poster: Balanced Input from the tRNA prenyltransferase MiaA Regulates the Virulence Potential of UPEC

2011 **ASM Conference on Regulating with RNA in Bacteria**, San Juan, Puerto Rico
Poster: MiaA Regulates UPEC Pathogenesis

2010 **Banff Conference on Infectious Diseases**, Banff, Alberta, Canada
Poster: Monkeying Around the Bladder: Persistence of UPEC in the Urinary Tract

2009 **FASEB Research Conference on Host-Pathogen Interactions**, Snowmass, CO
Poster: Hard to Kill: Uropathogenic *Escherichia coli* Persist within the Urinary Tract Regardless of Antibiotics Treatment

Teaching Experience

2021 Master's in Microbiology, Friedrich Schiller University Jena, MMB009: Guest Lecture on Transcription

2017-2019 Master's in Microbiology, Friedrich Schiller University Jena, MMB2.10: Section Proteomics

2009 Medical Microbiology Teaching Assistant, University of Utah

Committees / Societies

2019-2020 RNA Society – Postdoc Member

2015 Research Administration Training Series Certification on Research Education

2014-2016 American Society of Microbiology – Postdoc Member

2013-2014 Utah Life Sciences Postdoc Organization Chair

2013 Biochemistry Department Student House Staff Advisory Committee Student Representative

2008-2010 Molecular Biology Program Steering Committee Student Representative

2008 Molecular Biology Program Recruiting Committee Chair

2008 Molecular Biology Program External Program Review Student Representative

Selected Leadership Roles

2015 Participant in ASBMB 50-State Challenge to lobby U.S. Congress for increased NIH/NSF funding. Met with Utah Congressman Christ Stewart and Legislative Correspondent, Stuart Portman, from the office Utah Senator Orrin Hatch.

2014 Presenter in American Fork High School Science, Technology, Engineering, and Math (STEM) Career Day

2014 Participant in ASBMB 50-State Challenge to lobby U.S. Congress for increased NIH/NSF funding. Met with Utah Congressman Chris Stewart and Health Policy Advisor, Katie Simeon, from Utah Senator Orrin Hatch's office.

2013-2016 Volunteer for Huntsman Hometown Heroes program, which raises money for cancer research through endurance sport events and fundraising.