Michael Ibba

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POSITIONS AND EMPLOYMENT

2017 - present	*Associate Director*, Infectious Diseases Institute, Ohio State University, Columbus, Ohio
2013 - present	*Chair*, Department of Microbiology, Ohio State University, Columbus, Ohio
2011 - present	*Co-Director,* NIH Cellular, Molecular, and Biochemical sciences training program
2012 - 2013	*Director*, Biochemistry Graduate Program, Ohio State University, Columbus, Ohio
2010 - present	*Professor,* Department of Microbiology, Ohio State University, Columbus, Ohio
2006 – 2010	*Associate Professor,* Department of Microbiology, Ohio State University, Columbus, Ohio
2001 – 2006	*Assistant Professor,* Department of Microbiology, Ohio State University, Columbus, Ohio
1999 – 2001	*Associate Research Professor*, Panum Institute, University of Copenhagen, Denmark

EDUCATION AND TRAINING

1995 – 1998	*Associate Research Scientist*, Department of Molecular Biophysics and Biochemistry, Yale University. Adviser Professor Dieter Söll.
1993 – 1994	*Postdoctoral Research Assistant*, Microbiology Institute, Swiss Federal Institute of Technology, Switzerland. Adviser Professor Hauke Hennecke.
1990 – 1993	*Postdoctoral Research Fellow*, Department of Biotechnology, Ciba-Geigy AG, Switzerland. Adviser Dr. Martin Küenzi.
1990	*Doctor of Philosophy*, Department of Biochemistry and Applied Molecular Biology, University of Manchester, United Kingdom. Thesis: "The development of an anaerobic acetogenic continuous fermentation process". Supervisor Dr. G.H. Fynn.
1986	*Bachelor of Science,* Imperial College, University of London, London, UK. Degree: Biochemistry, B.Sc.(Hons) 2(I), ARCS.

DISTINCTIONS

2017	College of Arts and Sciences Diversity Enhancement Faculty Award
2015	American Society for Microbiology Distinguished Lecturer
2014	Chair, *2014 Gordon Research Conference on Microbial Stress Responses,* Mt. Holyoke, MA
2013	Fellow, *American Academy of Microbiology*
2013	*American Society for Microbiology/NSF-LINK Travel Award*
2012	Fellow, *American Association for the Advancement of Science*
2012	Chair, *24th tRNA Conference*. Olmué, Chile.
2010	Honorary Professor in Gene Expression and Translation, Faculty of Health Sciences, University of Copenhagen.
2009	Chair, *American Society for Microbiology 109th Annual General Meeting* colloquial session "Non-canonical Roles of tRNAs: Protein Biosynthesis and Beyond".
2008	Co-Chair, *AARS 2008,* Grenoble, France.
2007	Chair, *American Society for Microbiology 107th Annual General Meeting* colloquial session "Quality Control in Microbial Protein Synthesis".
2006	Scientific Committee member and session chair, *AARS 2006*, San Diego, CA.
2005	Session co-chair and organizer, *21st International tRNA Workshop*. Bangalore, India.

2005	Co-Chair of the organizing committee, *40 Years of Exploring tRNA*, New Haven, CT.
2005	College of Biological Sciences Dean's Award for Classroom teaching.
2003	Co-chair, *American Society for Microbiology 103rd Annual General Meeting* colloquial session "Expanding the Genetic Code".
2001 – 2005	Adjunct scientist, The State Serum Institute, Copenhagen, Denmark.
2001 – 2003	Member and contributor, Journal Club Panel, *Trends in Biochemical Sciences*.
2001 – 2005	Editor (with C. Francklyn and S. Cusack), "The Aminoacyl-tRNA Synthetases". Landes Bioscience. Published 2005.
1999 – 2001	Alfred Benzon Foundation Investigator Award**.** Panum Institute, University of Copenhagen, Denmark. Competitive award (twice renewed) providing full salary support.
1998	Member of the Scientific Committee and Session chair, EMBO Workshop on Aminoacyl-tRNA Synthetases, Mittelwihr, France.
1994	EMBO Fellow**.** Center for Protein Engineering, MRC Center, Cambridge, UK. 3 month stay in the Laboratory of Professor Sir Alan Fersht.
1990	Awarded a Royal Society Postdoctoral Fellowship and a European Commission Postdoctoral Fellowship (both declined).
1986 – 1990	Technology Transfer Fellow. Graduate student fellowship sponsored by the Water Research Council, United Kingdom.

PROFESSIONAL SERVICE

Grant reviewing

2011 –	**Member,** National Science Foundation MCB Genetic Mechanisms Panel.
2010 - 2014	**Member**, National Institutes of Health Molecular Genetics A Study Section.
2008 – 2009	**Member**, American Heart Association Molecular Biology Peer Review Group (Region 1)
2007	Ad hoc reviewer, NASA Astrobiology Program.
2006 –	Ad hoc member, NIH IDM-H, MIRA, MGA, MGC and PCMB Study Sections.
2004 – 2010	**Member,** National Science Foundation Prokaryotic Molecular and Cellular Biology Panel.
2003	Ad hoc reviewer, Whitehead Fellowship Committee, New York University.
2003	Ad hoc reviewer, Israel Science Foundation.
2003 – 2004	Ad hoc reviewer, National Institutes of Health.
2001	Ad hoc reviewer, National Research Council, COBASE Program.
2001	Ad hoc reviewer, John Simon Guggenheim Memorial Foundation.
2000 – present	Ad hoc reviewer, National Science Foundation.
1999	Ad hoc reviewer, Department of Energy, Division of Energy Biosciences.
1999 – 2003	Ad hoc reviewer, Department of the Army, Biological Sciences Division.

Editorships and service as a reviewer for journals

2007 – present	Guest editor:	*eLife*, *IJMS*, *Methods*, *PLoS Genetics*, *PNAS*.
2005 –	Editorial board member:	*Archaea* (2009 -) *Biomolecules* (2014 -) *Eurekah Bioscience* (2005 - 2006) *FEBS Letters* (2008 -) *IJMS* (2015 - 2016) *Journal of Biological Chemistry* (2009 – 2014; 2017-2022) *Molecular and Cellular Biology* (2015 -)

ADMINISTRATIVE SERVICE

Departmental

2013 - present **Chair, Department of Microbiology.** Notable accomplishments to date include:

- Recruitment from Arizona of two established "rising stars" in microbial genomics and environmental microbiology.
- Development of a strategic plan that secured funding from the Provost's office for two new additional faculty lines in microbial systems biology.
- Extensive overhaul of the Department's staff structure including revision of position descriptions and supervisory hierarchy.
- Successful retention of a member of the National Academy of Sciences.
- Secured funding from the College of Arts and Sciences to support expanded undergraduate course offerings in immunology and environmental microbiology.

2012 – 2013 **Chair**, Promotion and Tenure Committee.

2006 – 2010 **Chair,** Microbiology Graduate Studies Committee**.** This included a complete overhaul of the Microbiology Graduate Program.

2005 – 2007 **Founder, Organizer and Chair**. Department of Microbiology Annual Symposium.

2008 Microbiology Chair Search Committee.

2007 Unit Review Committee.

2002, 2009 Faculty Search Committee.

College and University

2017 - present **Founder & Director,** *Destination OSU,* research program for community college students.

2016 - present **Advocate and Facilitator,** *Ohio State Advocate FORWARD Program* for gender equity

2015 - 2016 **Facilitator**, *Searching for Excellence* diversity workshops, Office of Diversity and Inclusion.

2015 - 2016 **Co-Director**, *Business Fundamentals for Science* Executive Education Program.

2012 - 2013 **Director**, Biochemistry Graduate Program, Ohio State University, Columbus, Ohio

2011 - present **Co-Director and PI**, NIH Cellular, Molecular, and Biochemical Sciences training program. I am one of two founding PIs for this NIGMS-funded T32, which was awarded in 2011.

2010 – 2012 **Chair,** Joint OSBP/MCDB Seminar Committee

2011 - 2012 NMS Divisional Promotion and Tenure panel, College of Arts and Sciences

2010 - 2015 Program Council, Life Sciences Steering Committee

2009 – 2010 Public Health Preparedness for Infectious Diseases Steering committee.

2008 – 2009 Graduate School Task Force on the Life Sciences.

2007 – 2009 Council on Academic Affairs, Faculty Council member.

2006 – present OSU Institute of Mitochondrial Biology Steering Committee.

2004 – present OSU Center for RNA Biology, Steering committee member.

2004 – 2007 OSBP Recruitment Committee.

2004 – 2005 BioSci Day Participant. Presented the Microbiology program to prospective students.

2002 – 2009 OSBP Seminar Committee. Select and host external speakers for seminar series.

2001 – 2002 OSBP Student Seminar Committee. Instructor for upper class graduate student seminar.

Other service

2013 - present *American Society for Microbiology* Committee on Graduate and Postdoctoral Education. Instructor for webinar and in person workshops on grant writing.

2013 **Chair**, *RNA Society* Nominating Committee.

2010 - present Scientific Advisory Board, CNRS, Strasbourg, France.

2008 External Review Committee, CNRS, Palaiseau, France.

2004 – present Faculty trainer, Chemistry-Biology Interface NIH T32 training grant.

2004 – 2005 OSU Honors Day and National Merit Scholar Lunches, Faculty participant.

PRESENTATIONS (since joining OSU in 2001)

Invited presentations at scientific meetings

2017 IUBMB Symposium on Aminoacyl-tRNA Synthetases, Clearwater, FL (speaker, invited)
2017 Ohio Branch ASM meeting, Westerville, OH (keynote speaker)
2017 Gordon Research Conference on Translation in Health & Disease, Galveston, TX (speaker)
2016 Virginia Branch ASM meeting, Roanoke, VA (keynote speaker)
2016 North Central Branch ASM meeting in Ames, IA (keynote speaker)
2016 tRNA 2016, South Korea (speaker)
2016 Gordon Research Conference on Microbial Stress Responses, Mt. Holyoke, MA (speaker)
2015 AARS 2015, Barcelona, Spain (speaker and session chair)
2015 2nd Midlands Molecular Microbiology Meeting, Nottingham, UK (Keynote speaker)
2015 ASM Kadner Institute, Washington, DC (speaker and facilitator)
2015 Gordon Research Conference on Translation Machinery in Health & Disease, Ventura, CA (speaker)
2014 35th Chilean Congress of Microbiology, La Serena, Chile (speaker)
2014 25th tRNA Conference, Greece (speaker and session chair)
2014 ASM Kadner Institute, San Jose, CA (speaker and facilitator)
2014 ASM Conference on Undergraduate Education, Danvers, MA (speaker)
2014 Sigma-Aldrich Symposium on RNA Science, Albany, NY (keynote lecturer)
2013 Barcelona BioMed Conference on Gene Translation: fidelity and Quality Control, Spain (speaker)
2013 Annual Biomedical Research Conference for Minority Students, Nashville, TN (speaker)
2012 Gordon Research Conference on Microbial Stress Responses, Mt. Holyoke, MA (speaker)
2012 Cold Spring Harbor Advanced Bacterial Genetics Course (speaker)
2012 Annual Meeting of the RNA Society, Ann Arbor, MI (speaker)
2012 Society for General Microbiology Spring Conference, Dublin, Ireland (speaker)
2011 AARS 2011, Snowbird, UT (speaker)
2011 Cold Spring Harbor Advanced Bacterial Genetics Course (speaker)
2011 111th American Society for Microbiology General Meeting, New Orleans, LA (speaker)
2010 Molecular Genetics of Bacteria and Phages, CSHL, Cold Spring Harbor, NY (speaker)
2010 Annual Meeting of the RNA Society, Seattle, WA (plenary lecturer)
2010 23rd International tRNA Workshop, Aveiro, Portugal (plenary lecturer, session chair)
2009 31st Chilean Congress of Microbiology, Santa Cruz, Chile (plenary lecturer)
2009 Molecular Genetics of Bacteria and Phages, Madison, WI (speaker, session chair)
2009 Conference on Gram Positive Microorganisms, San Diego, CA (speaker, session chair)
2009 109th American Society for Microbiology General Meeting, Philadelphia, PA (speaker, session chair)
2009 Ohio Branch ASM, Annual Meeting, Denison University, OH (speaker)
2008 AARS 2008, Veyrier du Lac, France (meeting co-chair)
2008 Gordon Research Conference on Microbial Stress Responses, Mt. Holyoke, MA (speaker)
2007 22nd International tRNA Workshop, Uppsala, Sweden (speaker, session chair)
2007 Molecular Genetics of Bacteria and Phages, Madison, WI (speaker)
2007 107th American Society for Microbiology General Meeting, Toronto (speaker, session chair)
2006 AARS 2006, San Diego, CA (speaker, session chair)
2005 21st International tRNA Workshop, Bangalore, India, (speaker, session chair)
2005 40 Years of Exploring tRNA, New Haven, CT (speaker, session chair)
2005 XIX Annual Meeting of the Croatian Chemical Society, Opatija, Croatia (plenary lecturer)
2004 International Conference on Aminoacyl-tRNA Synthetases, Seoul, Korea (speaker)

2003 20th International tRNA Workshop, Banz, Germany (speaker)
2003 Ohio Branch ASM, Annual Meeting, Mason, OH (speaker)
2003 103rd American Society for Microbiology General Meeting, Washington, D.C. (session co-chair)
2002 Asilomar Conference on Aminoacyl-tRNA Synthetases, Asilomar, CA (speaker)
2001 Rustbelt RNA Meeting, Deer Creek, OH (speaker)
2001 9th International Conference on Microbial Genomics, Gatlinburg, TN (speaker)

External invited seminars

2017 Department of Microbiology and Environmental Toxicology, UC Santa Cruz, CA
2017 Department of Molecular Microbiology and Immunology, OHSU, Portland, OR.
2017 Biomedical Sciences, University of Central Florida College of Medicine, Orlando, FL
2016 Faculty of Sciences, University of Chile, Santiago, Chile
2016 IBMC du CNRS, Strasbourg, France
2016 National Institutes of Health, Bethesda, MD
2016 Department of Cell Biology and Molecular Genetics, University of Maryland, College Park, MD
2016 Department of Biology, University of Copenhagen, Denmark
2016 Ribocore, University of Uppsala, Sweden
2016 Department of Biology, Indiana University, Bloomington, IN
2015 Department of Microbiology, University of Washington, Seattle, WA
2015 Department of Chemistry, Portland State University, Portland, OR
2014 Department of Molecular, Cellular & Developmental Biology, U. California, Santa Barbara, CA
2014 Department of Biochemistry and Biophysics, Texas A&M University, College Station, TX
2014 Department of Microbiology, University of Pennsylvania, Philadelphia, PA
2014 Department of Biochemistry and Molecular Biology, Saint Louis University, St. Louis, MO
2013 Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT
2013 RNA Center, Case Western Reserve University, Cleveland, OH
2013 Department of Chemistry, Wayne State University, Detroit, MI
2013 Department of Biochemistry, School of Medicine, University of Patras, Greece
2013 Department of Molecular and Human Genetics, Baylor College of Medicine, TX
2012 Department of Microbiology and Immunology, Thomas Jefferson University, PA
2012 Department of Biochemistry & Biophysics, University of Rochester, NY
2012 Department of Biochemistry, IUPUI, Indianapolis, IN
2011 Department of Bacteriology, University of Wisconsin, Madison, WI
2011 Department of Biochemistry and Molecular Genetics, University of Illinois-Chicago, IL
2011 Department of Biology, University of California, Merced, CA
2011 Department of Molecular Genetics and Microbiology, University of Texas, Austin, TX
2011 Faculty of Health Sciences, University of Copenhagen, Denmark
2010 IBMC du CNRS, Strasbourg, France
2010 Departments of Biochemistry and Microbiology, Emory University, Atlanta, GA
2010 Department of Molecular Genetics, University of Toronto, Canada
2010 Department of Biochemistry and Molecular Biology, LSU HSC, Shreveport, LA
2009 Faculty of Medicine, University of Chile, Santiago, Chile
2009 Department of Biological Sciences, Ohio University, Athens, OH
2009 Department of Microbiology and Cell Science, University of Florida, Gainesville, FL

2009 Department of Biochemistry, University of Vermont, Burlington, VT
2009 Department of Biochemistry, University of Illinois at Urbana Champaign, IL
2009 Department of Microbiology and Molecular Genetics, UMDNJ, Newark, NJ
2009 Structure and Chemistry Affinity Group Seminar, Scripps Research, La Jolla, CA
2009 Department of Biochemistry and Molecular Biophysics, Washington University, St. Louis, MO
2008 IBMC du CNRS, Strasbourg, France
2008 Department of Biophysics and Biophysical Chemistry, Johns Hopkins School of Medicine, Baltimore, MD
2008 Department of Biochemistry, University of Miami School of Medicine, Miami, FL
2008 Department of Microbiology and Molecular Genetics, Michigan State University, MI
2007 Chinese Academy of Sciences, Shanghai, China
2007 Department of Molecular, Cellular & Developmental Biology, U. California, Santa Barbara, CA
2007 Genetics Seminar Series, University of California, Los Angeles, CA
2005 CARB, University of Maryland, Bethesda, MD
2005 Microbiology Institute, ETH Zürich, Zürich, Switzerland
2004 Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT
2004 Department of Microbiology, University of Georgia, Athens, GA
2004 Department of Biological Sciences, St. John's University, New York, NY
2003 Department of Microbiology, Miami University, Oxford, OH
2003 Department of Chemistry and Biochemistry, Colorado University, Boulder, CO
2003 Department of Biology, Indiana University, Bloomington, IN
2002 Department of Chemistry, University of Toledo, Toledo, OH
2002 Department of Chemistry, University of Buffalo, Buffalo, NY
2002 Department of Biochemistry and Microbiology, University of Laval, Canada
2001 Department of Genetics, Trinity College, Dublin, Ireland

STUDENTS AND TRAINEES

Doctoral Students (dissertation advisor)

Anne Witzky	2015 – present	Department of Molecular Genetics
Paul Kelly	2015 – present	MCDB Program
Rebecca Mann	2016 – present	Ohio State Biochemistry Program
Rodney Tollerson	2016 – present	Department of Microbiology
Nien Han	2017 – present	Department of Microbiology

Completed

Sandro Ataide	2002 – 2006	Assistant Professor, University of Sydney
Jeffrey Levengood	2002 – 2006	Research Scientist, Case Western Reserve
Corinne Hausmann	2004 – 2008	Deloitte Consulting
Jiqiang Ling	2004 – 2008	Assistant Professor, University of Texas
Theresa Rogers	2006 – 2010	Assistant Professor, Cal. Lutheran University
Noah Reynolds	2006 – 2011	Post-doc, Yale University
Samhita Yadavalli	2007 – 2012	Post-doc, University of Pennsylvania
Kiley Dare	2007 – 2012	ProFile Discovery
Medha Raina	2009 – 2014	Post-Doc, NIH
Sara Elgamal	2011 – 2015	Post-Doc, Ohio State University
Adil Moghal	2012 – 2016	Graduate Student, Moritz College of Law
Andrei Rajkovic	2012 – 2016	Post-Doc, Uppsala University, Sweden
Kyle Mohler	2013 – 2017	Post-doc, Yale University

Masters Students (thesis advisor)

Amanda Monthan (Lund University, Sweden), 2000		Scientist, Swedish Dairy Association
Marla Gilreath	2009 – 2011	Regulatory Specialist, Nexeo Solutions
Mengchi Wang	2011 – 2013	Graduate student, UC San Diego
Rachel Simari	2013 – 2014	Clinical microbiologist, Utah
Sarah Tyler	2014 – 2015	Graduate student, Boston College

Post-doctoral Fellows

Nina Mejlhede	2000 – 2001	Scientist, State Serum Institute, Denmark
Mette Prætorius	2001 – 2005	Lecturer, Ohio State University
Hervé Roy	2003 – 2011	Assistant Professor, Univ of Central Florida
Shiming Wang	2004 – 2006	Assistant Professor, Nanjing University
Rajat Banerjee	2008 – 2010	Assistant Professor, University of Calcutta
Assaf Katz	2011 – 2014	Assistant Professor, University of Chile
Jennifer Shepherd	2011 – 2015	Editor, Nature Publishing Group
Tammy Bullwinkle	2010 – 2016	Assistant Professor, Ohio State University
Miguel-Angel Rubio Gomez	2017 -	

Senior Honors Theses

Completed

Irnov	(2003–2004; post-doc at Yale University)
Roocha Patel	(2004-2005; MD student at Ohio State University)
Molly Paras	(2004-2006; MD student at the Mayo Clinic)
Caitlin Baiduc	(2008-2009; graduate student at the University of Pennsylvania)
Sara Repasky	(2008-2010)
Bailey Dyer	(2008-2010)
Kayla Humenansky	(2009-2010)
Lindsey Solden	(2011-2013; graduate student at Ohio State University)
Eleftheria Matsa	(2011-2013; MD student at Ohio State University)
Kyle Hopkins	(2015-2017; research assistant at Ohio State University)

TEACHING

Molecular Basis for Microbial Biodiversity (Micro 720, 4 credit hours), Ohio State University, 2001, lecturer (taught 5% of the class), graduate level.

Special Topics in Biochemistry (Biochem 795, 3 credit hours), Ohio State University, 2002 - 2003, supervisor of seminar course (30%), graduate level.

Seminar in Advanced Biochemistry (Biochem 796, 1 credit hour), Ohio State University, 2002, supervisor of seminar course (25%), graduate level.

General Microbiology 2 (Micro 521, 5 credit hours), Ohio State University, 2003 - 2012, lecturer (100%), undergraduate level.

Seminar in Microbiology (Micro 880, 1-2 credit hours), Ohio State University, 2003 - 2007, supervisor of seminar course (50%), graduate level.

The RNA World (Micro 8050, 3 credit hours), Ohio State University, 2004 - present, lecturer (20%), graduate level.

Current Topics in Molecular Microbiology (Micro 7060, 2 credit hours), Ohio State University, 2006 - present, lecturer (25%), graduate level.

Principles of Microbiology (Micro 6010, 2 credit hours), Ohio State University, 2012 - present, lecturer (100%), graduate level.

EXTRAMURAL FUNDING

Completed

2000 Danish Natural Science Research Foundation / Novo Nordisk Foundation. Grant. "Development of *in vivo* strategies for site-directed incorporation of non-natural amino acids". P.I.

2000 Danish Natural Science Research Foundation. Grant. "Automated chromatographic systems for the purification of proteins and nucleic acids". P.I.

2000 Fifth Framework program of the European Commission. Grant QLG2-1999-00660**.** "A functional genomics study of lysyl-tRNA synthesis as a target for the diagnosis and treatment of microbial infections and mitochondrial myopathies". P.I. (Co-P.I.s, K. Devine, C. Florentz; C. Marsac, M. Schneider).

2002 **American Heart Association Grant 0265004B.** "*Borrelia burgdorferi* lysyl-tRNA synthetase: a therapeutic target for Lyme disease". (07/2002 – 06 / 2004). P.I.

2003 National Institutes of Health**. "**Supplement to GM65183". Supplemental award for purchase of a microvolume stopped-flow reaction analyzer.

2004 **National Science Foundation Grant MCB-0344002.** "The role of aminoacyl-tRNA synthesis in translational quality control". P.I. (Co-P.I., A. Wolfson).

2005 American Heart Association Pre-doctoral fellowship 0515086B for Sandro Ataide. "Utilization of non-canonical tRNA by lysyl-tRNA synthetases".

2006 **US-Israel Binational Science Foundation.** "Structural and functional investigation of cytosolic and mitochondrial phenylalanyl-tRNA synthetase". Co-P.I. (P.I., M. Safro). (09/2006 – 08/2010).

2007 American Heart Association Pre-doctoral fellowship 0715172B for J. Ling. "Pathogenic mechanism and functional rescue of a $tRNA^{Phe}$ mutation causing MERFF". (07/2007 – 06/2009)

2008 **National Science Foundation Grant MCB-0744791.** "The role of quality control in microbial translation". P.I. (Joint P.I.s, B. Lazazzera, A. Wolfson). (03/2008 – 02/2011).

2008 **National Science Foundation Grant MCB-0936068.** "Collaborative research: The role of quality control in microbial translation". P.I. (01/2008 – 03/2012).

2010 **National Science Foundation Grant CHE-1040302**. "MRI: Acquisition of a high-resolution time-of-flight mass spectrometer". Co PI (Green-Church). (10/10 - 09/13)

2011 **Amgen Inc. contract #2011566548.** "Error rates in mammalian protein synthesis". P.I. (11/11 – 11/12).

2011 **National Science Foundation Grant MCB-1052344.** "Collaborative research: The role of quality control in microbial translation". P.I. (04/2011 – 09/2014).

2014 **National Institutes of Health Grant 1R13 AI111919.** "2014 Microbial Stress Response GRC/GRS". P.I. (Joint P.I., C. White-Ziegler). (05/2014 – 10/2014).

2014 **National Science Foundation Grant MCB- 1412611.** "Collaborative Research: The Role of Quality Control in Microbial Translation". P.I. (09/2014 – 08/2019).

Current

2003 **National Institutes of Health Grant R01 GM065183. "**Mechanisms of translational control". P.I. (01/2003 - 09/2021).

2011 **National Institutes of Health Grant T32 GM086252.** "Cellular, Molecular, and Biochemical Sciences Training Grant". P.I. (Joint P.I., K. Musier Forsyth). (07/2011 – 06/2021).

2015 **Army Research Office Grant 66973-LS.** "Increased Translation Error Rates and Long-term Survival". Co-P.I. (05/2015 – 04/2018).

2016 **National Institutes of Health Grant R21/R33 AI127582.** "A Systems Biology Approach for Targeted Drug Discovery for Leishmaniasis". P.I. (12/2016 – 12/2021).

2017 **National Institutes of Health Grant R35 GM122566.** "Causes and Population-genetic Consequences of Molecular Variation". Sub-contract (M. Lynch, P.I.).

2017 **National Science Foundation Grant MCB- 1715840.** "Collaborative Research: The Role of Quality Control in Microbial Translation". P.I. (07/2017 – 06/2020).

PUBLICATIONS (H-INDEX 47)

175. Mohler, K., Mann, R., Kyle, A., Reynolds, N. and **Ibba, M.** (2017) Aminoacyl-tRNA Quality Control is Required for Efficient Activation of the TOR Pathway Regulator Gln3p. *RNA Biol*. In Press.
174. Hummels, K.R., Witzky, A., Rajkovic, A., Tollerson, R., Jones, L.A., **Ibba M.** and Kearns, D.B. (2017) Carbonyl reduction by YmfI completes the modification of EF-P in *Bacillus subtilis* to prevent accumulation of an inhibitory modification state. *Mol. Microbiol.* In Press.
173. Tollerson, R., Witzky, A. and **Ibba, M.** (2017) Elongation Factor P interactions with the ribosome are independent of pausing. *mBio* **8**, e01056-17.
172. Mohler, K. and **Ibba, M.** (2017) Translational Fidelity, Mistranslation, and the Cellular Responses to Stress. *Nature Microbiol.* **2**:17117.
171. Rajkovic, A. and **Ibba, M.** (2017) Elongation Factor P and the Control of Translation Elongation. *Annu. Rev. Microbiol.* **8,** 117-131.

170. Mohler, K., Mann, R., Bullwinkle, T., Hopkins, K., Hwang, L., Reynolds, N., Gassaway, B., Aerni, H., Rinehart, J., Polymenis, M., Faull, K., and **Ibba, M.** (2017) Editing of misaminoacylated tRNA controls the sensitivity of amino acid stress responses in *Saccharomyces cerevisiae*. *Nucl. Acids Res.* **45,** 3985-3996.

169. Mohler, K., Aerni, H.R., Gassaway, B., Ling, J., **Ibba, M.** and Rinehart, J. (2017) MS-READ: Quantitative measurement of amino acid incorporation. *BBA - Gen Subjects*. In Press.

168. Kermgrad, E., Yang, Z., Michel, A.-M., Simari, R., Wong, J., **Ibba, M.** and Lazazzera, B.A. (2017) Quality control by isoleucyl-tRNA synthetase of *Bacillus subtilis* is required for efficient sporulation. *Sci. Rep.* **7,** 41763.

167. Wang, S., Corcilius, L., Sharp, P.P., Rajkovic, A., **Ibba, M.**, Parker, B.L. and Payne, R.J. (2017) Synthesis of rhamnosylated arginine glycopeptides and determination of the glycosidic linkage in bacterial elongation factor P. *Chem. Sci.* **8**, 2296-2302.

166. Chaliotis, A., Vlastaridis, P., Mossialos, D., **Ibba, M.,** Becker, H.D., Stathopoulos, C. and Amoutzias, G. (2017) The complex evolutionary history of aminoacyl-tRNA synthetases. *Nucl. Acids Res.* **45**, 1059-1068.

165. Mohler, K., Mann, R. and **Ibba, M.** (2017) Isoacceptor specific characterization of tRNA aminoacylation and misacylation *in vivo*. *Methods* **113**, 127-131.

164. Elgamal, S., Artsimovitch, I. and **Ibba, M.** (2016) Maintenance of Transcription-Translation Coupling by Elongation Factor P. *mBio* **7**, e01373-16.

163. Moghal, A., Hwang, L., Faull, K. and **Ibba, M.** (2016) Multiple quality control pathways limit non-protein amino acid use by yeast cytoplasmic phenylalanyl-tRNA synthetase. *J. Biol. Chem.* **291, 1**5796-15805.

162. Katz, A., Elgamal, S., Rajkovic, A. and **Ibba M.** (2016) Non-canonical roles of tRNAs and tRNA mimics in bacterial cell biology. *Mol. Microbiol.* **101**, 545-588.

161. Rajkovic, A., Hummels, K.R., Witzky, A., Erickson, S., Gafken, P.R., Whitelegge, J.P., Faull, K.F., Kearns, D.B. and **Ibba M**. (2016) Translation control of swarming proficiency in *Bacillus subtilis* by 5-amino-pentanolylated elongation factor P. *J. Biol. Chem.* **291**, 10976-10985.

160. Walker, M.A., Mohler, K.P., Hopkins, K.W., Oakley, D.H., Sweetser, D.A., **Ibba, M.**, Frosch, M.P. and Thibert, R.L. (2016) Novel compound heterozygous mutations expand the recognized clinical and neuropathologic phenotypes of FARS2-linked disease. *J. Child Neurology* **31**, 1127-1137.

159. Bullwinkle, T. and **Ibba, M.** (2016) Translation quality control is critical for bacterial responses to amino acid stress. *Proc. Natl. Acad. Sci. USA.* **113**, 2252-2257.

158. Rajkovic, A., Witzky, A., Navarre, W., Darwin, A.J. and **Ibba, M**. (2015) Elongation factor-P at the crossroads of the host-endosymbiont interface. *Microbial Cell* **2**, 360-362.

157. Rajkovic, A., Erickson, S., Witzky, A., Branson, O.E., Seo, J., Gafken, P.R., Frietas, M.A., Whitelegge, J.P., Faull, K.F., Navarre, W., Darwin, A.J. and **Ibba, M**. (2015) Cyclic rhamnosylated elongation factor P establishes antibiotic resistance in *Pseudomonas aeruginosa*. *mBio* **6** e00823-15.

156. Shepherd, J. and **Ibba, M.** (2015) Bacterial transfer RNAs. *FEMS Microbiol Rev.* **39**, 280-300.

155. **Ibba, M.** (2015) Transfer RNA comes of age. *RNA* **21**, 648-649.

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