



Curriculum Vitae Prof. Dr. Asifa Akhtar



Image: Marcus Rockoff | MPI-IE

Name: Asifa Akhtar
Born: 19 February 1971

Research Priorities: Epigenetics, chromatin, gene expression, RNA protein interactions, transcription, nuclear anomalies, X chromosome, metabolism

Asifa Akhtar is a molecular biologist. The primary focus of her research is gene regulation and she and her team are particularly interested in understanding the mechanisms underlying chromatin and epigenetic regulation.

Academic and Professional Career

- 2015 - 2017 Executive Director, Max Planck Institute of Immunobiology and Epigenetics, Freiburg, Germany
- since 2013 Director, Department Chromatin Regulation, Max Planck Institute of Immunobiology and Epigenetics, Freiburg, Germany
- 2009 - 2013 Research Group Leader, Max Planck Institute of Immunobiology and Epigenetics, Freiburg, Germany
- 2001 - 2009 Research Group Leader, European Molecular Biology Laboratory (EMBL), Gene Expression Program, Heidelberg, Germany
- 1999 - 2000 Postdoctoral Fellow, Adolf-Butenandt Institute, Molecular Biology, Munich, Germany
- 1997 - 1999 Postdoctoral Fellow, EMBL, Heidelberg, Germany
- 1997 PhD in Molecular Biology, Imperial Cancer Research Fund (ICRF), London, UK
- 1993 - 1997 PhD student, ICRF, London, UK
- 1993 BSc in Biology, University College London (UCL), London, UK
- 1990- 1993 BSc Biology Student, UCL, London, UK

Functions in Scientific Societies and Committees

- since 2023 Member, Stiftungsrat, Einstein Foundation Berlin, Germany
- since 2020 Vice President, Max Planck Society, Munich, Germany
- 2019 - 2021 Chairperson, Committee “Research Perspectives for the Biological & Medicine Section”, Max Planck Society, Munich, Germany
- 2019 - 2021 Member, Editorial Board, Journal “Molecular and Cellular Biology”
- 2019 - 2020 Member, Course Committee, European Molecular Biology Organization (EMBO)
- since 2019 Member, Scientific Advisory Board, Leibniz Institute on Aging – Fritz Lipmann Institute, Jena, Germany
- since 2019 Member, Editorial Board, Journal “Journal of Cell Science”
- 2019 Member, Nomination Committee, Max Planck-Humboldt Research Award 2020
- 2018 - 2019 Chairperson, Lise Meitner Excellence Program, Biological & Medicine Section, Max Planck Society, Munich, Germany
- since 2017 Member, Editorial Board, Journal “Life Science Alliance”
- since 2015 Member, Intersectional Committee, Scientific Council, Max Planck Society, Munich, Germany
- since 2014 Member, Committee “Research Perspectives for the Biological & Medicine Section”, Max Planck Society, Munich, Germany
- since 2012 Member, Board of Reviewing Editors (BRE), Journal “eLife”
- 2007 Member, pool of experts, Institut national de la santé et de la recherche médicale – INSERM, Paris, France
- 2007 Member, Editorial Board, Targeted protein database “Epigenetic Regulators”
- 2007 Member, Editorial Board, Journal “Chromosome Research”
- 2006 - 2009 Member, Scientific Advisory Committee, EMBL, Heidelberg, Germany

Project Coordination, Membership in Collaborative Research Projects

- 2020 - 2024 Subproject “Heterocellular Nature of Cardiac Lesions: Identities, Interactions, Implications (ScarCare)”, Collaborative Research Centre SFB 1425, German Research Foundation (DFG)
- 2019 - 2023 Subproject “Dynamic organization of cellular protein machineries: From biogenesis and modular assembly to function”, Collaborative Research Centre SFB 1381, DFG
- since 2019 Vice Spokesperson and Member, Executive Board, Collaborative Research Centre SFB 1381, DFG

- since 2019 Member, Steering Board, Cluster of Excellence “CIBSS – Centre for Integrative Biological Signalling Studies”, DFG
- 2019 - 2022 Cluster of Excellence “CIBSS – Centre for Integrative Biological Signalling Studies”, DFG
- 2015 - 2019 Member, Steering Board, Cluster of Excellence “BIOSS – Centre for Biological Signalling Studies”, DFG
- 2015 - 2019 Subproject “Kidney Disease – from Genes to Mechanisms”, Collaborative Research Centre SFB 1140, DFG
- 2012 - 2024 Subproject “Medical Epigenetics”, SFB 992, DFG
- 2012 - 2018 Cluster of Excellence “BIOSS – Centre for Biological Signalling Studies”, DFG
- since 2012 Joint Spokesperson and Member, Executive Board for Collaborative Research Centre SFB 992, DFG
- 2011 - 2018 Subproject “Functional specificity by coupling and modifications of proteins“, Collaborative Research Centre SFB 746, DFG
- 2010 - 2015 Joint Coordinator, Network of Excellence “EpiGeneSys“, Framework Programme FP7, European Union (EU)
- 2009 - 2012 Network for Initial Training (ITN) “NUCLEOSOME 4D – Nucleosome Structure and Function across Biological Scales and Biological Function“, FP7, EU
- 2005 - 2008 Subproject “Isolation and characterisation of the mammalian MSL complex“, Transregio 5, DFG
- 2004 - 2008 Subproject “Epigenetics“, Priority Programme SPP 1129, "Targeting of dosage compensation complex to the male X chromosome in Drosophila DFG
- 2004 - 2007 Network of Excellence “Epigenome“, FP6, EU

Honours and Awarded Memberships

- 2022 Christa Šerić-Geiger Prize, Carl-Friedrich Geiger Foundation, Kehl, Germany
- 2020 Gottfried Wilhelm Leibniz Prize, DFG, Germany
- since 2019 Member, German National Academy of Sciences Leopoldina, Germany
- 2017 Wilhelm Feldberg Prize, Feldberg Foundation for anglo-german scientific exchange, London, UK
- 2013 National Lecture, Federation of European Biochemical Societies (FEBS)
- since 2013 Member, EMBO
- 2008 Early Career Award, European Life Science Organization (ELSO)

2002 - 2004 Best speaker, Young Investigator Programme (YIP), EMBO

Research Priorities

Asifa Akhtar is a molecular biologist. The primary focus of her research is gene regulation and she and her team are particularly interested in understanding the mechanisms underlying chromatin and epigenetic regulation.

Epigenetic mechanisms influence chromatin structure and determine the accessibility of genetic information. Epigenetic modifiers play a key role in embryonic development, cell type identity and reactions to environmental influences such as stress and nutrition. Asifa Akhtar has spent many years looking at how gene expression on the X chromosome is equalised between male and female organisms through the classic epigenetic phenomenon of dosage compensation. Through this work, her laboratory has discovered the critical roles played by histone acetylation and long, non-coding RNA in chromosome-wide transcription regulation.

In recent times, Asifa Akhtar used interdisciplinary approaches – ranging from biochemical analyses to epigenomic studies in mammalian model systems – to identify new connections between epigenetics and metabolism. Her long-term goal is to find out how the loss of epigenetic regulators leads to many human diseases such as cancer and developmental syndromes.