

Academic History

February 2020 – current

Group leader – Vascular Epigenetics group, Helmholtz Institute for Metabolism, Obesity and Vascular Research (HI-MAG), of the Helmholtz Centre Munich

- Research topic: Vascular dysfunction in Metabolic Disorders
- Allen Distinguished Investigator (2022)

July 2014 – January 2020

Postdoctoral scientist at the Max Planck Institute for Immunobiology and Epigenetics, Freiburg, Germany

- Research topic: Interplay between metabolism and epigenetics in development and disease
- Alexander von Humboldt Fellow

September 2012 – June 2014

Postdoctoral scientist at the Walter & Eliza Hall Institute, Melbourne, Australia

January 2008 – September 2012

PhD at the Walter & Eliza Hall Institute, Melbourne, Australia

- Thesis title: “The independent and overlapping roles of chromatin regulators MOZ, QKF and BMI1”
- Dora Lush fellow (awarded by the Australian NHMRC)
- Student president – WEHI student association (2009)

January 2006 – December 2006

Bachelor of Science (Honours) at the Walter & Eliza Hall Institute, Melbourne, Australia

- Speed Coleman Prize
- Melbourne Honours scholarship

January 2003 – December 2005

Bachelor of Biomedical Science at the University of Melbourne, Australia

- First class honours in all 24 subjects (GPA 7.0/7.0)
- Honours list recipient (top 5 student in faculty)

Scholarships & Awards (select)

- Allen Distinguished Investigator award (2022, Seattle USA)
- Alexander von Humboldt fellowship (2015, Germany)
- Max Planck International postdoctoral fellowship (2014, declined)
- Selected member of the Theo Murphy High Flyer’s think tank (2013, Australian Academy of Science)
- University of Queensland Genetic Services (UQGS) student research prize (2012)
- Australian Stem Cell Centre Postgraduate Supplementary award (2010)
- Dora Lush scholarship (2008, Australian NHMRC)
- Melbourne Honours Scholarship (2006, University of Melbourne)
- Dean’s Honours List (2006, University of Melbourne)

Patents

1. Inventors: Jonathan Baell, Huu Nghi Nguyen, David J. Leaver, Benjamin L. Cleary, H. Rachel Lagiakos, Timothy John Thomas, Anne Kathrin Voss, [Bilal N. Sheikh](#). Title “**ARYL SULFONOHYDRAZIDES**”. WO Application No: PCT/EP2016/063125. Jurisdictions: Australia, USA, Europe, Africa and Japan.
Currently in phase 2 clinical trials

Peer-Reviewed Publications (select)

Total publications: 29 As first or last author: 17 Total citations: 1419 h-index: 20 i10-index: 25

10 indicative publications:

*Bondareva O, Rodríguez-Aguilera JR, Oliveira F, Liao L, Rose A, Gupta A, Singh K, Geier F, Schuster J, Boeckel JN, Buescher JM, Kohli S, Klötting N, Isermann B, Blüher M, **Sheikh BN**. Single-cell profiling of vascular endothelial cells reveals progressive organ-specific vulnerabilities during obesity. **Nature Metabolism**. 2022 Nov;4(11):1591-1610.*

doi: 10.1038/s42255-022-00674-x.

PMID: 36400935; PMCID: PMC9684070.

Sheikh BN, Guhathakurta S, Tsang TH, Schwabenland M, Renschler G, Herquel B, Bhardwaj V, Holz H, Stehle T, Bondareva O, Aizarani N, Mossad O, Kretz O, Reichardt W, Chatterjee A, Braun LJ, Thevenon J, Sartelet H, Blank T, Grün D, von Elverfeldt D, Huber TB, Vestweber D, Avilov S, Prinz M, Buescher JM, Akhtar A. *Neural metabolic imbalance induced by MOF dysfunction triggers pericyte activation and breakdown of vasculature. **Nature Cell Biology**. 2020 Jul;22(7):828-841.*

doi: 10.1038/s41556-020-0526-8.

PMID: 32541879.

Gaub A, **Sheikh BN**, Basilicata MF, Vincent M, Nizon M, Colson C, Bird MJ, Bradner JE, Thevenon J, Boutros M, Akhtar A. *Evolutionary conserved NSL complex/BRD4 axis controls transcription activation via histone acetylation. **Nature Communications**. 2020 May 7;11(1):2243.*

doi: 10.1038/s41467-020-16103-0.

PMID: 32382029; PMCID: PMC7206058.

Sheikh BN, Akhtar A. *The many lives of KATs - detectors, integrators and modulators of the cellular environment. **Nature Reviews Genetics**. 2019 Jan;20(1):7-23.*

doi: 10.1038/s41576-018-0072-4.

PMID: 30390049.

Sheikh BN, Bondareva O, Guhathakurta S, Tsang TH, Sikora K, Aizarani N, Sagar, Holz H, Grün D, Hein L, Akhtar A. *Systematic Identification of Cell-Cell Communication Networks in the Developing Brain. **iScience**. 2019 Nov 22;21:273-287.*

doi: 10.1016/j.isci.2019.10.026.

PMID: 31677479; PMCID: PMC6838536.

Sheikh BN, Bechtel-Walz W, Lucci J, Karpiuk O, Hild I, Hartleben B, Vornweg J, Helmstädter M, Sahyoun AH, Bhardwaj V, Stehle T, Diehl S, Kretz O, Voss AK, Thomas T, Manke T, Huber TB, Akhtar A. *MOF maintains transcriptional programs regulating cellular stress response. **Oncogene**. 2016 May;35(21):2698-710.*

doi: 10.1038/onc.2015.335.

PMID: 26387537; PMCID: PMC4893634.

Sheikh BN, Yang Y, Schreuder J, Nilsson SK, Bilardi R, Carotta S, McRae HM, Metcalf D, Voss AK, Thomas T. *MOZ (KAT6A) is essential for the maintenance of classically defined adult hematopoietic stem cells.* **Blood.** 2016 Nov 10;128(19):2307-2318.
doi: 10.1182/blood-2015-10-676072.
PMID: 27663673.

Sheikh BN, Downer NL, Phipson B, Vanyai HK, Kueh AJ, McCarthy DJ, Smyth GK, Thomas T, Voss AK. *MOZ and BMI1 play opposing roles during Hox gene activation in ES cells and in body segment identity specification in vivo.* **Proc Natl Acad Sci USA.** 2015 Apr 28;112(17):5437-42.
doi: 10.1073/pnas.1422872112.
PMID: 25922517; PMCID: PMC4418851.

Sheikh BN, Phipson B, El-Saafin F, Vanyai HK, Downer NL, Bird MJ, Kueh AJ, May RE, Smyth GK, Voss AK, Thomas T. *MOZ (MYST3, KAT6A) inhibits senescence via the INK4A-ARF pathway.* **Oncogene.** 2015 Nov 19;34(47):5807-20.
doi: 10.1038/onc.2015.33.
PMID: 25772242.

Sheikh BN, Lee SC, El-Saafin F, Vanyai HK, Hu Y, Pang SH, Grabow S, Strasser A, Nutt SL, Alexander WS, Smyth GK, Voss AK, Thomas T. *MOZ regulates B-cell progenitors and, consequently, Moz haploinsufficiency dramatically retards MYC- induced lymphoma development.* **Blood.** 2015 Mar 19;125(12):1910-21.
doi: 10.1182/blood-2014-08-594655.
PMID: 25605372; PMCID: PMC4440887.