



Kif Liakath-Ali

Postdoctoral Research Fellow, Molecular and Cellular Physiology

Bio

BIO

Dr Liakath-Ali holds a PhD degree in molecular genetics from the University of Cambridge, UK. He carried out his doctoral and a brief post-doctoral research under the supervision of Professor Fiona Watt at Cambridge and King's College London. While in Watt lab, he conducted a first, large-scale tissue-specific phenotype screen on hundreds of knockout mice and discovered many novel genes that are essential for mammalian skin function. He further elucidated the mechanistic roles of sphingolipid and a ribosome-rescue pathway in epidermal stem cell function. He has published many papers in the area of skin biology and won several awards, including, most recently a long-term fellowship from the European Molecular Biology Organization (EMBO).

Dr Liakath-Ali obtained his bachelor and master degree in Zoology from Jamal Mohamed College (Bharathidasan University), Trichy, India. He further specialized in human genetics and obtained an MPhil from the University of Madras, India. He went on to work at various capacities at Centre for DNA Fingerprinting and Diagnostics, Hyderabad, India, Institute of Human Genetics, University of Göttingen, Germany and the Wellcome Sanger Institute, Cambridge, UK. Dr Liakath-Ali also holds a degree equivalent (Associateship of King's College (AKC) in Philosophy, Ethics and Theology.

It is perhaps these combinations of diverse backgrounds and training that led Dr Liakath-Ali to develop an interest in fundamental questions in neuroscience. He is currently an EMBO Research Fellow, working under the supervision of Professor Thomas Südhof at Stanford on genetic mechanisms involved in synapse formation and function. He is also an avid communicator of science, STEM ambassador and open science advocate.

HONORS AND AWARDS

- Fellow of the Academy for Future Leaders in Dermatology, European Society for Dermatological Research (October 2019)
- EMBO Long-Term Fellowship, European Molecular Biology Organisation (EMBO) (July 2018 - July 2020)
- Blankenese Conference Stipend, Blankenese Conference, Hamburg, Germany (2018)
- Zhongmei Chen Yong Travel Award for Scientific Excellence, International Society for Stem Cell Research (ISSCR) (2018)
- eLIFE Early-Career Researcher Travel Grant, eLIFE (2018)
- Honor Fell Travel awards, British Society for Cell Biology (2017, 2015, 2013)
- Junior Scientist Travel Award, Genetics Society, UK (2017, 2015)
- Scholarships, International Mammalian Genome Society (2017, 2015)
- Best Poster Award at EMBO Conference, EMBO Conference on Protein Quality Control. Sant Feliu de Guixols, Spain (2017)
- Canadian Stem Cell Network Travel Award, Canadian Stem Cell Network and Till & McCulloch stem cell meeting (2017)
- Image of Distinction, Nikon Small World photomicrography awards (2017)
- Best Talk Award, Lipidomics Forum, Leibniz Institute for Analytical Research (ISAS), Dortmund, Germany (2016)

- Eugene M. Farber Travel Award for Young Investigators, Society for Investigative Dermatology (2015)
- Outstanding Presentation Award, International Mammalian Genome Conference, Yokohama, Japan (2015)
- Presentation at the Houses of Parliament, UK, SET for Britain 2014 (Britain's early-stage researchers competition) (2014)
- Travel Award, Graduate School of Life Sciences, University of Cambridge (2014)
- NIH-Mouse Genome Scholarship, International Mammalian Genome Society (2013)
- Travel Grant, Royal Society of Biology (2013)
- Santander Scholarship, Darwin College, University of Cambridge (2012-2015)
- Travel and Participatory Award, OptiStem (Optimization of Stem cell Therapy for degenerative Epithelial and Muscle Diseases) (2012)
- Research Internship, German Research Foundation (DFG), University of Göttingen (2007-2008)
- Senior Research Fellowship, Lady Tata Memorial Trust, India (declined) (2007-2008)
- Sambuvarayar Endowment Merit Scholarship, University of Madras, India (2003-2004)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Ambassador, eLIFE Early Career Researchers Community (2019 - present)
- Member, International Society for Stem Cell Research (ISSCR) (2018 - present)
- Member of Scientific Committee and Ambassador, The English Brain Bee – an organization to promote neuroscience education and research among school students. (2017 - present)
- STEM Ambassador, STEM Network, UK (2017 - present)
- eMentor, Social Mobility Foundation, UK (2017 - present)
- Resident Expert Biologist, Royal Society of Biology, UK (2016 - 2016)
- Associate Member, EuroScience (European Association for the Advancement of Science and Technology) (2015 - present)
- Editor, Wattlelab blog (2015 - 2018)
- Member, Society for Developmental Biology (2014 - present)
- Honorary Member, Institute of Biomedical Sciences (UK) (2014 - 2015)
- Full member, The Genetics Society, UK (2013 - present)
- Member, International Mammalian Genome Society (2013 - present)
- Member, American Society for Cell Biology (2013 - present)
- Faraday Student Member, The Royal Institution of Great Britain (2013 - 2017)
- Member, Royal Society of Biology (2012 - present)
- Member, British Society for Cell Biology (2012 - present)
- Genome Campus Tour Leader, The Franklin Centre for Public Engagement, Wellcome Sanger Institute, Cambridge, UK (2009 - 2010)
- Member, Indian Society of Human Genetics (2004 - 2005)
- Student Secretary, The Zoology Association, Post Graduate & Research Department of Zoology, Jamal Mohamed College, Tiruchirappalli, India (2001 - 2003)

PROFESSIONAL EDUCATION

- Doctor of Philosophy (PhD), University of Cambridge, UK , Molecular Genetics (Stem Cell Biology) (2015)
- Associateship of King's College, King's College London, UK , Philosophy, Ethics & Theology (2015)
- Master of Philosophy (MPhil), University of Madras, India , Genetics (2004)
- Master of Science (MSc), Jamal Mohamed College, Bharathidasan University, Trichy, India , Zoology (2003)
- Bachelor of Science (BSc), Jamal Mohamed College, Bharathidasan University, Trichy, India , Zoology (2001)

Research & Scholarship

LAB AFFILIATIONS

- Thomas Sudhof, Sudhof lab (1/22/2018)

Publications

PUBLICATIONS

- **An evolutionarily conserved ribosome-rescue pathway maintains epidermal homeostasis** *NATURE*
Liakath-Ali, K., Mills, E. W., Sequeira, I., Lichtenberger, B. M., Pisco, A., Sipila, K. H., Mishra, A., Yoshikawa, H., Wu, C., Ly, T., Lamond, A. I., Adham, I. M., Green, et al
2018; 556 (7701): 376-+
- **Myosin 10 is involved in murine pigmentation.** *Experimental dermatology*
Liakath-Ali, K., Vancollie, V. E., Sequeira, I., Lelliott, C. J., Watt, F. M.
2018
- **Immunomodulatory role of Keratin 76 in oral and gastric cancer.** *Nature communications*
Sequeira, I., Neves, J. F., Carrero, D., Peng, Q., Palasz, N., Liakath-Ali, K., Lord, G. M., Morgan, P. R., Lombardi, G., Watt, F. M.
2018; 9 (1): 3437
- **cells and acquisition of stem cell properties.** *Nature cell biology*
Donati, G., Rognoni, E., Hiratsuka, T., Liakath-Ali, K., Hoste, E., Kar, G., Kayikci, M., Russell, R., Kretzschmar, K., Mulder, K. W., Teichmann, S. A., Watt, F. M.
2017; 19 (6): 603-613
- **A genome-wide screen identifies YAP/WBP2 interplay conferring growth advantage on human epidermal stem cells** *NATURE COMMUNICATIONS*
Walko, G., Woodhouse, S., Pisco, A. O., Rognoni, E., Liakath-Ali, K., Lichtenberger, B. M., Mishra, A., Telerman, S. B., Viswanathan, P., Logtenberg, M., Renz, L. M., Donati, G., Quist, et al
2017; 8
- **Spatial constraints govern competition of mutant clones in human epidermis.** *Nature communications*
Lynch, M. D., Lynch, C. N., Craythorne, E., Liakath-Ali, K., Mallipeddi, R., Barker, J. N., Watt, F. M.
2017; 8 (1): 1119
- **A protein phosphatase network controls the temporal and spatial dynamics of differentiation commitment in human epidermis.** *eLife*
Mishra, A., Oulès, B., Pisco, A. O., Ly, T., Liakath-Ali, K., Walko, G., Viswanathan, P., Tihy, M., Nijjher, J., Dunn, S. J., Lamond, A. I., Watt, F. M.
2017; 6
- **Pelota Regulates Epidermal Differentiation by Modulating BMP and PI3K/AKT Signaling Pathways** *JOURNAL OF INVESTIGATIVE DERMATOLOGY*
Elkenani, M., Nyamsuren, G., Raju, P., Liakath-Ali, K., Hamdaoui, A., Kata, A., Dressel, R., Klonisch, T., Watt, F. M., Engel, W., Thliveris, J. A., Pantakani, D. V., Adham, et al
2016; 136 (8): 1664-1671
- **Alkaline ceramidase 1 is essential for mammalian skin homeostasis and regulating whole-body energy expenditure** *JOURNAL OF PATHOLOGY*
Liakath-Ali, K., Vancollie, V. E., Lelliott, C. J., Speak, A. O., Lafont, D., Protheroe, H. J., Ingvorsen, C., Galli, A., Green, A., Gleeson, D., Ryder, E., Glover, L., Vizcay-Barrena, et al
2016; 239 (3): 374-383
- **Macrophage Infiltration and Alternative Activation during Wound Healing Promote MEK1-Induced Skin Carcinogenesis** *CANCER RESEARCH*
Weber, C., Telerman, S. B., Reimer, A. S., Sequeira, I., Liakath-Ali, K., Arwert, E. N., Watt, F. M.
2016; 76 (4): 805-817
- **Mimicking the topography of the epidermal-dermal interface with elastomer substrates** *INTEGRATIVE BIOLOGY*
Viswanathan, P., Guvendiren, M., Chua, W., Telerman, S. B., Liakath-Ali, K., Burdick, J. A., Watt, F. M.
2016; 8 (1): 21-29
- **Over-expression of Plk4 induces centrosome amplification, loss of primary cilia and associated tissue hyperplasia in the mouse** *OPEN BIOLOGY*

Coelho, P. A., Bury, L., Shahbazi, M. N., Liakath-Ali, K., Tate, P. H., Wormald, S., Hindley, C. J., Huch, M., Archer, J., Skarnes, W. C., Zernicka-Goetz, M., Glover, D. M.
2015; 5 (12)

● **Novel skin phenotypes revealed by a genome-wide mouse reverse genetic screen** *NATURE COMMUNICATIONS*

Liakath-Ali, K., Vancollie, V. E., Heath, E., Smedley, D. P., Estabel, J., Sunter, D., DiTommaso, T., White, J. K., Ramirez-Solis, R., Smyth, I., Steel, K. P., Watt, F. M.

2014; 5

● **Genome-wide Generation and Systematic Phenotyping of Knockout Mice Reveals New Roles for Many Genes** *CELL*

White, J. K., Gerdin, A., Karp, N. A., Ryder, E., Buljan, M., Bussell, J. N., Salisbury, J., Clare, S., Ingham, N. J., Podrini, C., Houghton, R., Estabel, J., Bottomley, et al

2013; 154 (2): 452-464

● **MeCP2(270) Mutant Protein Is Expressed in Astrocytes as well as in Neurons and Localizes in the Nucleus** *CYTOGENETIC AND GENOME RESEARCH*

Kifayathullah, L. A., Arunachalam, J. P., Bodda, C., Agbemenyah, H. Y., Laccone, F. A., Mannan, A. U.

2010; 129 (4): 290-297

● **Microsatellite markers for the Indian golden silkmoth, *Antheraea assama* (Saturniidae: Lepidoptera)** *MOLECULAR ECOLOGY RESOURCES*

Arunkumar, K. P., Kifayathullah, L., Nagaraju, J.

2009; 9 (1): 268-270

PRESENTATIONS

- An evolutionarily conserved ribosome-rescue pathway maintains epidermal homeostasis - International Stem Cell Research Society (ISSCR) Annual Meeting (June 22, 2018 - 6/24/2018)
- An evolutionarily conserved ribosome-rescue pathway maintains epidermal homeostasis - 38th Blankenese Conference (5/5/2018 - 5/8/2018)
- An evolutionarily conserved ribosome-rescue pathway maintains epidermal homeostasis - Till & McCulloch Meeting (11/6/2017 - 11/8/2017)