

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.

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NAME Mathur, Ramkumar	POSITION TITLE Associate Research Scientist		
eRA COMMONS USER NAME (credential, e.g., agency login) RAMATHUR			
EDUCATION/TRAINING (<i>Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.</i>)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
School of Life Science, Dr. BR Ambedkar University, Agra, India	M.S.	05/90	Biotechnology
National Center for Cell Science, University of Pune, India	Ph.D.	02/07	Immunology
Yale University, Connecticut, USA	Postdoctoral	07/09	Immunology
Columbia University, New York, USA (same lab moved)	Postdoctoral	09/13	Immunology

A. Personal Statement

I am an innovative and independent research scientist with more than 10-years of relevant extensive experience in Mucosal Immunology. As a postdoctoral fellow at Yale University and Columbia University, my research emphasizes on understanding innate and adaptive host immune responses in the intestinal compartment. I have elucidated novel mechanisms underlying innate intestinal response to bacterial and protozoan pathogens and identified the novel role of PDK1 in TCR signaling, preventing spontaneous colitis. My findings were disseminated in high profile journals such as Cell, Nature medicine, and Immunity. I have been an author for 12 high impact research papers and book chapters totaling 700+ global citations. I also serve as a scientific reviewer for international peer-reviewed journals, and delivered several invitational presentations in international scientific meetings and academic institutions. My recent findings published in Mucosal Immunology insights for role of Autophagy in TNBS mediated fibrosis is very noteworthy in IBD research field. Currently I am investigating the mechanism of fibrosis and pave the path for finding a better therapeutic invention for Crohn's-associated intestinal fibrosis.

B. Positions and Honors**Positions and Employment**

2014-Present Research Assistant Professor, Department of Molecular and Cellular Physiology, Albany Medical College, Albany, New York, USA

2009-2013 Postdoctoral, Dept. of Microbiology and Immunology, Columbia University, New York, NY, USA

2007-2009 Postdoctoral, Section of Immunobiology, School of Medicine, Yale University, Connecticut

2002-2007 Senior Research Fellow, National Center for Cell Science, University of Pune, India

20013-2014 Associate Research Scientist, Dept. of Microbiology and Immunology, Columbia University, New York, NY, USA

2014-present Associate Research Scientist, Albany Medical College, Albany, NY 12208, USA

Other Experience and Professional Memberships

Ad-hoc Scientific Reviewer

American Society of Microbiology (ASM) journal, Clinical Vaccine Research, Infection and Immunity, Plos One, JOVE, Editor: GERF Bulletin of Bioscience. ISSN NO: 2229-6433

Professional Societies membership

Society of Mucosal Immunology, Sigma Xi Scientific Research Society, American Society of Microbiology Indian Immunology Society (Life-Membership)

Honors

Awards and Honors

2011 Steven I. Morse Postdoctoral Research Fellowship in Immunology and infectious diseases, USA

2004 Senior Research Fellowship (SRF), Indian Council of Medical Research, Govt. of India, India

2001 National Eligibility Test, University of Grant Commission and Council of Scientific and industrial research (CSIR), India.

2002 Junior Research Fellowship (JRF), Indian Council of Medical Research, Govt. of India,

2001 Graduate Aptitude Test for Engineering (GATE) in Life Science, Indian Institute for Technology, Kanpur (IIT-K), India

C. Current external Funding

Source: Crohn's & Colitis Foundation of America

1/2017- 12/2019

Role: **Principal Investigator**

Funding amount: 174,750 USD for three year

Institution: Department of Molecular and Cellular Physiology, Albany Medical College, Albany, NY

Project Title: Understand the role of IL22 in intestinal Fibrosis

Transfer policy: Allowed to transfer money as a career development grant to other institution

D. Selected Peer-reviewed Publications

1. **Ramkumar Mathur***, Mahabub Maraj Alam, Yuan Liao, Xiao-Feng Zhao, Tingting, Yunfei Huang, Zhu XC. Understand the mTOR/Autophagy signaling in intestinal fibrosis. *Mucosal Immunology*. 2019 Feb 14. doi: 10.1038/s41385-019-0146-4, PMID:30765845 * Corresponding Author
2. Ganesh Ambigapathy[#], Taylor Schmit[#], **Ram Kumar Mathur**, Suba Nila, Saad Bahri, Liise-anne Pirofski, M. Nadeem Khan. IL-17A plays a double-edged role in *Streptococcus pneumoniae* pathogenesis during an influenza virus co-infection (*revising with minor review*, **Journal of Infectious Disease**, April, 2019)
3. Taylor Schmit[#], Ganesh Ambigapathy[#], **Ram Kumar Mathur**, Brenden Jacobson, Ramneek Nakai, Rashid Ahmed, Sumit Ghosh, M. Nadeem Khan. IL-6 deficiency promotes *Streptococcus pneumoniae* pathogenesis during allergic asthma (*In preparation*, **Cell report**)
4. Xiao-Feng Zhao, Liao Yuan, **Ramkumar Mathur**, Shannon Morgan, Zhu XC, Yunfei Huang. Non-inflammatory homeostatic changes of microglia promote the development of spontaneous seizures. **Cell Report**, 2018 Feb 20;22(8):2080-2093
5. **Ramkumar Mathur**, Yuan Liao, Xiaofeng Zhao, Yunfei Huang, Zhu XC. IL23/MTOR Axis in CX3CR1 Residential Macrophages Modulates IL22-Mediated Intestinal Fibrosis **Gastroenterology**, 2017 April, Volume 152 (5). DOI: [http://dx.doi.org/10.1016/S0016-5085\(17\)32176-5](http://dx.doi.org/10.1016/S0016-5085(17)32176-5)
6. Ballesté-Delpierre C, Fàbrega A, Ferrer-Navarro M, **Mathur R**, Ghosh S, Vila J. Attenuation of in vitro host-pathogen interactions in quinolone-resistant *Salmonella Typhi* mutants. **J Antimicrob Chemother**. 2016 Jan;71(1):111-22

7. Khan TH, Srivastava N, Srivastava A, Sareen A, **Mathur RK**, Chande AG, Musti KV, Roy S, Mukhopadhyaya R, Saha B. SHP-1 Plays a Crucial Role in CD40 Signaling Reciprocity. **Journal of Immunology** 2014, 193(7):3644-53
8. Alicia Koblansky, Dragana Jankovic, Sara Hieny, Waradon Sungnak, **Ramkumar Mathur**, Matthew S. Hayden, Shizuo Akira, Alan Sher, and Sankar Ghosh. Recognition of profilin by TLR12 is required for host resistance to *Toxoplasma gondii*. **Immunity** 2013, 38(1):119-30
9. **Ramkumar Mathur**, Hyunju Oh, Zhang D, Sung Gyoo Park, Jin Seo, Alicia Koblansky, Mathew Hayden, Sankar Ghosh. A mouse model to study *Salmonella typhi* infection. **Cell**, 151, 590–602, 2012
10. **Ramkumar Mathur**, Suneeta Krishnareddy, Govind Bhagat, Peter H. Green, Sankar Ghosh, Sa1337 Analysis of Toll-Like Receptor and Defensin Expression in Celiac Disease, **Gastroenterology**, May 2012, Volume 142, Issue 5, Supplement 1, 275
11. **Ramkumar Mathur**, Suneeta Krishnareddy, Zhao-Yuan Wang, Carolina Arguelles-Grande, Govind Bhagat, Peter H. Green, Sankar Ghosh, Sa1338 Characterization of IL-17 Producing Cells in Celiac Disease. **Gastroenterology**, May 2012, Volume 142, Issue 5, Supplement 1, 276
12. Sung Gyoo Park, **Ramkumar Mathur**, Meixiao Long, Matthew S. Hayden, Namiko Hoshi, Liming Hao and Sankar Ghosh. T Regulatory Cells Maintain Intestinal Homeostasis by suppressing $\gamma\delta$ T Cells. **Immunity**, 2010, 33(5):791-803
13. **Ramkumar Mathur**, Awasthi A, Saha B. The conundrum of CD40 function: host protection or disease promotion? **Trends in Parasitology** 2006, 22(3):117-22
14. **Ramkumar Mathur**, Awasthi A, Wadhone P, Ramanamurthy B, Saha B. Reciprocal CD40 signals through p38MAPK and ERK-1/2 induce counteracting immune responses. **Nature Medicine**. 2004, 10(5):540-4
15. Awasthi A, **Mathur R**, Khan A, Joshi BN, Jain N, Sawant S, Boppana R, Mitra D, Saha B. CD40 signaling is impaired in L. major-infected macrophages and is rescued by a p38MAPK activator establishing a hostprotective memory T cell response. **Journal of Experimental Medicine** 2003, 197(8):1037-43
16. Majumder N*, Dey R*, **Mathur RK**, Datta S, Maitra M, Ghosh S, Saha B, Majumdar S. An unusual proinflammatory role of interleukin-10 induced by arabinosylated lipoarabinomannan in murine peritoneal macrophages. **Glycoconjugate journal**. 2006 23(9):675-86
17. Awasthi A, **Mathur RK**, Saha B. Immune response to *Leishmania* infection. **Indian J Med Res**. 2004;119(6):238-58

BOOK CHAPTER

18. Deep Roots, Open Skies, Reciprocal CD40 Signaling through p38map Kinase and ERK-1/2 in *Leishmania* Infection Bhaskar Saha, Amit Awasthi and **Ram Mathur**. 2004 ISBN; 81-7319-604-4
19. CD40 and Toll like Receptors Bridge between the Innate and Adaptive Immune system. **Ram K Mathur**, Sunit Srivastava, Bhaskar Saha. Ranbaxy Science Foundation. 2005. 12: 35- 43

SCIENTIFIC MEETINGS AND PRESENTATIONS

Nov11, 2018	School of Vet Medicine, Long Island University (Oral)
Jan 18, 2018	CCFA Congress, Los Vegas, USA, (Poster)
May 15, 2017	DDW-2017, Chicago, USA. Poster, control ID: 1295519(Poster)
Nov11, 2013	Dept. of Microbiology and Immunology, University of Arkansas (Oral)
July 17 th , 2013	16 th International Mucosal Society Meeting, Vancouver, Canada, (Oral)
Nov11, 2012	Dept. of Microbiology and Immunology, University of Connecticut (Oral)
Oct 9 th , 2012	4 th Young Investigator Scientific Meeting, MIT Cambridge (Oral)
May 19 th , 2012	DDW-2012, San Diego, California, USA. Poster, control ID: 1295519(Poster)
Sept 24-27, 2008	Recognition of bacterial and parasite ligands by TLRs. Toll Meeting Lisbon, Portugal
2004	31 st Annual Conference of Indian Immunology Society, Anna University, Chennai
2004	5 th International Conference on Tropical Diseases and Leishmaniasis, Sir Dorabji TATA Research Center, Indian Institute of Science, Bangalore

Ramkumar Mathur
3/29/2019