

Stanford



Mrinmoy Sanyal

Research Scientist, Biochemistry

Bio

BIO

Mrinmoy Sanyal obtained his undergraduate and master's degree in Human Physiology at the University of Calcutta. He did his Ph.D. in Biochemistry at All India Institute of Medical Sciences, New Delhi, working on reproductive immunology, with the focus on trophoblast invasion and differentiation and their role in human blastocyst implantation. Then, he moved to Stanford University for a postdoctoral fellowship on the role of transcription factor Pbx1, a leukemia proto-oncogene, on B cell development. Currently, he is Research Scientist at Department of Biochemistry, Stanford University. His work covers various topics, including B cell responses to viral infection and vaccination, human primary immunodeficiency, and biology of lymphocyte development and function and to elucidate etiology of immunological disorders.

EDUCATION AND CERTIFICATIONS

- Postdoctoral Fellowship, Stanford University , Immunology
- PhD, All India Institute of Medical Sciences , Biochemistry

Professional

PROFESSIONAL INTERESTS

Immune response to natural infection and viral vaccine

Reverse Vaccinology

Human immunodeficiency

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Academic Editor, PloS One (2018 - present)
- Editorial Advisory Board Member, Pulmonary Therapy (Springer Nature) (2019 - present)
- Editorial Board Member, Public Library of Science (2018 - present)

Publications

PUBLICATIONS

- **A single immunization with spike-functionalized ferritin vaccines elicits neutralizing antibody responses against SARS-CoV-2 in mice.** *bioRxiv : the preprint server for biology*
Powell, A. E., Zhang, K. n., Sanyal, M. n., Tang, S. n., Weidenbacher, P. A., Li, S. n., Pham, T. D., Pak, J. E., Chiu, W. n., Kim, P. S.

2020

- **Adaption of a conventional ELISA to a 96-well ELISA-Array for measuring the antibody responses to influenza virus proteins and vaccines.** *Journal of immunological methods*
Waltari, E. n., Carabajal, E. n., Sanyal, M. n., Friedland, N. n., McCutcheon, K. M.
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- **Human VP8* mAbs neutralize rotavirus selectively in human intestinal epithelial cells.** *The Journal of clinical investigation*
Feng, N., Hu, L., Ding, S., Sanyal, M., Zhao, B., Sankaran, B., Ramani, S., McNeal, M., Yasukawa, L. L., Song, Y., Prasad, B. V., Greenberg, H. B.
2019; 130
- **Diminished B-cell response after repeat influenza vaccination.** *The Journal of infectious diseases*
Sanyal, M., Holmes, T. H., Maecker, H., Albrecht, R. A., Dekker, C. L., He, X., Greenberg, H. B.
2018
- **A Dominant Role for Regulatory T Cells in Protecting Females Against Pulmonary Hypertension.** *Circulation research*
Tamosiuniene, R. n., Manouvakhova, O. n., Mesange, P. n., Saito, T. n., Qian, J. n., Sanyal, M. n., Lin, Y. C., Nguyen, L. P., Luria, A. n., Tu, A. B., Sante, J. M., Rabinovitch, M. n., Fitzgerald, et al
2018
- **VP4-and VP7-specific antibodies mediate heterotypic immunity to rotavirus in humans** *SCIENCE TRANSLATIONAL MEDICINE*
Nair, N., Feng, N., Blum, L. K., Sanyal, M., Ding, S., Jiang, B., Sen, A., Morton, J. M., He, X., Robinson, W. H., Greenberg, H. B.
2017; 9 (395)
- **Selective expansion of human regulatory T cells in nasal polyps, and not adjacent tissue microenvironments, in individual patients exposed to steroids.** *Clinical immunology*
Edward, J. A., Sanyal, M., Le, W., Soudry, E., Ramakrishnan, V. R., Bravo, D. T., Nguyen, A. L., Zarabanda, D., Kingdom, T. T., Hwang, P. H., Garrison Fathman, C., Nayak, J. V.
2017; 179: 66-76
- **Lack of IL7Ra expression in T cells is a hallmark of T-cell immunodeficiency in Schimke immuno-osseous dysplasia (SIOD).** *Clinical immunology*
Sanyal, M., Morimoto, M., Baradaran-Heravi, A., Choi, K., Kambham, N., Jensen, K., Dutt, S., Dionis-Petersen, K. Y., Liu, L. X., Felix, K., Mayfield, C., Dekel, B., Bokenkamp, et al
2015; 161 (2): 355-365
- **Distinct patterns of B-cell activation and priming by natural influenza virus infection versus inactivated influenza vaccination.** *journal of infectious diseases*
He, X., Holmes, T. H., Sanyal, M., Albrecht, R. A., García-Sastre, A., Dekker, C. L., Davis, M. M., Greenberg, H. B.
2015; 211 (7): 1051-1059
- **Peripheral blood-derived mesenchymal stem cells: candidate cells responsible for healing critical-sized calvarial bone defects.** *Stem cells translational medicine*
Li, S., Huang, K., Wu, J., Hu, M. S., Sanyal, M., Hu, M., Longaker, M. T., Lorenz, H. P.
2015; 4 (4): 359-368
- **Systemic prednisone administration selectively alters granulocyte subsets in nasal polyps from aspirin-exacerbated respiratory disease and chronic rhinosinusitis patients.** *International forum of allergy & rhinology*
Edward, J. A., Sanyal, M., Ramakrishnan, V. R., Le, W., Nguyen, A. L., Kingdom, T. T., Hwang, P. H., Nayak, J. V.
2013; 3 (11): 866-876
- **Characterization of human upper airway epithelial progenitors.** *International forum of allergy & rhinology*
Bravo, D. T., Soudry, E., Edward, J. A., Le, W., Nguyen, A. L., Hwang, P. H., Sanyal, M., Nayak, J. V.
2013; 3 (10): 841-847
- **Penetrance of biallelic SMARCA1 mutations is associated with environmental and genetic disturbances of gene expression** *HUMAN MOLECULAR GENETICS*
Baradaran-Heravi, A., Cho, K. S., Tolhuis, B., Sanyal, M., Morozova, O., Morimoto, M., Elizondo, L. I., Bridgewater, D., Lubieniecka, J., Beirnes, K., Myung, C., Leung, D., Fam, et al
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- **PBX1: A Novel Stage-Specific Regulator of Adipocyte Development** *STEM CELLS*
Monteiro, M. C., Sanyal, M., Cleary, M. L., Sengenès, C., Bouloume, A., Dani, C., Billon, N.

2011; 29 (11): 1837-1848

- **CD8(+)**CD44**(hi) but not CD4(+)**CD44**(hi) memory T cells mediate potent graft antilymphoma activity without GVHD** *BLOOD*
Dutt, S., Baker, J., Kohrt, H. E., Kambham, N., Sanyal, M., Negrin, R. S., Strober, S.
2011; 117 (11): 3230-3239
- **CD81 protein is expressed at high levels in normal germinal center B cells and in subtypes of human lymphomas** *HUMAN PATHOLOGY*
Luo, R. F., Zhao, S., Tibshirani, R., Myklebust, J. H., Sanyal, M., Fernandez, R., Gratzinger, D., Marinelli, R. J., Lu, Z. S., Wong, A., Levy, R., Levy, S., Natkunam, et al
2010; 41 (2): 271-280
- **Enhanced B cell activation in the absence of CD81** *INTERNATIONAL IMMUNOLOGY*
Sanyal, M., Fernandez, R., Levy, S.
2009; 21 (11): 1225-1237
- **Wiskott-Aldrich syndrome protein is an effector of Kit signaling** *BLOOD*
Mani, M., Venkatasubrahmanyam, S., Sanyal, M., Levy, S., Butte, A., Weinberg, K., Jahn, T.
2009; 114 (14): 2900-2908
- **Pbx/Meis deficiencies demonstrate multigenetic origins of congenital heart disease** *CIRCULATION RESEARCH*
Stankunas, K., Shang, C., Twu, K. Y., Kao, S., Jenkins, N. A., Copeland, N. G., Sanyal, M., Selleri, L., Cleary, M. L., Chang, C.
2008; 103 (7): 702-709
- **B-cell development fails in the absence of the Pbx1 proto-oncogene** *BLOOD*
Sanyal, M., Tung, J. W., Karsunky, H., Zeng, H., Selleri, L., Weissman, I. L., Herzenberg, L. A., Cleary, M. L.
2007; 109 (10): 4191-4199
- **Leukemia proto-oncoprotein MLL forms a SET1-like histone methyltransferase complex with menin to regulate Hox gene expression** *MOLECULAR AND CELLULAR BIOLOGY*
Yokoyama, A., Wang, Z., Wysocka, J., Sanyal, M., Aufero, D. J., Kitabayashi, I., Herr, W., Cleary, M. L.
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- **The TALE homeodomain protein pbx2 is not essential for development and long-term survival** *MOLECULAR AND CELLULAR BIOLOGY*
Selleri, L., DiMartino, J., van Deursen, J., Brendolan, A., Sanyal, M., Boon, E., Capellini, T., Smith, K. S., Rhee, J., Popperl, H., GROSVELD, G., Cleary, M. L.
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- **K252a, a high-affinity nerve growth factor receptor blocker, improves psoriasis: An in vivo study using the severe combined immunodeficient mouse-human skin model** *JOURNAL OF INVESTIGATIVE DERMATOLOGY*
Raychaudhuri, S. R., Sanyal, M., Weltman, H., Kundu-Raychaudhuri, S.
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- **Severe combined immunodeficiency mouse-human skin chimeras: a unique animal model for the study of psoriasis and cutaneous inflammation** *BRITISH JOURNAL OF DERMATOLOGY*
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- **Localization of nitric oxide synthase in human trophoblast cells: Role of nitric oxide in trophoblast proliferation and differentiation** *AMERICAN JOURNAL OF REPRODUCTIVE IMMUNOLOGY*
Sanyal, M., Nag, T. C., Das, C.
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- **Immunomodulators in Human Trophoblast-Uterus Cross Talk: Cytokines, Growth Factors and nitric oxide.** *Reproductive Immunology*
Sanyal, M.
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Narosa Publishing House.1999; 1 st: 99-109
- **Expression of Inducible and Neuronal Nitric Oxide Synthase in 20-Methyl Cholanthrene (20-MCA) Induced Fibrosarcoma.** *Indian Journal Pharmacology*
Sengupta, S., Sanyal, M., Kochupillai, V., Gupta, S. K.
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- **Collagenase-IV in human trophoblast invasion and differentiation** *4th International Symposium on Biochemical Role of Eukaryotic Cell Surface Macromolecules*
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