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Research Scientist (Clinical & Translational Medicine)
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Summary

- Domain Knowledge:** Experienced in designing clinical and translational studies using skills in health informatics, data science, study design, data analysis (using SAS, R, and Python) and data visualization in Tableau, clinical informatics, biomedical informatics, and molecular biology. Practiced intensive care medicine (especially in cardiothoracic, neurology) for 10 years.
- Statistics Skills:** Skilled in SAS, and R-programing/Python. Examples:
 - Disease Progression Model:** <https://rpubs.com/singhuh1/dpm>
 - Unsupervised Learning Methods:** <https://singhuh.github.io/uslbt/>
- Business Management Information Systems Knowledge and Skills:**
 - Certified in business administration, and skilled in information system applications using tools such as XML, big data integration, systems design
 - Presented at international conferences and publish research work in high-impact peer-reviewed journals on factors related to early hospital readmissions with a primary diagnosis of asthma using SAS, R-programming.
<https://www.sciencedirect.com/science/article/pii/S2213219818304483?via%3Dihub#abssec0010>.
- Goals:** Interested in application of skills in IoT integration into clinical informatics for investigating mechanism of disease and building clinical intelligence; developing clinical intelligence for efficient management of disease

Education and Professional Development

College Name	Degree / Certification	Degree Date
University of Calcutta, India	Bachelor of Medicine & Surgery	1997 / March
University of Cincinnati, USA	Master of Health Informatics	2016 / December
University of Cincinnati, USA	Master of Business Administration	2017 / April
University of Cincinnati, USA	Master of Public Health (Biostatistics)	2018 / December
University of Cincinnati, USA	Master of Science, Information Systems (Data Science)	2020 / December (expected)
SAS Institute, Cary, NC, USA	Certified Clinical Trials Programmer	2014 / October
SAS Institute, Cary, NC, USA	Certified Advanced SAS Programmer	2014 / October
SAS Institute, Cary, NC, USA	Certified Statistical Business Analyst	2014 / October

Work Experiences

Organization	Title	Date
University of Cincinnati, Cincinnati, USA	Research Scientist <i>Design and analyze clinical studies to determine mechanisms of disease; Use machine learning methods to develop predictive models of disease outcomes or clinical efficacy of interventions in clinical trials. Analyze and published results on big datasets from University of Cincinnati Hospitals.</i>	2012- present
University of Cincinnati, Cincinnati, USA	Research Assistant <i>Designed and analyzed research studies to determine exposures to fine microbial particles in domestic and work environments related to development of pediatric asthma with aims to determine specific hazard or protective factors. Extensively used SAS programming language in my research thesis to analyze and interpret the graduate research data.</i>	2007-2012
	Intensivist, Cardiothoracic Intensive Care	2002-2007

Advanced Medicare Research Institute, Calcutta, India	<i>Manage patients with coronary artery bypass grafts, heart valve replacement and congenital heart disease reconstructive surgery</i>	
Apollo Gleneagles Hosp., Calcutta, India	Intensivist, Cardiothoracic Intensive Care	2005-2007
Calcutta Medical Research Institute, Calcutta, India	Intensivist, Critical Care	1999-2003
	<i>Manage patients with complicated medical and surgical conditions in the intensive care units</i>	

Employment Eligibility

Can work for any company without sponsorship.

Research Publications

- Benralizumab for Chronic Spontaneous Urticaria. Bernstein JA, **Singh U**, Rao MB, Berendts K, Zhang X, Mutasim D. N Engl J Med. 2020 Oct 1;383(14):1389-1391. doi: 10.1056/NEJMc2016395. PMID: 32997916.
- Clinical use of biologics for asthma treatment by allergy specialists: A questionnaire survey. Kuruvilla M, Ariue B, Oppenheimer JJ, **Singh U**, Bernstein JA. Ann Allergy Asthma Immunol. 2020 Jul 3:S1081-1206(20)30445-2. doi: 10.1016/j.anai.2020.06.041. PMID: 32629016
- Association Between Self-Reported Dental Hygiene Practices and Dental Procedure-Related Recurrent Angioedema Attacks in HAE Subjects: A Multicenter Survey. **Singh U**, Lumry WR, Busse P, Wedner HJ, Banerji A, Craig TJ, Li HH, Tachdjian R, Jacobs JS, Riedl MA, Davis-Lorton M, Christiansen SC, Zuraw BL, Bernstein JA. J Allergy Clin Immunol Pract. 2020 Jun 10:S2213-2198(20)30582-1. doi: 10.1016/j.jaip.2020.05.041. PMID: 32534150
- Chronic Rhinitis Is a High-Risk Comorbidity for 30-Day Hospital Readmission of Patients with Asthma and Chronic Obstructive Pulmonary Disease. **Singh U**, Wangia-Anderson V, Bernstein JA. J Allergy Clin Immunol Pract. 2019 Jan;7(1):279-285.e6. doi: 10.1016/j.jaip.2018.06.029. Epub 2018 Jul 25. PMID: 30053594
- An Atypical Presentation of Pediatric Acute Neuropsychiatric Syndrome Responding to Plasmapheresis Treatment. Barzman DH, Jackson H, **Singh U**, Griffey M, Sorter M, Bernstein JA. Case Rep Psychiatry. 2018 Jun 28;2018:8189067. doi: 10.1155/2018/8189067. eCollection 2018. PMID: 30050718
- A Pilot Study Investigating Clinical Responses and Biological Pathways of Azelastine/Fluticasone in Nonallergic Vasomotor Rhinitis before and after Cold Dry Air Provocation. **Singh U**, Bernstein JA, Lorentz H, Sadoway T, Nelson V, Patel P, Salapatek AM. Int Arch Allergy Immunol. 2017;173(3):153-164. doi: 10.1159/000478698. Epub 2017 Aug 9. PMID: 28787742 Clinical Trial.
- Incidence of postoperative nausea and vomiting following gynecological laparoscopy: A comparison of standard anesthetic technique and propofol infusion. Bhakta P, Ghosh BR, **Singh U**, Govind PS, Gupta A, Kapoor KS, Jain RK, Nag T, Mitra D, Ray M, Singh V, Mukherjee G. Acta Anaesthesiol Taiwan. 2016 Dec;54(4):108-113. doi: 10.1016/j.aat.2016.10.002. Epub 2016 Dec 23. PMID: 28024715 Clinical Trial.
- Clinical associations in the diagnosis of vocal cord dysfunction. Li RC, **Singh U**, Windom HP, Gorman S, Bernstein JA. Ann Allergy Asthma Immunol. 2016 Oct;117(4):354-358. doi: 10.1016/j.anai.2016.08.002. Epub 2016 Aug 31. PMID: 27590638
- Neural Abnormalities in Nonallergic Rhinitis. Bernstein JA, **Singh U**. Curr Allergy Asthma Rep. 2015 Apr;15(4):18. doi: 10.1007/s11882-015-0511-7. PMID: 26130469 Review.
- Azelastine desensitization of transient receptor potential vanilloid 1: a potential mechanism explaining its therapeutic effect in nonallergic rhinitis. **Singh U**, Bernstein JA, Haar L, Luther K, Jones WK. Am J Rhinol Allergy. 2014 May-Jun;28(3):215-24. doi: 10.2500/ajra.2014.28.4059. PMID: 24980233
- A cross-sectional questionnaire assessing patient and physician use of short-term prophylaxis for hereditary angioedema. Nanda MK, **Singh U**, Wilmot J, Bernstein JA. Ann Allergy Asthma Immunol. 2014 Aug;113(2):198-203. doi: 10.1016/j.anai.2014.05.009. Epub 2014 Jun 11. PMID: 24928306
- Probenecid as a noninjurious positive inotrope in an ischemic heart disease murine model. Koch SE, Tranter M, Robbins N, Luther K, **Singh U**, Jiang M, Ren X, Tee T, Smith L, Varma P, Jones WK, Rubinstein J. J Cardiovasc Pharmacol Ther. 2013 May;18(3):280-9. doi: 10.1177/1074248412469299. Epub 2012 Dec 14. PMID: 23241275
- Influence of home characteristics on airborne and dustborne endotoxin and β -D-glucan. **Singh U**, Levin L, Grinshpun SA, Schaffer C, Adhikari A, Reponen T. J Environ Monit. 2011 Nov;13(11):3246-53. doi: 10.1039/c1em10446b. Epub 2011 Oct 19. PMID: 22012201
- Comparison of workplace protection factors for different biological contaminants. Cho KJ, Reponen T, McKay R, Dwivedi A, Adhikari A, **Singh U**, Shukla R, Jones S, Jones G, Grinshpun SA. J Occup Environ Hyg. 2011 Jul;8(7):417-25. doi: 10.1080/15459624.2011.585094. PMID: 21732855
- Effect of particle size on respiratory protection provided by two types of N95 respirators used in agricultural settings. Cho KJ, Jones S, Jones G, McKay R, Grinshpun SA, Dwivedi A, Shukla R, **Singh U**, Reponen T. J Occup Environ Hyg. 2010 Nov;7(11):622-7. doi: 10.1080/15459624.2010.513910. PMID: 20835946
- Visually observed mold and moldy odor versus quantitatively measured microbial exposure in homes. Reponen T, **Singh U**, Schaffer C, Vesper S, Johansson E, Adhikari A, Grinshpun SA, Indugula R, Ryan P, Levin L, Lemasters G. Sci Total Environ. 2010 Oct 15;408(22):5565-74. doi: 10.1016/j.scitotenv.2010.07.090. PMID: 20810150