

Kishore R. Anekalla

Chicago, IL

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EDUCATION:

- **Northwestern University** Chicago, IL
Ph.D. – Div. of Pulmonary and Critical Care; Fellowship: Cugell Fellowship Sept. 2017 - Present
- **The University of Texas at El Paso** El Paso, TX
M.S. – Bioinformatics; GPA:3.65/4.0 Aug. 2014 - Dec. 2015
- **Jawaharlal Nehru Technological University** Hyd, INDIA
Master of Pharmacy, GPA – 4.0/4.0 Sept. 2010 - Oct. 2012
- **Osmania University** Hyd, INDIA
Bachelor of Pharmacy, GPA – 3.8/4.0 Oct. 2006 - Jun. 2010

EXPERIENCE:

Northwestern University Chicago, IL
PhD Candidate, Bioinformatics track Sep. 2017 - present

- Identifying transcriptional differences during influenza infection using mouse models
- Using Single cell RNA-seq to understand cellular dynamics in pulmonary fibrosis
- Characterize key transcription level molecular mechanisms during flu in aging mice
- RNA-seq analysis of nasal swabs from pediatric patients
- Identifying differentially methylated regions based on entropy from methylation data
- Brain tumor patient sample classification based on non-negative matrix factorization for isoform and gene level expression data from microarray experiments

Northwestern University Chicago, IL
Bioinformatics Analyst Feb. 2016 - Sep. 2017

- Building pipelines for whole genome bisulphite sequencing (WGBS) analysis, Single cell RNA-seq and bulk RNA-seq analysis
- Using bioinformatic algorithms to perform various statistical analysis on genomics data
- Provide analysis, interpretation and publication quality reports of data to collaborators
- Create web-based bioinformatics tools and applications (R Shiny)
- Data mining using various publicly available databases

Northwestern University Chicago, IL
Summer Intern Jun. 2015 - Jul. 2015

- Differential expression analysis of Next Generation Sequencing data (RNA-Seq)
- Gene network analysis using Cytoscape
- Pathway analysis using Metacore, Gorilla and DAVID
- Data retrieval and analysis of human lung data from GTEx consortium

Lupin Limited (Research Park) Pune, India
Research Associate, Oct. 2012 – Jul. 2014

- Planning, designing and implementation of end to end Design of Experiments for robust product/process development from conceptual stage for tablets and capsules for new chemical entities
- Optimizing critical process parameters and developed scale up correlations to improve product development from research lab level to production level
- Provided documentation and statistical support for QbD based product filing for USFDA
- Optimized dry compression-based tablet formulation for immediate release of Rosuvastatin

Dr. Reddy's Laboratories Hyd., India
Drug Formulation Intern, Dec.-2011 -Aug. 2012

- Formulation and evaluation of Controlled Porosity Osmotic Pump of an Antihypertensive drug

SELECTED PUBLICATIONS

1. Reyfman, P. A., Walter, J. M., Joshi, N., **Anekalla, K. R.**, McQuattie-Pimentel, A. C., Chiu, S., ... & Verma, R. (2018). Single-cell transcriptomic analysis of human lung provides insights into the pathobiology of pulmonary fibrosis. *American journal of respiratory and critical care medicine*, (ja).
2. Walter, J. M., Ren, Z., Yacoub, T., Reyfman, P. A., Shah, R. D., Abdala-Valencia, H., **Anekalla, K. R.**, ... & McQuattie-Pimentel, A. C. (2019). Multidimensional assessment of the host response in mechanically ventilated patients with suspected pneumonia. *American journal of respiratory and critical care medicine*, 199(10), 1225-1237.
3. McGrath-Morrow, S. A., Ndeh, R., Helmin, K. A., Chen, S. Y., **Anekalla, K. R.**, Abdala-Valencia, H., ... & Singer, B. D. (2018). DNA methylation regulates the neonatal CD4+ T-cell response to pneumonia in mice. *Journal of Biological Chemistry*, 293(30), 11772-11783.
4. Magnani, N. D., Dada, L. A., Queisser, M. A., Brazee, P. L., Welch, L. C., **Anekalla, K. R.**, ... & Iwai, K. (2017). HIF and HOIL-1L-mediated PKC ζ degradation stabilizes plasma membrane Na, K-ATPase to protect against hypoxia-induced lung injury. *Proceedings of the National Academy of Sciences*, 201713563.
5. Misharin, A.V., Morales-Nebreda, L., Reyfman, P.A., Cuda, C.M., Walter, J.M., McQuattie-Pimentel, A.C., Chen, C.I., **Anekalla, K.R.**, Joshi, N., Williams, K.J. and Abdala-Valencia, H., 2017. Monocyte-derived alveolar macrophages drive lung fibrosis and persist in the lung over the life span. *Journal of Experimental Medicine*, 214(8), pp.2387-2404.
6. PubRunner: A light-weight framework for updating text mining results. **Anekalla, K.R.** et.al, **F1000 research**, 2017,6-612.
7. Zheng, Z., Chiu, S., Akbarpour, M., Sun, H., Reyfman, P.A., **Anekalla, K.R.**, Abdala-Valencia, H., Edgren, D., Li, W., Kreisel, D. and Korobova, F.V., 2017. Donor pulmonary intravascular nonclassical monocytes recruit recipient neutrophils and mediate primary lung allograft dysfunction. *Science Translational Medicine*, 9(394), p.eaal4508.

AWARDS

- David W. Cugell fellowship from Division of Pulmonary and Critical Care at Northwestern University
- Received research excellence award in Bioinformatics, The University of Texas at El Paso

TEACHING EXPERIENCE

- Instructor for summer workshop on Python (Numpy/Scipy), Northwestern University, August 2018
- Teaching Assistant in Department of Biology, University of Texas at El Paso, Sep 2014 – Dec 2015

SKILLS

- **Data Analysis:** Experimental design, Times series analysis, multivariate statistics
- **Machine Learning:** Unsupervised clustering, Semi-supervised clustering, feature engineering
- **NGS:** Single cell and bulk RNA-seq analysis, samtools,
- **Programming:** R (Bioconductor, tidyverse, stats,ggplot), Python (scipy, pandas), SQL, bash, git
- **Experimental Biology:** Western blotting, RNA-seq, RT-PCR

MEMBERSHIPS:

- American Thoracic Society (ATS)
- American Heart Association (AHA)
- Pharmacy Council of India (PCI)

SERVICE

- **Peer Reviewer:** Journal of cellular physiology
- **Vice President:** Biomedical informatics student group (BIDS, Chicago Campus)
- **StAMP Mentor:** student-to-student mentoring program