

# Ashutosh Singhal, M.Sc., Ph.D.

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## Current Position(s)

Director, Medical Research, Development and Strategy  
The Data Science Institute  
Meharry Medical College  
Nashville, TN

## Education

<b>Data Science Boot Camp</b> Nashville Software School, Nashville, TN	2018–2019
<b>Principles and Practice of Clinical Research</b> NIH Clinical Center	2018–2019
<b>Ph.D. Biochemistry</b> Central Drug Research Institute, Lucknow, India Jawaharlal Nehru University, New Delhi, India	2003–2009
<b>M.Sc. Microbiology</b> Gurukula Kangri University, Haridwar, India	2000–2002
<b>B.Sc. (Industrial Microbiology, Chemistry, Botany)</b> Kurukshetra University, Kurukshetra, India	1997–2000

## Academic Appointments

<b>Director, Medical Research, Development and Strategy</b> The Data Science Institute Meharry Medical College Nashville, TN	2020–Present
<b>Medical Research Data Scientist</b> The Data Science Institute Meharry Medical College Nashville, TN	2020–2020
<b>Postdoctoral/Research Associate</b> Meharry Medical College Nashville, TN	2014–2019
<b>Postdoctoral Research Associate</b> University of North Texas Health Science Center Fort Worth, TX	2009–2014

**Senior Research Fellow**

Central Drug Research Institute  
Lucknow, Uttar Pradesh, India

2005–2009

**Junior Research Fellow**

Central Drug Research Institute  
Lucknow, Uttar Pradesh, India

2003–2005

## Professional Positions and Experience

**Director, Medical Research, Development and Strategy**

The Data Science Institute  
Meharry Medical College  
Nashville, TN

2020–Present

**Medical Research Data Scientist**

The Data Science Institute  
Meharry Medical College  
Nashville, TN

2020–2020

## Certification and Licensure

**Data Science Boot Camp**

Nashville Software School, Nashville, TN

**Principles and Practice of Clinical Research Certificate**

NIH Clinical Center

**Certificate in Scientific Writing**

Stanford Lagunita- Stanford University

## Professional Development

### Professional Memberships and Activities

**Associate Member**, American Association for Cancer Research

2014–Present

**Life Member**, Indian Society for Parasitology

2007–Present

**Associate Member**, American Society of Biochemistry and Molecular Biology

2014–2015

**Member**, American Heart Association

2014–2015

**Regular Member**, Society for Neuroimmune Pharmacology

2010–2014

**Vice-President**, Post-doctoral Research Association, UNTHSC, Fort Worth, TX

2010–2012

## **Editorial Board Appointments**

### **Consulting Editor and Reviewer:**

International Journal of Nanomedicine

### **Reviewer:**

Journal of Immunology Research

Laboratory Investigations

Plos One

Oncotarget and Therapy

Cancer medicine

International Journal of HIV/AIDS and Research

Advances in Molecular Biology

### **Ph.D. Thesis Reviewer:**

College of Pharmacology; Maharishi Markandeshwar University, Mullana, India

## **Committee Assignments and Administrative Services**

**Abstract-reviewer**, Annual Biomedical Conference for Minority Students-Tampa, FL

**Poster judge**, 60<sup>th</sup> Annual Student Research Day, MMC, Nashville, TN

**Poster judge**, The 7<sup>th</sup> Annual Texas Conference on Health Disparities, UNTHSC, Fort Worth

**Poster judge**, North Texas High Undergrad and School Research Symposium, Fort Worth

**Vice-President**, Elected twice, Post-doctoral Research Association, UNTHSC, Fort Worth, TX

## **Clinical / Quality Improvement Activities**

### **MMC Quality Improvement/Compliance and PCMH Meeting**

Monthly meeting to discuss the quality improvement at clinic, operations, care delivery, patient outcomes. Consent and compliance. Leading data analytics and dashboards for care gaps including providing training on DISCOVER tools.

### **Clinical data exchange to providers.**

Reviewing data pull requests, data exchange and other data governance issues and compliance. Managing tech team for health information exchange, operation and infrastructure development.

**Patient-Centered Outcomes Research Network (PCORnet):** The CTRC's Dr. Rajbir Singh is the principal investigator and the I am co-investigating this effort. I am responsible managing clinical data operations, data mapping or data variables issues, and coordinate with health IT managers, clinical coordinators and secure network teams. I am also responsible for interfacing with MMC systems and EHR databases to populate and maintain the CDM, validate data integrity, and serve as the primary governance and data manager. Additionally, as a member of leadership team, I interface with other team members at MMG as well as the Midsouth CDRN network.

**eMERGE:** Data mapping and data share (arrhythmia study published at conference- 2 abstracts)

### **Feasibility studies and technical support to clinical trials/Study**

Supporting feasibility of retrospective and prospective clinical study and clinical trials. COVID-19, Osteoporosis, Stroke, Surgical visits, Phased Large Awards for Comparative Effectiveness Research, The GUARD Trial for kidney.

### **Educational Activities**

#### **Developing a curriculum for DISCOVER training**

Considering the researcher's specialized areas of research, specific need and level of understanding Discover training was divided into three modules:

*Module 1:* How to create patient cohorts, learn how to apply filters and generate a basic report. Leaving the user to do some practice and come up with some questions and troubles.

*Module 2:* How to compare cohorts, extensive use of filters and different types of apps, and generate multiple reports using the report feature.

*Module 3:* Getting insight from the reports and going deep into the question/hypothesis. Play with multiple/complicated cohorts, filters and apps and generate detail reports.

#### **Webinar and Training**

##### **How to use DISCOVER tools to utilize patient's health record at Meharry:**

- Designed a training seminar and use case to train building patient cohorts, run analysis and building up research hypothesis.
- Trained group of diverse audience including clinical coordinators, manager, administrators, physicians and students.
- Identified ways to measure quality of care to better inform managers using DISCOVER tool.
- How to build cohorts with COVID-19 underlying conditions susceptible to severe symptoms and high-risk underserved patients at the beginning of pandemic.

May 2020: Training and project development  
Correlation of cancer and stress/neurological/mental disorder.  
Dr. Anil Shanker (Professor)  
Dr. Akiko Shimamoto (Associate Professor)

June 2020: Training, project development, troubleshooting and supervising  
Analysis of chronic disease patient's cohort in reference to COVID-19.  
Dr. Girish Rachakonda (Instructor)  
Terry Henry (1st year Medical Student)

July 2020: Training and troubleshooting  
Analysis of Tele-medicine users Meharry Medical Group in past 6 months during COVID-19.  
Dr. Im Wansoo (Associate Professor)  
Geryn T. Hasty (Medical Student)

May 15, 2020: College-wide Patient Center Medical Home (CWPCMH-Webinar)  
Discover Tool use in Tracking COVID-19 Patients  
Webinar organized and hosted by Dr. Patricia Matthews-Juarez and Renee S. Frazier  
Total invited to the webinar = 50 total, attended 25.

## Seminars

### Work-in-progress and journal clubs' seminars

Throughout at all academic levels, I have actively participated and presented a number of presentations in departmental work-in-progress and journal clubs.

## Laboratory Teaching

### One-on-One Sessions

I served as a scientific mentor to teach research methods, laboratory research and project development to several undergraduate researchers who conducted research projects in the laboratory. Each of these individuals have either continued on with post-graduate training or are completing their undergraduate education.

Stephen Frimpong (Medical Student, Meharry Medical College)	2018
Ariana Rendrick (Graduate Student, Meharry Medical College)	2017
Alicia Garcia (Undergraduate Student, Meharry Medical College)	2016–Summer
Tracy Taylor (Undergraduate Student, Meharry Medical College)	2013–Summer
Mayuri Thete (Undergraduate Student, University of North Texas Health Science Center, Fort Worth TX)	2014
Neha Vertak (Graduate Student, University of North Texas Health Science Center, Fort Worth TX)	2010–2013
Manmeet Kaur (Graduate Student, University of North Texas Health Science Center, Fort Worth TX)	2010–2013
Neeti Kumari (Graduate Student, Central Drug Research Institute, India)	2008–2009
Ravinder (Graduate Student, Central Drug Research Institute, India)	2004–2009
Kirtika Prakash (Graduate Student, Central Drug Research Institute, India)	2005–2007

## Honors and Awards

<b>Best poster presentation, 1st Prize</b> Annual Scientific Retreat Vanderbilt Ingram Cancer Center, Vanderbilt University, Nashville, TN	2017
<b>Arthur Falek Young Investigator Award, Best Poster Award, 2<sup>nd</sup> place</b> 19 <sup>th</sup> SNIP Conference, San Juan, PR	2013
<b>Early Career Investigator Travel Award</b> National Institute of Drug Abuse, NIH-AAPI 19 <sup>th</sup> SNIP Conference, San Juan, PR	2013
<b>Early Career Investigator Conference Award</b> National Institute of Drug Abuse, NIH-AAPI 18 <sup>th</sup> SNIP Conference, Hawaii	2012

**Best poster award, 2<sup>nd</sup> place**

Postdoc Appreciation Day 2011  
University of North Texas Health Science Center, Fort Worth, TX

**Prof. M.B. Mirza Award**

Indian Society for Parasitology, India 2007

**Young Scientist Award Nominee**

Indian Society for Parasitology, India 2006

**National Level Competitive Fellowships**

**Senior Research Fellowship Award**

Council of Industrial Research, India 2005–2008

**Junior Research Fellowship Award**

Council of Industrial Research, India 2003–2005

**National Eligibility Test (NET) for Junior Research Fellowship**

Council of Industrial Research-University Grant Commission, India 2002

**Junior Research Fellowship National Eligibility Test**

Indian Council of Medical Research, India 2002

**Grants and Contract Awards**

**Ongoing Research Support**

**PCORI, PCORnet®**

The National Patient-Centered Clinical Research Network  
Conduct health research, creating a large, highly representative network for conducting clinical outcomes research.

Role: Co-Investigator and member of Tech and Leadership Team

**COVID-19 Vaccine Hesitancy and Health Equity**

Predictive modeling of social determinants of health and socially vulnerable index to investigate COVID-19 vaccine hesitancy and assessing health policy

Funded by Blue Cross Blue Shields of Tennessee (BCBST)

Role: Co-Investigator

**Past Research Support**

**1SC1CA182843-01A1, NIH/NCI/NIGMS**

Dr. Anil Shanker (PI)

07/12/13-06/30/17

Defining the effects of bortezomib on NK cell activation in cancer

Role: Research Associate (100% effort)

**1R21CA181920-01**, NIH/NCI

Dr. Gautam Chaudhuri (PI)

08/05/14-07/31/16

Manipulation of macrophage Alu RNA metabolism by breast cancer cells

Role: Postdoctoral Research Associate (100% effort)

**1R01 NS048837**, NIH/NINDS

Dr. Anuja Ghorpade (PI)

02/01/05-04/04/19

Neuronal Survival, HIV-1 and Astrocyte-TIMP-1

Role: Postdoctoral Research Associate (50% effort)

**1R01 NS070896**, NIH/NINDS

Dr. Vinod D. Labhassetwar (PI)

06/01/11-05/31/16

Stroke Therapy

Role: Postdoctoral Research Associate (50% effort)

## Publications

### Projects/apps published available online

**1. Simple Linux Utility for Resource Management (SLURM) Scheduling:** Advance Computing Center for Research and Education (ACCRE) at Vanderbilt University had query related with submitting and monitoring jobs on ACCRE's Vampire cluster. Analyzed one year of time-series data from SLURM, a software for submitting, scheduling, and monitoring jobs on large compute clusters.

*Analyzed following questions:*

- i. As you request more RAM, how does that impact your queue time?
- ii. As you request more wall time, how does that impact your queue time?
- iii. Are there nodes that fail more often than others?
- iv. Are there users who are clogging up the flow by running too many small jobs? Greater than 500 jobs, each less than 5 minutes, within 4 hours?

*Link of Repository:* <https://github.com/Ashutosh-Singhal/SLURM-Analysis-Vanderbilt>

**2. Cancer and Determinants of Health in the Southern USA:** Found that over 75% of counties in southern US have disproportionally higher rate of cancer deaths compared to the national average. Created an interactive county level map of cancer burden to visualize and gain insight. Developed machine learning models and identified key socio-economical and health behavioral factors associated with greater burden of cancer in counties.

*Link of Repository:* [https://github.com/Ashutosh-Singhal/Cancer\\_Social\\_health\\_determinants](https://github.com/Ashutosh-Singhal/Cancer_Social_health_determinants)

**3. Does Health Insurance Status/Type Affect Early Diagnosis of Cancer?** Analyzed data of all cancer types from 2007 to 2016 and found that patients with no insurance or government-sponsored insurance had higher percentage of late-stage diagnosis than patients with private insurance. Private insurance provided better chance of early detection of cancer; however, with launch of Affordable Care Act (ObamaCare), early diagnosis of cancer increased by ~10% with government-sponsored insurance.

*Link of app:* [http://ashutosh-singhal.shinyapps.io/cancerstage\\_insurancetype](http://ashutosh-singhal.shinyapps.io/cancerstage_insurancetype)

**4. Opioid Crisis:** This project sought to visualize the problem as it relates to opioid prescriptions. Analyzed the prescribing habits of a sample of 25,000 American doctors in 2014. We searched for insights and answers to how prescription opioids are linked to opioid deaths.

Link of app: [https://ashutosh-singhal.shinyapps.io/OpioidCrisis\\_Shiny\\_App/](https://ashutosh-singhal.shinyapps.io/OpioidCrisis_Shiny_App/)

#### Peer-reviewed publications

1. Chandra N, Ramesh, **Ashutosh**, Goyal N, Suryawanshi SN, Gupta S. Antileishmanial agents part-IV: synthesis and antileishmanial activity of novel terpenyl pyrimidines. Eur J Med Chem. 2005 Jun;40(6):552-6. doi: 10.1016/j.ejmech.2005.01.004. PubMed PMID: 16003841.
2. **Ashutosh**, Gupta S, Ramesh, Sundar S, Goyal N. Use of Leishmania donovani field isolates expressing the luciferase reporter gene in in vitro drug screening. Antimicrob Agents Chemother. 2005 Sep;49(9):3776-83. doi: 10.1128/AAC.49.9.3776-3783.2005. PubMed PMID: 16131481; PubMed Central PMCID: PMC1195392.
3. Agarwal A, Ramesh, **Ashutosh**, Goyal N, Chauhan PM, Gupta S. Dihydropyrido[2,3-d]pyrimidines as a new class of antileishmanial agents. Bioorg Med Chem. 2005 Dec 15;13(24):6678-84. doi: 10.1016/j.bmc.2005.07.043. Epub 2005 Aug 26. PubMed PMID: 16126395.
4. Mittal MK, Rai S, **Ashutosh**, Ravinder, Gupta S, Sundar S, Goyal N. Characterization of natural antimony resistance in Leishmania donovani isolates. Am J Trop Med Hyg. 2007 Apr;76(4):681-8. PubMed PMID: 17426170.
5. **Ashutosh**, Kou W, Cotter R, Borgmann K, Wu L, Persidsky R, Sakhuja N, Ghorpade A. CXCL8 protects human neurons from amyloid- $\beta$ -induced neurotoxicity: relevance to Alzheimer's disease. Biochem Biophys Res Commun. 2011 Sep 9;412(4):565-71. doi: 10.1016/j.bbrc.2011.07.127. Epub 2011 Aug 5. PubMed PMID: 21840299; PubMed Central PMCID: PMC3236067.
6. Singhal J, Nagaprashantha LD, Vatsyayan R, **Ashutosh**, Awasthi S, Singhal SS. Didymin induces apoptosis by inhibiting N-Myc and upregulating RKIP in neuroblastoma. Cancer Prev Res (Phila). 2012 Mar;5(3):473-83. doi: 10.1158/1940-6207.CAPR-11-0318. Epub 2011 Dec 15. PubMed PMID: 22174364; PubMed Central PMCID: PMC3294094.
7. **Ashutosh**, Garg M, Sundar S, Duncan R, Nakhasi HL, Goyal N. Downregulation of mitogen-activated protein kinase 1 of Leishmania donovani field isolates is associated with antimony resistance. Antimicrob Agents Chemother. 2012 Jan;56(1):518-25. doi: 10.1128/AAC.00736-11. Epub 2011 Nov 7. PubMed PMID: 22064540; PubMed Central PMCID: PMC3256019.
8. **Ashutosh**, Chao C, Borgmann K, Brew K, Ghorpade A. Tissue inhibitor of metalloproteinases-1 protects human neurons from staurosporine and HIV-1-induced apoptosis: mechanisms and relevance to HIV-1-associated dementia. Cell Death Dis. 2012 Jun 28;3:e332. doi: 10.1038/cddis.2012.54. PubMed PMID: 22739984; PubMed Central PMCID: PMC3388228. (\*Recommended by F1000: doi:10.3410/f.717953958.793459479)
9. **Singhal A**, Morris VB, Labhsetwar V, Ghorpade A. Nanoparticle-mediated catalase delivery protects human neurons from oxidative stress. Cell Death Dis. 2013 Nov 7;4:e903. doi: 10.1038/cddis.2013.362. PubMed PMID: 24201802; PubMed Central PMCID: PMC3847304.



10. Pellom ST Jr, Dudimah DF, Thounaojam MC, Uzhachenko RV, **Singhal A**, Richmond A, Shanker A. Bortezomib augments lymphocyte stimulatory cytokine signaling in the tumor microenvironment to sustain CD8<sup>+</sup>T cell antitumor function. *Oncotarget*. 2017 Jan 31;8(5):8604-8621. doi: 10.18632/oncotarget.14365. PubMed PMID: 28052005; PubMed Central PMCID: PMC5352426.
11. Szente L, **Singhal A**, Domokos A, Song B. Cyclodextrins: Assessing the Impact of Cavity Size, Occupancy, and Substitutions on Cytotoxicity and Cholesterol Homeostasis. *Molecules*. 2018 May 20;23(5). doi: 10.3390/molecules23051228. PubMed PMID: 29783784; PubMed Central PMCID: PMC6100472.
12. **Singhal A**, Szente L, Hildreth JEK, Song B. Hydroxypropyl-beta and -gamma cyclodextrins rescue cholesterol accumulation in Niemann-Pick C1 mutant cell via lysosome-associated membrane protein 1. *Cell Death Dis*. 2018 Oct 3;9(10):1019. doi: 10.1038/s41419-018-1056-1. PubMed PMID: 30282967; PubMed Central PMCID: PMC6170477.
13. **Singhal A**, Krystofiak ES, Jerome WG, Song B. 2-Hydroxypropyl-gamma-cyclodextrin overcomes NPC1 deficiency by enhancing lysosome-ER association and autophagy. *Sci Rep*. 2020 May 26;10(1):8663. doi: 10.1038/s41598-020-65627-4. PubMed PMID: 32457374; PubMed Central PMCID: PMC7250861.

#### Review Article:

14. **Ashutosh**, Sundar S, Goyal N. Molecular mechanisms of antimony resistance in Leishmania. *J Med Microbiol*. 2007 Feb;56(Pt 2):143-53. doi: 10.1099/jmm.0.46841-0. Review. PubMed PMID: 17244793.

#### Editorial

15. Pellom ST Jr, **Singhal A**, Shanker A. Prospects of combining adoptive cell immunotherapy with bortezomib. *Immunotherapy*. 2017 Mar;9(4):305-308. doi: 10.2217/imt-2017-0015. PubMed PMID: 28303766.

#### Published Abstracts and Presentations

1. Giovanni Davogustto et al. High Rate of Arrhythmia Diagnoses Following Return of Pathogenic/Likely Pathogenic Variants in an Unselected Population. *Circulation*. 2020;142:A14663
2. Andrew M. Glazer et al. Association of Incidental Rare Variants with Arrhythmia Phenotypes in 24,410 Individuals. ASHG conference abstract.
3. **Singhal A**, Song B. Lysosome-Associated Membrane Protein 1 Rescues Cholesterol Accumulation in NPC1 Mutant Cell by Enhancing Lysosome-ER Contacts. ASBMB, Experimental Biology Conference, Orlando, FL. The FASEB Journal. April 2019. Vol. 33, No.1\_supplement. Abstract Number:490.14
4. Uzhachenko RV, **Singhal A**, and Shanker A. Physical crosstalk between CD8<sup>+</sup>T and natural killer cells elicits antitumor effector response. American Association of Cancer Research Conference, Washington DC, 2017. *Cancer Res* 2017;77(13 Suppl): Abstract# 5665.

5. Pellom ST, Jr., Thounaojam MC, Dudimah DF, **Singhal A**, Uzhachenko RV, and Shanker A. Bortezomib improves adoptive cell immunotherapy in adenocarcinomas. MeTRC Conference, Meharry Medical College, Nashville. 2016
6. **Singhal A**, Mishra S, Chaudhuri G. Cancer cell-induced suppression of cytotoxic Alu RNA biosynthesis in the co-cultured macrophages. ASBMB, Experimental Biology Conference, Boston MA. The FASEB Journal. 2015. 29 (1) Suppl: 578.10. (\*Selected for talk)
7. **Singhal A**, Mishra S, Chaudhuri G. Autocrine regulation of stress induced cytotoxic Alu RNA expression in TNBC cells. American Association of Cancer Research Conference, Philadelphia, PA. Cancer Res. 2015. 75 (15 suppl); 236
8. Misra S, Mittal M K, **Singhal A**, Chaudhuri G. Functional evaluation of the effects of missense and non-sense SNPs in the p25 subunit of human dynactin complex. ASBMB, Experimental Biology Conference, Boston MA. The FASEB Journal. 2015. 29 (1) Suppl:576.9
9. Misra S, **Singhal A**, Chaudhuri G. Oncogenic miRNA miR-130a-induced inhibition of the growth regulator protein ZAR2 in TNBC cells. American Association of Cancer Research Conference, Philadelphia, PA. Cancer Res. 2015. 75 (15 suppl); 183
10. **Singhal, A**, Ghorpade A. Tumor necrosis factor-alpha confers cytotoxicity in astrocytes under oxidative stress via inhibition of NF-kB signaling. 20<sup>th</sup> SNIP Scientific Conference, New Orleans, LA. J Neuroimmune Pharm. 2014. 9 (1), 52.
11. **Singhal, A**, Ghorpade A. A Nanotechnology approach to protect human neurons from oxidative stress. 19<sup>th</sup> SNIP Scientific Conference, San Juan, Puerto Rico. J Neuroimmune Pharm. 2013. 8 (2), 382. (\*Selected for Talk).
12. **Ashutosh**, Chao C, Borgmann K, Tang L, Ghorpade A. TIMP-1 attenuates staurosporine- and HIV-1-induced apoptosis in human neurons through modulation of Bcl-2 family and mitochondrial membrane permeability. 18<sup>th</sup> SNIP Scientific Conference, Waikiki, Hawaii. J Neuroimmune Pharm. 2012. 7 (Suppl 1): S28-29.
13. **Ashutosh**, Borgmann K, Tang L, Labhasetwar V, Ghorpade A. A gene therapeutic approach for HIV-1 associated Dementia using targeted Nanoparticles for tissue inhibitor metalloproteinases-1 delivery into central nervous system. 17<sup>th</sup> SNIP Scientific Conference, Clear water beach, Florida. J Neuroimmune Pharm. 2011. 6 (Suppl 1):S24
14. **Ashutosh** Ravinder, Goyal N. Cloning, sequencing and characterization of SRRG-1 gene of *Leishmania donovani*. International Conference on Advances in Drug Discovery Research, 11<sup>th</sup> ISCBC, 2007, Feb 24-26, Aurangabad, Maharashtra, India
15. **Ashutosh**, Goyal N. Bioluminescent *Leishmania donovani*: Use in drug discovery. 17<sup>th</sup> National Congress of Parasitology, October 24-26, 2006, Dibrugarh, Assam, India. (Nominee for Young Scientist Award, delivered talk for the award Session)
16. **Ashutosh**, Sundar M, Duncan R, Nakhasi HL, Neena Goyal. A screen for genes involved in sodium antimony gluconate resistance in *Leishmania donovani* clinical isolates by DNA microarray. Third World Congress on Leishmaniosis, April 10-15 2005, Palermo-Terrasini, Sicily, Italy
17. Mittal M, **Ashutosh**, Sundar S, Duncan R, Nakhasi HL, Neena Goyal. Drug resistance in field isolates of *Leishmania donovani* associated with amplification of PGPA and increased trypanothione levels. Third World Congress on Leishmaniosis, April 10-15 2005, Palermo-Terrasini, Sicily, Italy

18. Gupta S, Ramesh, **Ashutosh**, Goyal N. Application of *Leishmania donovani* cell line expressing Luciferase reporter gene in semi *in vivo* drug screening. Third World Congress on Leishmaniasis, April 10-15 2005, Palermo-Terrasini, Sicily, Italy
19. **Ashutosh**, Goyal N. Development of *Leishmania donovani* cell line expressing luciferase reporter gene for *in vitro* antileishmanial screening. International chemistry biology interface: Synergistic new frontiers, November 21-26, 2005, New Delhi, India
20. Gupta S, **Ashutosh**, Ramesh, Goyal N. Development of rapid, sensitive semi *in vivo* model using *Leishmania donovani* cell line expressing luciferase reporter gene. 9<sup>th</sup> national conference on bioactive heterocycles and drug discovery paradigm, Jan 8-10, 2005, Rajkot, Gujarat, India
21. Agarwal A, Ramesh, **Ashutosh**, Goyal N, Chauhan PMS, Gupta S. Synthesis of Dihydropyrido[2,3- D]Pyrimidine derivatives as noval antileishmanial agents. 9<sup>th</sup> national conference on bioactive heterocycles and drug discovery paradigm, Jan 8-10, 2005, Rajkot, Gujarat, India
22. Goel A, Dixit M, Ramesh, **Ashutosh**, Goyal N, Gupta S. Antileishmanial activity of Furanoflavonoids against *Leishmania donovani*. 9<sup>th</sup> national conference on bioactive heterocycles and drug discovery paradigm, Jan 8- 10, 2005, Rajkot, Gujarat, India
23. **Ashutosh**, Ramesh, Gupta S, Goyal N. Bioluminescent *Leishmania donovani* field isolates: Application in High throughput screening of antileishmanial compounds. 74<sup>th</sup> Annual Meeting; Society of Biological Chemists; November 7-10, 2005, Lucknow, India
24. Singh S, **Ashutosh**, Bala M. Effect of low dose 60Co- $\gamma$ -irradiation on DNA repair in human peripheral blood lymphocyte. International Conference on Radiation Damage and Modification. 2002; Delhi, India.

## Oral Presentations

### National/International Meetings

1. Cancer cell-induced suppression of cytotoxic Alu RNA biosynthesis in co-cultured macrophages. **ASBMB Experimental Biology Conference**, March 28-April 1, 2015, Boston, MA. (Competitive selection for talk)
2. A Nanotechnology approach to protect human neurons from oxidative stress. **19<sup>th</sup> SNIP Scientific Conference**, Early Career Investigator Symposium, April 3-6, 2013, San Juan, PR. (Invited for talk)
3. Development of bioluminescent *Leishmania donovani*: Use in drug discovery. **17<sup>th</sup> National Congress of Parasitology**, October 24-26, 2006, Dibrugarh, Assam, India. (Invited for talk)

### Local/Regional Meetings

4. Bioluminescent *Leishmania donovani*: Use in drug discovery. **Duke Human Vaccine Institute**, Duke University, Durham NC.

## Poster Presentations

### National/International Meetings

1. American Association of Cancer Research, Philadelphia, PA. April 18-26, 2015
2. ASBMB, Experimental Biology Conference, Boston, MA. Mar 28-Apr 1, 2015
3. 20th SNIP Scientific Conference, New Orleans, LA. Mar 26-29, 2014
4. 19th SNIP Scientific Conference, San Juan, PR. Apr 3-6, 2013
5. 18th SNIP Scientific Conference, Waikiki, Hawaii. Apr 24-28, 2012
6. 17th SNIP Scientific Conference, Clear water beach, FL. Apr 06-11, 2011
7. 19th National Congress of Parasitology, Visakhapatnam, India. Oct 26-28, 2007
8. 17th National Congress of Parasitology, Dibrugarh, India. Oct 24-26, 2006
9. 74th Annual Meeting; Society of Biological Chemists, Lucknow, India. Nov 07-10, 2005
10. 3rd Global Meet on Parasitic Diseases, Bangalore, India. Jan 12-16, 2004
11. Chem. Bio. Interface: Synergistic New Frontiers, New Delhi, India. Nov 21-26, 2004

### Local/Regional Meetings

12. Vanderbilt Ingram Cancer Center, Annual Scientific Retreat, 2017
13. 59th Annual Student Research Day, MMC, Nashville, TN. Mar 18, 2015
14. Research Appreciation Day, UNTHSC, Fort Worth, TX. Mar 21, 2014
15. Research Appreciation Day, UNTHSC, Fort Worth, TX. Apr 12, 2013
16. Research Appreciation Day, UNTHSC, Fort Worth, TX. Apr 13, 2012
17. Research Appreciation Day, UNTHSC, Fort Worth, TX. Apr 1, 2011

## Other Scholarly Products

### Invited Panelist

Bio-Career Development Symposium, Fort Worth, TX

CWPCMH Steering Committee Virtual Retreat, June 12, 2020

Cross Cutting Issues on Patient-Centeredness in the Face of a Global Pandemic

The Office of Faculty Affairs and Development and The Department of Family and Community Medicine.

Topic of discussion: The Use of Clinical Data and Patient Cohorts to Address Clinical Decision Making, Physician Performance, and Quality

### Co-organizer of Symposium

Symposia, Postdoc-appreciation day and professional development programs at UNTHSC, Fort Worth TX

## Patents and Technology Transfer

A process for screening of anti-leishmanial compounds using *Leishmania donovani* cell lines expressing luciferase reporter gene.

**Inventors:** Neena Goyal and **Ashutosh.**

*Application No.:* 123/DEL/2006, Indian patent office, *Date of filling:*17/01/2006. *Publication Date:* 17/08/2007, *Journal No.:* 33/2007.