

### **Education:**

**Ph.D. Biotechnology (2003)** Central Drug Research Institute/Hamdard University, India.  
(Major in Biochemistry and Molecular Biology)

**M.Tech. Biotechnology (1997)** Institute of Engineering & Technology, Lucknow, India.  
(Major in Pharmaceutical and Industrial Biotechnology)

**M.Sc. Biochemistry (1994)** Lucknow University, India.

**B.Sc. Chemistry, Physics & Mathematics (1992)** Kanpur University, India.

### **Professional Positions:**

**2019-Present Assistant Professor (Tenure Track)**

Dept. of Immunology and Microbiology, Univ. of TX Rio Grande Valley, McAllen, TX.

**2017-2019 Assistant Professor**

Dept. of Pharmaceutical Sciences, Univ. of TN Health Science Center, Memphis, TN.

Project: A) Molecular mechanism and identification of biomarker(s) for early stage diagnosis, metastasis and drug response in colorectal cancer.

1. Role of mucin MUC13 in CRC health disparity.
2. Long noncoding RNA (LncRNA) in CRC metastasis and Anoikis resistance.

B) Role of LncRNA-MALAT1 in Colorectal Cancer Health Disparity

1. MALAT1 levels in different CRC tissues.
2. Regulation of MALAT1 by NFATc1 transcription factor.

C) Anoikis resistance in metastasis: Regulation and Mechanism.

D) *In vitro* model to screen drugs potent for Immunotherapy.

E) Ankyrin Family protein as a poor prognostic marker in aggressive breast cancer.

F) GalNT14 a novel enzyme regulating MUC13 glycosylation and signaling.

G) Role of LncRNAs in Triple Negative Breast Cancer drug resistance. LncRNAs as early diagnostic, prognostic and novel therapeutic target in TNBC.

H) Nanoparticle delivery of CRISPR-Cas9 constructs to inhibit oncogenes.

(*J Colloid Interface Sci.* 2019; *Noncoding RNA* 2018; *Drug Discov. Today* 2018; *Br. J cancer* 2018; *Mol Cancer Ther.* 2017)

**2011-2017 Research Faculty**

Department of Cancer Biology, Vanderbilt University, Nashville, TN.

Project: A) Transactivation of Kaiso by the tumor suppressor BRCA1. Identify, component map and characterize Kaiso / BRCA1 complex. (*J of Clin Investigation* 2017)

B) Role of Nuclear Factor of Activated T-cell (NFAT) transcription factor in colorectal cancer invasion and metastasis (*Cancer Research*, 2014).

**Adjunct Faculty (2016):** Nashville State Community College, Nashville, TN.

Teaching: Introduction to Biology II (BIOL 1020); 4.0 Credit; 6 Sem. Hrs.

General Biology I, (BIOL 1110); for Science Majors; 4.0 Credit; 6 Sem. Hrs.

**2004-2010 Post-Doctoral Fellow**  
Molecular Physiology and Biophysics, Vanderbilt University, Nashville, TN.  
Project: Biochemical, structural, and functional (co-activator) analyses of Transcription Factor IID (TFIID) and mechanism of gene regulation by RNA Polymerase II. (*Nature*, 2010; *Structure*, 2009; *MCB*, 2007).

**2002-2003 Post-Doctoral Research Associate**  
Department of Microbiology and Immunology, Meharry Medical College, Nashville, TN.  
Project: Role of transcriptional repressor protein Slug on Human BRCA2 gene expression. (*JBC a*, 2005; *JBC b*, 2005; *BBRC a/b*, 2005; *Mol Cancer*, 2010; *Mol Bio Par*, 2005).

**1998-2002 Senior Research Fellow**  
Department of Fermentation Technology, Central Drug Research Institute, Lucknow, India.  
Project: Biochemistry and molecular biology of microbial lipase (*J. Chem Res.*, 1999; *Bioorganic Chem*, 2002; *Enzyme Microb. Techno.* 2004).

### **Honors and Awards:**

**Judge**, *Graduate Research Day*, College of Graduate Health Sciences, Univ. of TN Health Science Center, TN (April 26, 2019).

**Judge**, *Annual Postdoc Research Day*, Univ. of TN Health Science Center, TN (December 6, 2018).

“**Most Outstanding Poster**”, In *Recognition of Excellence in Cancer Research and Outstanding Poster Presentation*, Vanderbilt Ingram Cancer Center retreat on “GI Malignancies”, Vanderbilt Medical Center, (May 2013).

“**Exemplary efforts in Cancer Research**”, 11<sup>th</sup> Annual Meharry Medical College /Vanderbilt Ingram Cancer Center /Tennessee State University Cancer Partnership retreat, Meharry Medical College, (Jan. 2012).

**ASBMB Travel Award**, American Society for Biochemistry and Molecular Biology, “Biochemical and Genetic Analyses of Post Translational Modifications on the Mechanism of Gene Regulation by Repressor Activator Protein RAP1” San Diego, CA, (April 2008).

**Third Prize (Biochemistry)**, First Annual BRET Postdoctoral Symposium, Poster presentation: “TFIID serves as coactivator for Rap1p through direct protein-protein interactions”, Vanderbilt University Medical Center, (April 2007).

**ASBMB Travel Award**, American Society for Biochemistry and Molecular Biology  
“Slug mediated repression of BRCA2 gene expression in invasive Breast tumor cells”, Centennial Anniversary celebration, San Francisco, CA, (April 2006).

**Senior Research Fellowship**, Council of Scientific and Industrial Research, India, (1998-2002).

**DBT Master’s Fellowship**, Department of Biotechnology, India, (1994-1997).

### **Research Support**

#### **ACTIVE**

#### **UT Clinical CORNET Cancer Award**

Funded May 01, 2018 to July 2019; \$50,000

Project: Role of lncRNA-NRON and NFAT in CRC health disparity  
Agency: University of TN Health Science Center  
**Role: Principal Investigator**

**1R01CA204552:** (Chauhan-PI) 07/11/2016-05/31/2021

MUC13 Mucin in Colorectal Cancer Health Disparity

Agency: NIH/NCI

Project: To investigate role of MUC13 mucin in colorectal cancer health disparity and evaluate its diagnostic/prognostic potential.

**Role: Key Personnel**

### **PENDING**

P20 Disparity; RFA-CA-19-034

**TRIPATHI, MANISH (PI)**

Aspects of lncRNA-MALAT1 in Colorectal Cancer Health Disparity

Submission Complete 06/19/2019

**Overlap: None.**

### **Completed Research Support:**

#### **UT CORNET Cancer Award**

Funded May 01, 2017 (1 year); \$50,000.

Project: Role of lncRNA-NRON and NFAT in CRC health disparity

Agency: University of TN Health Science Center

**Role: Principal Investigator**

**PI: Manish Tripathi** (NIH Roadmap Opportunity)

Grant# VR17697: Tripathi: CTSA Program Development.

Funded January 2016: Dec. 2016

Project: Role of Kaiso in tumorigenesis.

**Role: Principal Investigator**

**PI: Manish Tripathi** (NIH Roadmap Opportunity)

Grant# 000000080: Tripathi: CTSA Program Development.

Funded April 2007

Project: Post Translation Modification studies in Rap1p and TFIID.

**Role: Principal Investigator**

**PI: Manish Tripathi** (NIH Roadmap Opportunity)

Grant# 000000073: Tripathi: CTSA Program Development

Funded May 2007

Project: Generation of phospho-mutants (hyper or hypo) of Rap1p and TFIID.

**Role: Principal Investigator**

### **Peer Reviewer:**

African Journal of Microbiology Research, Asian Journal of Biotechnology, Blood Substitutes, Biotechnology, Cancers, Cellular Immunology, Heliyon, International Journal of Cancer Research, International Journal of Molecular Sciences, Journal of Biological Sciences, Journal of Biological Chemistry, Journal of Pharmacology and Toxicology, Journal of Applied Sciences, Journal of Clinical Medicine, Journal of Ovarian Research, Journal of Cancer Biology and Research, Lifesciences, Molecular Cellular Biochemistry, Medicina, Molecular Microbiology, Nanomedicine, Nucleic Acid Research,

### **Professional Memberships:**

American Association for Cancer Research (AACR) since 2002

American Society of Biochemistry and Molecular Biology (ASBMB) since 2006

Association of Microbiologist of India, Life member since 1999

### **Talks/Seminars:**

1. “NFAT associated long noncoding RNA in colorectal cancer health disparity. CORNET Symposium, UTHSC, Memphis TN, (October 29, 2018).
2. “Current research areas in cancer: Personalized medicine, Genomics and Immunotherapy” Purple night Kosten Foundation (Pancreatic Cancer) 10/06/2018, UTHSC, Memphis TN.
3. “To understand the molecular mechanisms involved in the carcinogenesis of PDAC” Kosten Foundation (Pancreatic Cancer) Annual Meeting 08/14/2018, UTHSC, Memphis TN.
4. “NRON as a repressor of NFAT Transcription factor in Pancreatic Cancer”, Kosten Foundation (Pancreatic Cancer) Annual Meeting 06/07/2017, CRB 252, UTHSC, Memphis TN.
5. “To understand the molecular mechanisms involved in the carcinogenesis of PDAC”, Kosten Foundation (Pancreatic Cancer) Day 10/07/2017, CRB 114, UTHSC, Memphis TN.
6. “NFATc1: Transcriptional Regulator for Long Noncoding RNA MALAT1 in CRC”, Departmental presentation: 11/28/2017, CRB 114, UTHSC, Memphis TN.
7. “Role of NFATc1 in colon cancer metastasis”, Department of Microbiology and Immunology, Meharry Medical College, (May 17, 2016).
8. “Role of Kaiso and its interacting partners in tumorigenesis”, Department of Cancer Biology, Vanderbilt University, (October 21, 2015).
9. “Role of Kaiso in intestinal tumorigenesis”, Vanderbilt Digestive Disease Research Center, Vanderbilt University Medical Center, (April 27, 2015).
10. “Transcription Factor IID (TFIID): Structural Analysis and Co-activator function on Ribosomal Protein Genes”, Vanderbilt Medical Center, (Oct 6, 2008).
11. “Down-regulation of UCRP and UBE2L6 in BRCA2 knocked-down human breast cells”. Department of Cancer Biology, Meharry Medical College, (April 2006).

### **Publications: (Impact Factor/Citations)**

1. **Tripathi MK\***, Zacheaus C, Doxtater K, Keramatnia F, Gao C, Yallapu MM, Jaggi M, Chauhan SC. Z Probe, an Efficient Tool for Characterizing Long Non-Coding RNA in FFPE Tissues. *Non-coding RNA* 2018 Sep5;4(3). PMID: 30189670.  
**\*Corresponding author**
2. **Tripathi MK\***, Doxtater K, Keramatnia F, Zacheaus C, Yallapu MM, Jaggi M, Chauhan SC. Role of lncRNAs in ovarian cancer: defining new biomarkers for therapeutic purposes. *Drug Discovery Today* 2018 Sep; 23(9):1635-1643. PubMed PMID: 29698834. **(6.4)**  
**\*Corresponding author**
3. Chowdhury P, Nagesh PKB, Hatami E, Wagh S, Dan N, **Tripathi MK**, Khan S, Hafeez BB, Meibohm B, Chauhan SC, Jaggi M, Yallapu MM. Tannic acid-inspired paclitaxel nanoparticles for enhanced anticancer effects in breast cancer cells. *J Colloid Interface Sci.* 2018 Sep 22;535:133-148. PMID:30292104. **(5.09)**

4. Short SP, Kondo J, Smalley-Freed WG, Takeda H, Dohn MR, Powell AE, Carnahan RH, Washington MK, **Tripathi M**, Payne DM, Jenkins NA, Copeland NG, Coffey RJ, Reynolds AB. p120-Catenin is an obligate haploinsufficient tumor suppressor in intestinal neoplasia. *J Clin Invest.* 2017 Dec 1;127(12):4462-4476. PMID: 29130932. **(14.4 ; 1 citations)**
5. Ganju A, Chauhan SC, Hafeez BB, Doxtater K, **Tripathi MK**, Zafar N, Yallapu M, Kumar R, Jaggi M. Protein kinase D1 regulates subcellular localization and metastatic function of metastasis-associated protein 1. *Br J Cancer.* 2018 Feb 20;118(4):587-599. PubMed PMID: 29465084 **(6.2 ; 1 citations)**
6. Hafeez BB, Ganju A, Sikander M, Kashyap VK, Hafeez ZB, Chauhan N, Malik S, Massey AE, **Tripathi MK**, Halaweish FT, Zafar N, Singh MM, Yallapu MM, Jaggi M, Chauhan SC. Ormeloxifene suppresses prostate tumor growth and metastatic phenotypes via inhibition of oncogenic  $\beta$ -catenin signaling and EMT progression. *Mol Cancer Ther.* 2017 Oct;16 (10):2267-2280. **(5.4)**
7. **Tripathi Manish K**, Deane NG, Zhu J, An H, Mima S, Wang S, Padmanabhan S, Shi Z, Prodduturi N, Ciombor KK, Chen X, Washington MK, Zhang B and Beauchamp RD. "Nuclear Factor of Activated T-cell Activity Is Associated with Metastatic Capacity in Colon Cancer". *Cancer Research* 2014; 74(23), 6947-57. **(9.32 ; 19 citations)**
8. Zhu S, Hong J, **Tripathi Manish K**, Sehdev V, Belkhiri A, El-Rifai W. Regulation of CXCR4-mediated invasion by DARPP-32 in gastric cancer cells. *Molecular Cancer Research* 2013; 11, 86-94. **(4.9; 15 Citations)**
9. Singha UK, Hamilton V, Duncan MR, Weems E, **Tripathi MK**, Chaudhuri M. Protein translocase of mitochondrial inner membrane in *Trypanosoma Brucei*. *Journal of Biological Chemistry* 2012; 287(18), 14480-93. **(4.7; 15 Citations)**
10. Papai G, **Tripathi Manish K**, Ruhlmann C, Layer JH, Weil PA, Schultz P. TFIIA and the transactivator Rap1 cooperate to commit TFIID for transcription initiation. *Nature* 2010; 465, 956-961. **(42; 40 Citations)**
11. Misra S, Sharma S, Agarwal A, Khedkar SV, **Tripathi Manish K**, Mittal MK, Chaudhuri G. Cell cycle-dependent regulation of the bi-directional overlapping promoter of human BRCA2/ZAR2 genes in breast cancer cells. *Molecular Cancer* 2010; 9, 50. **(5.3; 16 Citations)**
12. Papai G, **Tripathi Manish K**, Ruhlmann C, Werten S, Crucifix C, Weil PA, Schultz P. Mapping the initiator binding Taf2p subunit in the structure of hydrated yeast TFIID. *Structure*, March 2009; 17, 363-373. **(5.9; 28 Citations)**
13. Garbett KA, **Tripathi Manish K**, Cencki B, Layer JH, Weil PA. TFIID serves as coactivator for Rap1p through Direct Protein-Protein interactions. *Molecular and Cellular Biology* 2007; 27(1), 297-311. **(5.3; 53 Citations)**
14. **Tripathi MK**, Misra S, Khedkar SV, Hamilton N, Irvin-Wilson C, Sharan C, Sealy L, Chaudhuri G. Regulation of BRCA2 Gene Expression by the SLUG Repressor Protein in Human Breast Cells. *Journal of Biological Chemistry* 2005; 280 (17), 17163-17171. **(4.7; 55 Citations)**

- 15. Tripathi Manish K**, Chaudhuri G. Down-regulation of UCRP and UBE2L6 in BRCA2 knocked-down human breast cells.  
*Biochemical & Biophysical Research Communication* 2005 ; 328(1), 43-48. **(2.3; 14 Citations)**
- 16. Tripathi Manish K**, Misra S, Chaudhuri G. Negative regulation of the expressions of cytokeratins 8 and 19 by SLUG repressor protein in human breast cells.  
*Biochemical & Biophysical Research Communication* 2005 ; 329(2), 508-515. **(2.3; 36 Citations)**
- 17. Misra S, Tripathi Manish K**, Chaudhuri G. Down-regulation of 7SL RNA expression and impairment of vesicular protein transport pathways by Leishmania infection of macrophages.  
*Journal of Biological Chemistry* 2005; 280(32), 29364-29373. **(4.7; 14 Citations)**
- 18. Misra S, Bennett J, Friew YN, Abdulghani J, Irvin-Wilson CV, Tripathi Manish K, Williams S, Chaudhuri M, Chaudhuri G.** A type II ribonuclease H from Leishmania mitochondria: an enzyme essential for the growth of the parasite.  
*Molecular Biochemical Parasitology* 2005; 143(2), 35-145. **(1.8; 3 Citations)**
- 19. Tripathi Manish K**, Roy U, Jinwal UK, Jain SK, Roy PK. Cloning, Sequencing and Structural Features of Lipase: A new member of the 343-residues *Streptococcus* lipase.  
*Enzyme Microbial Technology* 2004; 34(5), 437-445. **(2.9; 14 Citations)**
- 20. Tripathi Manish K**, Jinwal UK, Roy U, Patra A, Roy PK, Batra S, Bhaduri AP. Effect of different strains of yeast on stereo controlled reduction of 5-acetylisoaxazolines.  
*Bioorganic Chemistry* 2002; 30(5), 350-355. **(2.2; 2 Citations)**
- 21. Chowdhury AR, Tripathi Manish K**, Jinwal UK, Roy U, Kumar VV, Bhaduri AP, Roy PK. Chemoselective hydrolysis of esters by fungal lipase.  
*Journal of Chemical Research* 1999; S (4), 266-267. **(0.61; 1 Citations)**

#### **Nucleotide sequences of novel cDNAs submitted to GenBank Accession Numbers**

- *AF395190*  
*Streptococcus* sp. (N1) putative ABC transporter, putative lipase, putative carbonic anhydrase, and lipase genes, complete cds.
- *AF395194, AF395195, AF395196, AF395197, AF395198, AF395199*  
*Pseudomonas mendocina* (PK-12CS) Lipase gene, partial nucleotide sequence (1-6).
- *AF395200, AF395201, AF395202*  
*Pseudomonas mendocina* (PK-12CS) Esterase gene, partial nucleotide sequence (1-3).
- *AY091666*  
Lipase Structural Gene lipA, Lipase Helper Gene lipB, Probable Aspartokinase and Unknown Proteins.

#### **Protein structures submitted to EMDatabank (<http://emsearch.rutgers.edu>)**

- *EMDB Accession code: 5026*  
Cryo-negative stain structure of the yeast transcription factor TFIID at 20 Angstrom resolution; TAP-tag purified yeast TFIID; Single particle reconstruction (22 angstroms resolution).  
[http://emsearch.rutgers.edu/atlas/5026\\_summary.html](http://emsearch.rutgers.edu/atlas/5026_summary.html)
- *EMDB Accession code: 5175*  
Frozen-hydrated map of the yeast general transcription factor TFIID; HA-tag purified yeast TFIID; Single particle reconstruction (28.9 angstroms resolution).  
[http://emsearch.rutgers.edu/atlas/5175\\_summary.html](http://emsearch.rutgers.edu/atlas/5175_summary.html)
- *EMDB Accession code: 5176*

Frozen hydrated map of the yeast TFIID-TFIIA-Rap1-DNA complex; HA-tag purified yeast TFIID; Single particle reconstruction (24.5 angstroms resolution).

[http://emsearch.rutgers.edu/atlas/5176\\_summary.html](http://emsearch.rutgers.edu/atlas/5176_summary.html)

- *EMDB Accession code: 5177*

Frozen hydrated map of the yeast TFIID-TFIIA-Rap1-DNA complex; HA-tag purified yeast TFIID; Single particle reconstruction (18.6 angstroms resolution).

[http://emsearch.rutgers.edu/atlas/5177\\_summary.html](http://emsearch.rutgers.edu/atlas/5177_summary.html)

- *EMDB Accession code: 5178*

Frozen hydrated map of the yeast TFIID-TFIIA-DNA complex; TAP-tag purified yeast TFIID; Single particle reconstruction (31.4 angstroms resolution).

[http://emsearch.rutgers.edu/atlas/5178\\_summary.html](http://emsearch.rutgers.edu/atlas/5178_summary.html)

### **Selected Abstract Presentations (from total of 35)**

Abstracts presented at national and international conferences (AACR, ASBMB, DDW, and VICC retreats).

1. **Doxtater K**, Mehdi C, Zacheaus C, Keramatnia F, **Tripathi, MK**, Chauhan SC. “MUC13 interacts with SOX2 leading to Cell Stemness and Anoikis Resistance in Colorectal Cancer”, Abstract # 5222, AACR 2019 (Annual Meeting) March 30<sup>th</sup> to April 3rd, 2019, Atlanta, GA.
2. **Tripathi MK**, Zacheaus C, Doxtater K, Stiles Z, Keramatnia F, Zafar N, Amin M, Jaggi M, Chauhan SC. 5178 / 10 – “MUC13 is a novel molecular signature, for early detection and metastatic colorectal cancer”, AACR 2018 (Annual Meeting) April 18, 2018, 8:00 AM - 12:00 PM, Chicago, Illinois.
3. **Tripathi MK**, Short SP, Reynolds AB. “Kaiso/BRCA1 interaction in Intestinal Tumorigenesis”, Vanderbilt-Ingram Cancer Center Scientific Retreat “At the Crossroads of Metabolism and Oncogenic Signaling” Vanderbilt University, (May 06, 2016).
4. **Tripathi MK**, Reynolds AB. “Role of Kaiso in Intestinal Tumorigenesis”, AACR Annual Meeting, Abstract # 2884, New Orleans, LA, (April 17-19, 2016).
5. **Tripathi MK**, Mima S, Shi Z, Prodduturi N, Zhu J, Ciombor KK, Chen X, Washington MK, Deane NG, Beauchamp RD, Zhang B. “NFAT regulates a gene expression program associated with invasiveness and poor prognosis in colorectal cancer”, AACR special conference on TUMOR INVASION and METASTASIS”, Abstract #89460\_1, San Diego, CA, (Jan 20-23, 2013).
6. **Tripathi MK**, Freeman TJ, Connie W, Deane NG, Zhang B, Beauchamp RD. “Candidate-regulators of metastasis in colorectal cancer: Identification, validation and mechanism of regulation”, Digestive Disease Workshop (DDW) in conjunction with American Gastroenterological Association (AGA Institute), San Diego, CA, (May 19-22, 2012).
7. **Tripathi MK**, Ham AJ, Weil PA. “Biochemical and Genetic Analyses of Post Translational Modifications on the Mechanism of Gene Regulation by Repressor Activator Protein RAP1”, ASBMB, San Diego, CA, (April 2008).
8. **Tripathi MK**, Garbett KA, Cencki B, Layer JH, Weil PA. “TFIID serves as coactivator for Rap1p through Direct Protein-Protein interactions”, ASBMB Transcription Meeting; “Transcriptional Regulation by Chromatin and RNA Polymerase II”, Plenary Lecture: Prof. Roger Kornberg, Kiawah Island, SC, (Nov. 2-5, 2006).

9. **Tripathi MK**, Chaudhuri G. “SLUG-mediated repression of BRCA2 gene expression in invasive breast tumor cells” ASBMB, San Diego, CA, (April 2006).
10. **Tripathi MK**, Chaudhuri G. “Down-regulation of Ubiquitin Cross-Reacting Protein (UCRP) in BRCA2 knocked-down human breast cells”, U54 Cancer Partnership Annual Retreat 2003, Vanderbilt Ingram Cancer Center, Vanderbilt University, (May 2003).
11. **Tripathi MK**, Chaudhuri G. “Regulation of human BRCA2 gene silencer by SLUG and SNAIL in quiescent cells”, AACR, Washington DC, (June 2003).
12. **Tripathi MK**, Chaudhuri G. “H1 RNA Promoter-based expression of short hairpin RNAs (shRNAs) against BRCA2 transcripts in Human Mammary Epithelial Cells”, Vanderbilt Ingram Cancer Center, Annual Retreat, Vanderbilt University, (Nov 2002).

### **TEACHING EXPERIENCE**

I have been a big proponent of teaching throughout my life. Coming from a family with fourth generation in teaching and research, it was something that I appreciated while advancing through my education. I started teaching when I was in college started with high school students and continued during my Master’s, Ph.D. degrees and later during my Post-Ph.D. research career. I have been involved in teaching at different stages of my educational/research career.

**1. Assistant Professor:** Department of Pharmaceutical Sciences, University of TN Health Science Center, Memphis TN.

**Jan. 2017-May 2019**

#### **A. PHARMACEUTICAL ANALYSIS**

PHAC 826 (Spring 2017, Spring 2019)

Lecture: Antibody based methods (March 10, 2017)

Total Students: 20 (Ph.D. and Pharm. D. students)

#### **B. BIOCHEMISTRY FOR PHARMACISTS (PHCY 1100)**

Availability P1 (Fall 2019, 2018, 2017)

Credit Hours 2.5 (2.5-0-0);

Total Students: 180-189 (Pharm. D. students)

I worked in close association with Prof. Subhash Chauhan in developing particular sections of this course. I was responsible for the “**DNA/RNA**” and “**Cell Signaling**” section along with “**Active Learning**” sessions.

#### **Lectures: (1 hr each)**

##### **DNA/RNA:**

1. Nucleic acids: composition and structure.
2. From DNA to proteins: replication, transcription, translation, regulation of gene expression.
3. Recombinant DNA Technology.
4. Active learning 1 (Interactive session).



## Cell signaling:

1. Basic principles of cell communication I: extracellular mediators of cell communication; secretory paradigms.
2. Basic principles of cell communications II: membrane receptors; GPCR linked 2nd messenger pathways; receptor tyrosine kinases.
3. Basic principles of cell communication III: intracellular receptors ; gap junctions
4. Basic principles of cell communication IV: non-canonical receptor-independent signal modulators.
5. Signaling pathways relevant to drug action.
6. Active learning 2 (Interactive session).

**2. Adjunct Faculty:** Nashville State Community College, Nashville, TN.  
**Jan. 2016-Dec. 2016**

**A. General Biology I (Science Major - BIOL 1110); 4.0 Credits; 6 Contact Hrs.**

CAMPBELL BIOLOGY (10<sup>th</sup> Edn). *Reece, Wasserman et al, (Pearson)*

**Spring 2016 and Fall 2016**

(please find some of the personal comments attached)

Comments: It was a great class, Dr. Tripathi!  
I enjoyed the class much more than expected,  
and I learned an immense amount about Biology.  
I am grateful to have had an instructor as  
knowledgeable, and experienced as you are.

Comments: Mr. Tripathi is an awesome teacher. He explains all  
assignments and labs clearly and gives reminders on when  
work is due.

Comments: I thoroughly enjoyed this class. Our instructor was  
awesome, he is extremely intelligent, easy to get along with,  
and treats you like a colleague. Would recommend to take  
him as a teacher. The only thing I didn't like was how  
late we met, but no one has control over that.

Comments: professor tripathi is an excellent instructor! He  
not only knows the subject matter better than any other  
teacher (science) that has taught me, but as well cares  
so much about all of his students. Professor tripathi  
made me born understand + love science, so I thank  
him for being such a wonderful teacher!

Comments: Dr. Manish Tripathi is absolutely one of the best teachers I have had since attending Nashville State. It was absolutely fascinating to have an instructor working in the field as a cancer biologist; he related the course material in ways that made it relevant and more interesting than I'd imagined. He is an absolute asset to the school. Excellent lectures - he was animated and full of energy.

07/08/2016

BIOL1110

AMAZING LECTURES CARING INSPIRATIONAL

For Credit: Yes  
Attendance: Mandatory

Textbook Used: No  
Would Take Again: Yes  
Grade Received: A

I had many classes this semester, but in Prof. Tripathi's class I felt like home. He relates the matter to real life and discusses multiple career options. He is a researcher himself, shares many stories, funny some times. If you are sincere, he helps. Assignments and Exams are from the lecture. You can understand book better if you want to read.

5.0 OVERALL QUALITY  
3.0 LEVEL OF DIFFICULTY

10 people found this useful 0 people did not find this useful

**B. Introduction to Biology II (BIOL 1020); 4.0 Credits; 6 Contact Hrs.**  
BIOLOGY (3<sup>rd</sup> Edn); Concepts and Investigations; M. Hoefnagels. (McGraw Hill).

### Spring 2016 and Summer 2016

Syllabus; Lecture and Exam Schedule; Lab schedule and Teaching evaluation can be provided if needed.

07/05/2016

BIOL1020

CARING PARTICIPATION MATTERS AMAZING LECTURES

For Credit: Yes  
Attendance: Mandatory

Textbook Used: Yes  
Would Take Again: Yes  
Grade Received: N/A

Dr. Tripathi's classes were very beneficial to me. To me Dr. Tripathi is a very intellectual person. He is very knowledgeable about Biology. He is also a professor that tries everything he can to assist his students to do well in this course. I was impressed with his passion for his students to do well in this course. He makes the material plain.

5.0 OVERALL QUALITY  
4.0 LEVEL OF DIFFICULTY

08/04/2016

BIOL1020

CARING CLEAR GRADING CRITERIA AMAZING LECTURES

For Credit: Yes  
Attendance: Mandatory

Textbook Used: Yes  
Would Take Again: Yes  
Grade Received: A

I joined this course to complete some criteria. It was a right decision. Learned a lot, its basic biology but Dr. Tripathi relates to advance biology. very Helpful. If you show interest and sincerity, he will help. I might take his advance biology course this fall. Treat students like colleagues.

5.0 OVERALL QUALITY  
2.0 LEVEL OF DIFFICULTY

10 people found this useful 0 people did not find this useful

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### 3. Guest Lecturer (ASGS-73; 1 credit hour):

#### June 2005- June 2016

I was associated with School of Graduate Studies, Meharry Medical College, Nashville, TN, as a Guest Lecturer for the Recombinant DNA course since 2005. These classes were organized by Prof. Gautam Chaudhuri, Department of Microbiology and Immunology, Meharry Medical College. The classes comprised of 5-15 first and second year Ph.D. and MD/Ph.D. students. I was involved in designing the course with the most recent, student centric and research oriented topics every year.

Lectures include different topics in the Recombinant DNA class such as:

- Proximity Ligation assay to understand protein-protein interactions and applications in cancer biology studies
- Introduction to Rainbow vectors and their applications in cancer metastasis investigations
- RNAi Technology: history, mechanism and role in basic science and therapeutics
- Retroviral based over-expression of proteins
- Biochemistry of Transcription by RNA Polymerase II
- Structural composition and analysis of multi-subunit transcriptional complex
- Post-Translational Modifications
- New methods to analyze Cancer Invasion and Metastasis
- Different Molecular and Protein Biology Techniques