Curriculum Vitae

Rama Gullapalli, M.D., Ph.D.

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I. OBJECTIVES

I am interested in pursuing research on applied engineering, bioinformatics and translational genomics questions within clinical oncology, mainly using high-throughput genomics approaches. My research is primarily focused on hepatobiliary (liver and gallbladder) cancer biology. My areas of interest and expertise include genomics, optics, bioinformatics, mathematical modeling, clinical laboratory medicine, next generation sequencing and clinical molecular diagnostics.

II. FACULTY APPOINTMENTS

- Assistant Professor, Department of Pathology (July 2015 – Present, Tenure Track)
  Assistant Professor, Department of Pathology (September 2012 – June 2015 – Flex Track/Clinical)
  University of New Mexico Health Sciences Center, Albuquerque, NM, USA.

- Assistant Professor, Department of Chemical and Biological Engineering (January 2013 – Present)
  University of New Mexico, Albuquerque, NM, USA.

- Medical Director of Biomedical Informatics, Department of Pathology (September 2012 – Present)
  University of New Mexico Health Sciences Center, Albuquerque, NM, USA

III. MEMBERSHIPS

- Member, Center for Biomedical Engineering (September 2012 – Present)
  University of New Mexico, Albuquerque, NM, USA.

- Full Member, Cancer Genomics and Epigenetics Program, UNM Cancer Center, (January 2013 – present)
  University of New Mexico Health Sciences Center, Albuquerque, NM, USA.

IV. EDUCATION AND TRAINING

- Fellow, Division of Molecular Diagnostics, Department of Pathology (July 2011 – June 2012)
  University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania USA

- Clinical Pathology Resident, Department of Pathology (July 2009 – March 2011)
  University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania USA

- Anatomic and Clinical Pathology Resident, Department of Pathology (July 2007 – June 2009)
  University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA

- Doctor of Philosophy (Ph.D.), Department of Bioengineering (August 2001 – June 2007).

The Pennsylvania State University, University Park, Pennsylvania, USA
Dissertation Topic: *Integrated Experimental, Computational and Theoretical Methods to study the Molecular Dynamics of Lipid Membranes*

- Master of Science (M.S.), Department of Electrical Engineering (August 2001 – June 2005).
  The Pennsylvania State University, University Park, Pennsylvania, USA
  Area of Focus: *Optical Electrical Engineering.*

- Bachelor of Medicine, Bachelor of Surgery (M.B; B.S.), (August 1992 – January 1999).
  Armed Forces Medical College, Pune, Maharashtra India

V. MEDICAL BOARD CERTIFICATION AND LICENSES

Board	**Issue Date**	**Expiration**
- American Board of Pathology – Clinical Pathology	07/2011	12/2021
- American Board of Pathology - Molecular Genetic Pathology	09/2013	12/2023
- American Board of Pathology - Clinical Informatics	12/2015	12/2025
- ECFMG Certificate	09/2005	N/A
- New Mexico License (current)	07/2013	07/2020
- Pennsylvania trainee license (lapsed)	07/2007	07/2012

VI. HONORS AND AWARDS

2014 – American Society of Clinical Pathology (ASCP) - 40 under 40 award.
Details - http://bit.ly/1pGd1NQ **Media** - http://bit.ly/TQpEbN **Article -** http://bit.ly/1rNjk3i
2011 - Paul L. Strandjord Young Investigator award presented by ACLPS, St Louis, MO, June 2011.
2009 - College of American Pathologists resident research award.
2008 - Association of Pathology Informatics (APIII) travel award.
2004 - Biomedical engineering society travel award, October 2004.
2003 - Graduate student exhibition award, Pennsylvania State University.
2001 - Huck Institute of Life Sciences Fellowship, Pennsylvania State University.
1998 - Final M.B.;B.S., AFMC Pune (5th in a class of 130).
1998 - Maj. Gen. P P Chowdhury silver Medal, First in Preventive medicine, Armed Forces Medical College.
1998 - Col T D Chablani medal, Final Year M.B; B.S, Armed Forces Medical College.
1996 - Inter-batch Athletics, Gold Medalist, Pole Vault, AFMC, Pune
1995 - Inter-batch Athletics, Silver Medalist, Pole Vault, AFMC, Pune
1995 - Chief Student Editor, Annual College Magazine, "Dhanvantari" – AFMC, Pune.
1995 - Second in class, Microbiology, Armed Forces Medical College.
1993 - National Science Talent Scholarship, India.
1990 - State Merit scholarship for academic achievement, India.

VII. RESEARCH GRANT FUNDING

a. Current active funding

2) Full grant award, NIH-New Mexico – Idea Networks for Biomedical Research Excellence (NM-INBRE),
Title: "Molecular and Microbiome Analysis of Gallbladder Cancer in New Mexican Populations".
Dates – 2014 - 2017. Grant Number P20GM103451, Direct costs - $75,000 per annum – 3 years.

1) New faculty departmental start-up funds, Department of Pathology, University of New Mexico, Primary Investigator, September 2012 – Present, $30,000/annum for 3 years - $90,000 total.

b. Past Funding

3) *Title: "Computational Molecular Dynamics of TP53 Oligomerization Domain"*;
– XSEDE compute time allocation, San Diego Supercomputing Center; April 2014-April 2015

2) Title - *"Molecular Dynamics Study of Structural HLA Micropolymorphisms as a Basis of Antigenic Recognition";*
- Compute time allocation, Pittsburgh Supercomputing Center; 2009-2011

1) Title-*"Surface Enhanced Raman Scattering (SERS) measurements of glycosylated hemoglobin using nanostructured substrates for long term management of diabetes mellitus". Resident research award, $2000.*
Granting agency: College of American Pathologists (CAP), Funding period: December 2009 – July 2011

VIII. PATENTS

1) *Title: "A method to analyze the composition of the human tissue microbiome using retrospective, archived, formalin-fixed, paraffin embedded tissues and the technique of next generation sequencing"* (STC Ref. 2016-015) developed by Ramachandra Rao Gullapalli and Jin Wu.
Provisional Application No. 62/251,780 titled *"Methods for Analyzing Microbiome of Paraffin Embedded Formalin Fixed Cancer Samples*" filed on Nov 6, 2015.

IX. CURRENT RESEARCH ACTIVITIES (80% work-time allocation)

Assistant Professor (Tenure track)
Department of Pathology,
Department of Chemical and Biological Engineering, University of New Mexico.

My lab is currently focused on two major research themes in Hepatobiliary Cancers: a) Gallbladder carcinogenesis and b) Epithelial-mesenchymal transition (EMT) phenomenon in Liver Cancer.

a) Gallbladder Carcinogenesis: The state of New Mexico in USA is a global hotspot for gallbladder cancer (GBC) incidence. Native American populations of New Mexico have a 5-8 fold higher incidence of GBC compared to Caucasian populations for currently unknown reasons. The clinical outcomes in GBC patients are very poor, with only ~8-10% of patients alive at the end of 5 years (Stage III and above). Research into the causation of GBC has severely lagged over the years. The Gullapalli lab is taking the first steps towards understanding the reasons for this elevated incidence of GBC among the Native American and Hispanic minority populations of USA. We are conducting translational research into GBC using high-throughput genomics approaches to understand population level differences among the three ethnicity cohorts of New Mexico (Native American vs Hispanic vs Caucasian). We use various experimental and computational techniques of next generation sequencing (NGS), NGS microbiome analysis, molecular biology, immunohistochemistry and bioinformatics methods to study the problem of gallbladder carcinogenesis. We are currently developing mouse models of gallbladder carcinogenesis to complement our human translational studies.
b) EMT in Liver Cancer: Hepatocellular Cancer (Cancer of the Liver, HCC) is the 5th most common cancer in the world and the 3rd most lethal. The incidence of HCC has been increasing in the United States over the past decade for unknown reasons. We are working on a specific biological phenomenon of HCC, the Epithelial-Mesenchymal Transition (EMT). Epithelial phenotypes tend to show a lower propensity to metastasize compared to mesenchymal phenotypes in all types of cancers (including GBC). However, much about the phenomenon of EMT currently remains unknown. A deeper understanding of the phenomenon of EMT may enable a better understanding of diagnostic outcomes as well as potential therapeutic options for HCC (and GBC) patients. We use principles of bioengineering, differential interference contrast (DIC) microscopy, image processing, molecular biology and computational biology to study the phenomenon of EMT in Liver Cancer.
c) Translational Bioinformatics: NGS technology is the main experimental platform in the Gullapalli lab to conduct basic as well as translational research into gallbladder and liver carcinogenesis. We have extensive experience in

the experimental implementation of NGS techniques. Additionally, we have robust and detailed experience in the implementation of bioinformatics pipelines as well. We have implemented bioinformatics pipelines on a linux platform to analyze DNA-seq, RNA-seq and 16s Metagenomics data generated in the lab. Multiple NGS and molecular projects are currently underway focusing on various aspects of Hepatobiliary Cancer Biology.

X. CURRENT CLINICAL ACTIVITIES (20% work-time allocation)

Medical Director, Division of Molecular Pathology, TriCore Reference Laboratories
Medical Director of Biomedical Informatics, Department of Pathology, University of New Mexico

a) Clinical sign out responsibilities: I am currently an attending physician in the molecular pathology division of TriCore Reference Laboratories (TRL) and UNM. As an attending physician, I am responsible for the review and sign out of clinical molecular pathology cases. I have extensive experience in the interpretation and sign out of constitutional and cancer related sequencing assays (NGS and Sanger), various RNA and DNA based clinical molecular assays, pharmacogenetics assays and other forms of clinical molecular assays. I was part of a team which oversaw the development and implementation of a clinical NGS assay at TRL and UNM. I am also experienced in the sign out of FISH based clinical assays and co-signed constitutional and solid tumor cancer cytogenetics/karyotyping assays here at TRL. I participate in regular clinical review meetings of the division to provide inputs as necessary for NGS assay development. I am board certified by the American Board of Pathology in Clinical Pathology and Molecular Genetic Pathology.

b) Clinical Bioinformatics: As the Medical Director of Biomedical Informatics, I was heavily involved in the development, implementation and oversight of the bioinformatics component of clinical NGS assay here at TRL. I am consulted on a regular basis for any potential issues related to bioinformatics. I also consult from time to time on issues related to translational research bioinformatics as required for NGS and microarray assays. I have extensive experience in the implementation, systems administration and oversight of bioinformatics pipelines on a Linux platform. I have developed informatics pipelines related to DNA-seq, Microbiome analysis and RNA-seq analysis using NGS (clinical and research setting). I am board certified by American Board of Pathology in Clinical Informatics.

XI. DEPARTMENTAL COMMITTEES

1) Department of Pathology Seminar Committee – 2014
2) Clinical Informatics Research Fellow selection committee, UNM, 2015-2016
3) UNM Comprehensive Cancer Center GI Oncology Recruitment committee – 2016
4) UNM Comprehensive Cancer Center GI Translational Scientist Recruitment Committee - 2016

XII. TEACHING/MENTORING ACTIVITIES

a. Post-doctoral fellow mentorship
- None currently

b. Graduate research mentorship
- None currently

c. Undergraduate research mentorship
- Joseph M. Pomo, UNM, Major in Chemistry, 09/2013 – Present.

d. Clinical students
- Tenzin Tsewang, MS-1, May 2014 – present

e) Lab Alumni
- Nehemiah Wilson, UNM, Honors thesis In Biochemistry, 05/2015- 05/2016
- Katherine Sanchez, Medical Student, 03/2013 – 06/2015
- Robert M. Taylor, ASERT post-doctoral fellow, 11/2012 – 03/2015

- Lauren A. Marek, UNM, Major in Biochemistry, 06/2013 – 12/2013
- Veleta Moises, UPN network summer student, 6/2013-08/2013.
- Anusha Tejomurtula, Visiting research student, 11/2012 – 2/2013.

XIII. PAST RESEARCH EXPERIENCE

3) Department of Pathology, University of New Mexico, Albuquerque, NM, USA, *Medical Director*, Translational Pathology Research Laboratory (October 2012 – October 2015)

- Oversaw multiple molecular and NGS translational research projects for departmental faculty.
- Involved in the design and oversight of molecular assays of RT-PCR and FISH.

2) The Pennsylvania State University, University Park, Pennsylvania, USA; Department of Bioengineering, *Graduate Research Assistant,* August 2001 - June 2007. Advisor: Dr. Peter J Butler

- Expertise in ultrasensitive single molecule fluorescence microscopy imaging techniques (FCS, FLIM, FRET).
- Implemented and validated time-correlated single molecule spectroscopy (TCSPC) instrumentation.
- Developed a statistical mechanical theory to predict diffusion of lipid molecules under lateral stress.

1) The Pennsylvania State University, University Park, Pennsylvania, USA; Department of Engineering Science and Mechanics, *Graduate Research Assistant,* December 2004 - June 2007. Advisor: Dr. Melik C. Demirel

- Computational MD to simulate diffusive properties of fluorescence molecules in a model lipid bilayer.
- I used high performance computing modeling techniques to model lipid molecules.
- Wrote custom scripts and programs in Python to analyze data from the molecular dynamics simulation.

XIV. PAST CLINICAL WORK EXPERIENCE

3) Residency and Fellowship training:
University of Pittsburgh Medical Center, Pittsburgh, USA, June 2007 – June 2012:

- Trained in Anatomic Pathology from June 2007 – June 2009 and subsequently in Clinical Pathology until June 2011. Pursued fellowship level training in Molecular Pathology from June 2011-June 2012.
- Obtained extensive training in the development and interpretation of various pathology assays for clinical purposes.

2) Yashoda Super Specialty Medical Hospital, Hyderabad, Andhra Pradesh, India; Intensive Coronary Care Unit, Department of Cardiology, *Resident Medical Officer* June 1999 - June 2001.

- Worked as a medical officer responsible for the admission and care of acute cardiac patients.
- Experienced in the emergency management of cardiac patients in an ICU setting.

1) Central Railway Hospital, Secunderabad, Andhra Pradesh, India;
Rotating clinical intern, January 1997 - February 1998.

- Worked as a rotating resident intern responsible for the admissions, workup and clinical management of patients in the internal medicine, surgery, and obstetrics and gynecology departments.

XV. PAST EDUCATIONAL EXPERIENCE

The Pennsylvania State University, University Park, Pennsylvania, USA;
Department of Biobehavioral Health. *Teaching Assistant* August 2002 - May 2003
BBH 101 - Introduction to Biobehavioral Health. Instructor: Dr. Jordan Finkelstein.

XVI. PEER REVIEWED JOURNAL PUBLICATIONS

12) "16s Microbiome Analysis Shows Ethnicity Dependent Differences in Gallbladder Cancer Patients of New Mexico" (Journal Article, Manuscript in preparation), **Gullapalli R.R.,** Sanchez K.G., Pomo J.M., Tsewang T., Joshua Hanson J.A., Chabot-Richards D., Wu J.,

11) 16s Microbiome Analysis Using Archived Formalin Fixed Paraffin Embedded Tissue, (Journal Article, Manuscript in Preparation), Sanchez K.G., Wu J., Pomo J.M., **Gullapalli R.R.,**

10) Pomo J.M., Taylor R.M., Gullapalli R.R., "Influence of TP53 and CDH1 genes in hepatocellular cancer spheroid formation and culture: a model system to understand cancer cell growth mechanics", Cancer Cell International, 2016, 16**:44, PMID:27303212; PMCID:PMC4907104**

9) Broehm C.J., Wu, J., **Gullapalli R.R.,** Bocklage T., "First Case Report of an Extraskeletal Myxoid Chondrosarcoma with a t(9;16)(q22;p11.2) Resulting in Fusion of FUS and NR4A3", Cancer Genetics, 2014. Jun;207(6):276-80. PMID: 25130955.

8) Berry R.S., Gullapalli R.R., Wu J., Morris K.T., Hanson J.A., "Diffuse Glutamine Synthetase Overexpression Restricted to Areas of Peliosis in a β-Catenin Activated Hepatocellular Adenoma: A Potential Pitfall in Glutamine Synthetase Interpretation", Virchows Arch. 2014 Aug;465(2):241-5. PMID: 24997695.

7) Taylor R.M., Monson T.C., **Gullapalli R.R.,** "Influence of carbon chain length on the synthesis of fatty amine-coated iron-platinum nanoparticles". Nanoscale Research Letters 2014, 9:306 PMID: 25006334; PMCID: PMC4078006.

6) Carter AB, **Gullapalli R.R.**, Hagenkord JM, Kang HP, Monzon FA, Williams TM. "A tribute to Jeffrey A. Kant, MD, PhD." J Pathol Inform 2012;3:47

5) *Gullapalli R.R., *Desai K.V., Santana-Santos L, Kant J.A., Becich M.J., "Next Generation Sequencing in Clinical Medicine: Challenges and Lessons for Pathology and Biomedical Informatics", J Pathol Inform 2012;3:40 PMID: 23248761; PMCID: PMC3519097

4) Muddana H.S., **Gullapalli R.R.,** Manias E, Butler P.J., "Atomistic simulation of lipid and DiI dynamics in membrane bilayers under tension", Phys Chem Chem Phys. 2011 Jan 28;13(4):1368-78. PMID: 21152516; PMCID: PMC3267629.

3) **Gullapalli R.R.,** Demirel, M., Butler, P.J., "Molecular dynamics simulations of DiI-C18(3) in a DPPC lipid bilayer", Phys Chem Chem Phys., 2008 Jun 28;10(24):3548-60. PMID: 18548161; PMCID: PMC3251217.

2) ***Gullapalli R.R., ***Tabouillot, T., Mathura, R., Dangaria, J., Butler, P.J., "Integrated multimodal microscopy, time resolved fluorescence, and optical-trap rheometry: toward single molecule mechanobiology", J Biomed Opt. 2007 Jan-Feb; 12(1):014012. PubMed PMID: 17343487; PMCID: PMC3251961.

1) Tabouillot, T., **Gullapalli R.R.,** Butler, P.J., "Monitoring cellular mechanosensing using time- correlated single-photon counting", Proceedings of SPIE Volume:6732, Advanced Photon Counting Techniques, Nov 2006, ISBN: 0-8194-6470-8.

XVII. BOOK CHAPTERS

3) Molecular Oncology, Amirsys Publications, Editors: Dr Mohammad Vasef and Dr Aaron Auerbach
Contributed three chapters in the book - a) High-throughput methods in Molecular Pathology b) Hepatocellular Carcinoma c) Cholangiocarcinoma.

2) **R.R.Gullapalli**, M. Lyons, P. Petrosko, R. Dhir, M.J. Becich, W.A. LaFramboise, "Clinical Integration of Next Generation Sequencing Technology", Clin Lab Med. 2012 Dec;32(4):585-99. doi: 10.1016/j.cll.2012.07.005.

1) Butler P.J., **Gullapalli R.R.,** Tabouillot, T., Ferko, M., "Fluorescence methods in cellular and molecular mechanobiology", The Annual Reviews in Fluorescence, Editor: Chris Geddes and Joseph Lakowicz, Springer press (2010)

XVIII. POPULAR PRESS/WHITE PAPERS/NON-PEER REVIEWED ARTICLES

2) "Cost-Benefit Analysis: Comparing the Cray® Urika®-GX System with Public Cloud Implementations for Life Sciences", White Paper sponsored by Cray Supercomputing, Asthana A., Chari S., **Gullapalli R.R.,**

1) "Pathology in the Genome Era", **Rama R. Gullapalli** and Michael J. Becich, ADVANCE For Administrators of Laboratory, September 1, 2012 – Volume 21, Number 9[£].

XIX. INVITED TALKS

9) "16s Metagenomic Sequencing Analysis of Gallbladder Cancer Patients in New Mexico", Rama Gullapalli, Katherine Sanchez, Jin Wu, Association of Molecular Pathology Meeting, Austin, Texas, November 5th to 7th, 2015 **– Invited Podium Presentation. 4 Podium presentations were chosen out of 80+ posters submitted.**

8) “Personalized Medicine: The future of Cancer Treatment”, 27th Cancer Survivorship Conference and Celebration, People Living through Cancer, JCC, Albuquerque, NM, June 28th 2014.
7) “Clinical Applications of Magnetic Nanoparticles”, Invited guest lecturer, Colloidal Nanocrystals for Biomedical Applications Course, ECE 581, March 31st, 2014.
6) “The role of Next Gen Sequencing in the Clinic”, MD PhD Student Annual Seminar, Invited talk, UNMHSC, Albuquerque, NM, December 2013.
5) “Clinical Next Generation Sequencing” Invited seminar talk, Department of Biology, New Mexico Tech Institute, Socorro, NM, August 2013.
4) "The Future of Pathology: Imaging, Genomics and Beyond”, New Mexico Biotechnology and Biomedical Association, NM Bio meeting, Albuquerque, NM, May 14th 2013.
3) “Next Generation Sequencing in the Clinic”, DAMSIG meeting, Spatio-temporal modeling center (STMC), UNM, May 2013.
2) “Next Generation Sequencing in the Clinic”, Dept. of Biochemistry Department Monthly Seminar, UNM, March 2013.
1) “The Role of Microstructural Polymorphisms in Class I HLA-B Peptide Binding: A Computational Molecular Dynamics Study”, ACLPS meeting, June 2011, St. Louis, Missouri.

XX. CONFERENCE PRESENTATIONS

18) “16s Metagenomic Sequencing Method Using Archived FFPE Tissue: An Untapped Resource to Study the Cancer Microbiome.” Katherine Sanchez, Jin Wu, Joseph Pomo, Rama Gullapalli, Poster presentation, Association of Molecular Pathology Meeting, Austin, Texas, Nov 5th to7th.
17) Pomo, J.M., Taylor, R.M., Wu, J., **Gullapalli R.R.,** “TP53 isoform expression in hepatocellular carcinomas” UNM Undergraduate Pipeline Network (UPN) Research Day. Albuquerque, NM. July 30th, 2014**.**
16) Taylor R.M., and **Gullapalli R.R.,**. Influence of Carbon Chain Length on the Synthesis of Fatty Amine-Coated Iron-Platinum Nanoparticles. UNM CNTC Nanoparticle Synthesis and Applications to Cancer Imaging and Treatment Symposium. Albuquerque, NM. August 16, 2013
15) Lauren A. Marek, Taylor R.M., and **Gullapalli R.R.,**. Synthesis of UV-polymerized Iron Platinum nanoparticles as probes for circulating tumor cells. UNM CNTC Nanoparticle Synthesis and Applications to Cancer Imaging and Treatment Symposium. Albuquerque, NM. August 16, 2013
14) Veleta M., Taylor R.M.,, and **Gullapalli R.R.,**. Silica-Encapsulated Superparamagnetic Iron Platinum Nanoparticles: Synthesis, Characterization, and Fluorescence Incorporation. UNM Undergraduate Pipeline Network (UPN) Research Day. Albuquerque, NM. August 1, 2013.
13) Marek L.A., Taylor R.M., and **Gullapalli R.R.,**. Synthesis of UV-polymerized Iron Platinum nanoparticles as probes for circulating tumor cells. UNM Undergraduate Pipeline Network (UPN) Research Day. Albuquerque, NM. August 1, 2013.
12) Taylor R.M., and **Gullapalli R.R.,** Influence of Carbon Chain Length on the Synthesis of Fatty Amine-Coated Iron-Platinum Nanoparticles. Annual IRACDA Conference. Atlanta, GA. June 2013
11) **Gullapalli R.R.,** Muddana, H.S. “The Role of Microstructural Polymorphisms in Class I HLA-B Peptide Binding: A Computational Molecular Dynamics Study”, Podium presentation, Academy of Clinical Laboratorians and Physicians annual meeting. St. Louis, MO, June 9 – 11.
10) Muddana, H.S., **Gullapalli R.R.,** Tabouillot, T., Butler, P.J., "Physiological Membrane Tension Causes an Increase in Lipid Diffusion: A Single Molecule Fluorescence Study", Biophysical Society Annual Meeting, Boston MA, 2009.
9) Muddana, H.S., **Gullapalli R.R.,** Butler, P.J., "Tension causes direct changes in lipid dynamics that can play a role in mechanotransduction", Mechanotransduction in Physiology and Disease, Taos NM, 2009.
8) **Gullapalli R.R.,** Carter, A.B., Kant, J.A., "Automated Data Analysis of Real-Time PCR Data Using a Modular Programming Approach (Poster)", AMP Annual Meeting, Grapevine, TX, 2008.
7) **Gullapalli R.R.,** Demirel, M., Butler, P.J., "Molecular Dynamics Simulations of DialkylCarbocyanine Dyes in a DPPC Bilayer: Atomistic Insights into Single Molecule Fluorescence", ASME BED Summer Meeting, 2007.
6) **Gullapalli R.R.,** Demirel, M., Butler, P.J., "Molecular dynamics simulation of DiI in a lipid bilayer: Development of a membrane hydration sensor (Poster)", Biomedical Engineering Society, Annual fall meeting, University of Chicago IL, 2006.

5) **Gullapalli R.R.,** Tabouillot, T., Butler, P.J., "Tracking molecules in stressed cells: multimodal microscopy and single molecule spectroscopy for mechanotransduction (Poster)", 5th World congress of biomechanics, 2006.
4) **Gullapalli R.R**., Demirel, M., Butler, P.J., "Molecular dynamics simulations of Dialkylcarbocyanine dyes in a lipid bilayer (Poster)", Biomedical Engineering Society, Annual Fall Meeting, Johns Hopkins University, MD, 2005.
3) **Gullapalli R.R.,** Tabouillot, T., Butler, P.J., "Fluorescence-based molecular dynamics of stressed model membranes (Poster)", Biomedical Engineering Society, Annual Fall Meeting, Johns Hopkins University, MD, 2005.
2) **Gullapalli R.R.,** Tabouillot, T., Butler, P.J., "Time-Resolved Fluorescence Analysis of Stressed Membranes (Poster)", Biomedical Engineering Society, Annual fall meeting, Philadelphia, PA, 2004.
1) Bae, C., Dangaria, J**., Gullapalli R.R.,** Tabouillot, T., "Techniques to Study Endothelial Cell Mechanics & Molecular Dynamics (Poster)", Penn State University Graduate student exhibition, 2003.

XXI. JOURNAL EDITORSHIP

Associate Editor, BMC Cancer, Publisher - BioMedCentral (Impact Factor – 3.3)
Translational Oncology, Systems Biology, Post-genomic Analysis and Emerging Technologies sub-group.
Open Access Journal.

XXII. JOURNAL REVIEWER

1) Cancer Cell International
2) Scientific Reports (Nature Journal)
3) Journal of Pathology Informatics
4) Journal of Molecular Diagnostics

XXIII. COMPUTATIONAL SKILLS

Programming Languages:	Python, R, MATLAB, Bash Shell Programming.
Applications:	Gromacs, VMD, Origin, MS-Office.
NGS Software	**DNA-seq Analysis**- Bowtie, SAMtools, BWA, Freebayes, VarScan, Annovar, GATK, Picard, IGV, NextGene, VariantCalller.
	16s Microbiome Analysis – Mothur, QIIME, PICRUSt.
Operating Systems:	Linux, Windows.

XXIV. SPOKEN LANGUAGES

Fluent in English, Hindi and Telugu. Limited linguistic skills in French.

XXV. PROFESSIONAL SOCIETY MEMBERSHIPS

Association of Molecular Pathology	- member.
American Association of Cancer Research	- member.
Association of Pathology Informatics	- member.
American Society of Clinical Pathology	- past member
College of American Pathologists	- past member.
Biomedical Engineering Society	- past member
Society for Optical Engineering	- past member