Mukund Bhandari, MS, PhD

Bioinformatics, Computational Biology, Multi Omics, Biostatistics, Machine Learning
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SUMMARY:

I am a bioinformatics scientist with over 5 years of experience in bioinformatics/computational biology, possessing a solid background in cancer genomics, multi-omics, statistics, and machine learning. I specialize in developing and implementing computational methods and workflows to analyze large-scale multi-omics NGS data and clinical data, utilizing Linux environments and cloud computing. I have extensive experience working with large database such as TCGA, NCDB, and SEER using R and Python. In addition, I have experience and an understanding of basic and translational research in cancer biology, protein biochemistry, drug discovery, and biotechnology.

EDUCATION:

PhD in Integrated Biomedical Science Program- **(Bioinformatics)** August 2019- June 2024
UTHealth San Antonio, TX

MS in Biotechnology- (Cancer Research) August 2013-May 2015
Stephen F. Austin State University, Nacogdoches, TX

BTech in Biotechnology- (Cancer Research) August 2007- July 2011
Kathmandu University, Dhulikhel, Nepal

WORK EXPERIENCE:

Computational Biology Scientist-II August 2024- Current
UT Southwestern Medical Center, Dallas, TX

- Serve as subject matter expert in multiple areas of computing technology, and specific knowledge of molecular biology and genetics.
- Investigate multiple projects related to microbiome and viral genome.
- Oversee the development and maintenance of complex databases to support new and ongoing research projects.
- Ensure continued excellence in innovation (bring on new tests/ analysis tools), patient care (ensure on-time processing/ speeding up analysis time), and research (aid in physician and resident research projects by gathering genetic data from across 1000's of cases).
- Develop new bioinformatics pipeline for NGS multi-omics analysis using cloud computing and nextflow.
- Report scientific findings in project team meetings to facilitate decisions between stakeholders and KOLs.
- Prepare research reports for presentation and assist with preparation of manuscripts for publication.
  Github*: https://github.com/mukund-bhandari*

Graduate Research Assistant August 2019- June 2024
Greehey Children's Cancer Research Institute, UTHealth San Antonio, TX

- Developed new bioinformatics pipeline for NGS multi-omics analysis and optimized pipeline to reduce computational time and cost by 40 percent. I used R, Python, Shell, Perl, package management (Conda, mamba), version control (Git), containerization (Docker, Singularity), cloud computing (HPC, AWS, AZURE), workflow management (Snakemake, Nextflow), and workload management (Slurm) to achieve the goals.
- Investigated genomic landscape and molecular aberrations in 21 patient tumor and pre-clinical model using RNA, WES and WES data and developed best practice guidelines and standard for genomic analysis. I utilized bioinformatics tools such as samtools, bcftools, STAR, Kallisto, DESeq2, STARFusion, GATK, CNVkit, Mutect2, annovar, tidyestimate, Bioconductor, edgeR/limma,
- Performed exploratory data analysis to gain preliminary results on lead biomolecules in different cancer pathways for many collaborative projects, hence saved time, resources and cost for several research projects using tools such as Seurat, Scanpy and databases such as TCGA, cbioPortal, ClinicalOmicsDB, NCDB, SEER, EMBL, UniProt, PDB, and UCSC.

- Performed machine learning analysis on TCGA data to identify osteosarcoma subtype with the better prognosis by utilizing machine learning (supervised & unsupervised, knn, nmf, kmeans) and AI (scikit-learn, Tensorflow, PyTorch), statistical analysis (correlation, t-test, ANOVA), and statistical modeling (linear & non-linear),
- Wrote custom UNIX scripts to run different applications and algorithms and troubleshoot technical issues.
- Reported scientific findings in project team meetings to facilitate decisions between stakeholders and KOLs.

Github*:* *https://github.com/mukund-bhandari*

Professional Research Associate-II 2016-2019

University of Texas Medical Branch, Galveston, TX

- Investigated 4 different proteins involved in neurological and cancer research.
- Studied proteins involved in transcription regulation using biochemical and biophysical techniques
- Purified protein, developed and optimized compound screening assays and instruments
- Used robotics to screen 20K+ co-valent compound to verify molecular targets
- Contributed to 2 scientific manuscripts, assisted postdoctoral in laboratory practices
- Trained undergrad, grad students and post-doctoral trainee on scientific protocol and equipments

Other Skills: Presentation, Report Writing, Project Leadership, Data Analysis, Lab Management

Research Assistant 2013- 2016

Stephen F Austin State University, Nacogdoches, TX

- Conducted research on colorectal cancer, and identified potent natural compound with anticancer property
- Presented and discussed research findings at various international and regional conferences.
- Provided instruction on experimental concepts in undergraduate biology labs
- Demonstrated use of laboratory equipment and its principle using my technical knowledge

Other Skills: Project Planning, Time Management, Literature Review, Data Analysis, Team Management

Industrial Trainee 2010-2010

Quality Control and R&D Department, AstraZeneca Pharma Ltd, Bengaluru, India

- Aided senior scientist in GMP, quality control and R&D department
- Participated in daily and weekly discussions and meetings and took notes
- Analyzed lab samples routinely, wrote report and corresponded with manufacturing department

Other Skills: Quantitative Research, Team Building, QC, Troubleshooting

Industrial Trainee 2009-2010

Quality Control and R&D Department, Carlsberg Group

- Aided senior scientist in GMP, quality control and R&D department
- Participated in daily and weekly discussions and meetings and wrote reports

Other Skills: Quantitative Research, Team Building, QC, Troubleshooting

OTHER RESEARCH INVOLVEMENTS:

Rotation Student Spring 2020
Lab of Dr. Siyuan Zheng, Greehey Children Cancer Research Institute
Research Area: Cancer Genomics in Pediatric Cancer
Quantitation of Exon Expression using RNA-seq data.

Rotation Student Fall 2019
Lab of Dr. Mingjiang Xu, South Texas Research Facility
Research Area: Myeloid Malignancies and Epigenetics in Leukemia
Investigate the role of LncRNAs dysregulation and TET2 mutations in the development of myeloid malignancies.

Rotation Student Fall 2019
Lab of Dr. Patrick Sung, UTHealth San Antonio
Research Area: BRCA1 molecular biology and biochemistry in Breast Cancer
Purification of PALB2 and binding partners BRCA1-BARD1-MRG1 to investigate their binding mechanism.

Rotation Student Fall 2019
Lab of Dr. Ann Griffith, UTHealth SA
Research Area: Cancer Immunity
Catalase deficiency creates oxidative environment in stromal cells for tolerance to tissue-restricted antigens

Research Assistant 2013-2015
Lab of Dr. Beatrice Clack, Stephen F. Austin State University, TX, USA
Research Area: Adenocarcinoma and Natural products
Apoptosis in DLD-1 Colorectal Cancer Cells L-19 compound

Student Researcher 2007-2011
Lab of Dr. Janardhan Lamichhane, Kathmandu University
Research Area: Cancer Biology and Drug Development
Antibacterial and anti-proliferative activity of high-altitude medicinal plants of Nepal

OTHER EXPERIENCES:

Technology Commercialization Catalyst 2024-2024
UTHealth San Antonio, TX
- Performed holistic analysis of inventions, such as drugs, biologics, or medical devices.
- Carried out detailed market research, including market size, competitors, and potential barriers to entry.
- Determined the invention's intellectual property potential.
- Identified and communicated with potential industry partners for acquisition and commercialization.

Skills: Literature Review, Data Analysis, Report Writing, Market Research

Co-founder and President 2020-2021
BIG Bioinformatics, San Antonio, Texas, USA
- Established 'BIG Bioinformatics', a non-profit to address the growing demand for bioinformatics
- Served as a Founding President to structure its mission, goals, and objectives.
- Chaired executive and general meetings to initiate, plan and execute multiple Bootcamp and Workshops
- Organized 'BioInfo Talk Series' by bringing many world-renowned Professors and Research Scientists
- Established collaborations with other Grad students, Instructors, Faculties and Grad School to grow the organization and maximize student participation

Skills: Cross-functional Team Leadership, Entrepreneurship, Public Speaking, Project Leadership

EDITOR/REVIEWER BOARD/PEER-REVIEWER:

Associate Editor, Journal of Emerging Investigators 2023-Current
Reviewer Board Member, BioMedInformatics 2023-Current
Peer Reviewer: For 24 scientific journals 2015-Current
Name of Journals:
Journal of Translational Medicine, Translational Medicine Communications, Cancers, Frontiers in Biomedical Sciences, Frontiers in Public Health, PLOS One, PLOS Global Public Health, Medicina, Applied Biochemistry and Biotechnology, BioMedInfomatics, Onco, etc.)

PUBLICATION AND PRESENTATION:

Publications available online (14):

1. Ahmad Abdelaziz, **Mukund Bhandari**, Emad Eddin Dalla, Shaun Trecarten, Michael Liss, Ahmed M.Mansour "Perioperative Outcomes and Trends of Transurethral Surgeries for Benign Prostatic hyperplasia in Octogenarians: A Comperative Analysis Using the NSQIP Database (2011-2022)", 2024, (accepted, World Journal of Urology)

2. Shaun Trecarten, **Mukund Bhandari**, Ahmad Abdel-Aziz, Onika Noel, Michael Liss, Furkun Dursun, Robert Svatek, Ahmad Mansour "Open versus Minimally Invasive Nephroureterectomy in Octogenarians: An Analysis of Surgical Approach Trends, Outcomes and Survival Analysis with Propensity Matching", 2024, https://doi.org/10.1016/j.urolonc.2024.02.005

3. Ahmad Abdelaziz, **Mukund Bhandari**, Ahmed Elshabrawy, Shaun Trecarten,Emad Eddin Dalla, Kamel A. Samara, Fadi Alsayegh, Michael Liss, Ahmed M.Mansour "Contemporary Trends of Holmium Laser Enucleation of the Prostate (HoLEP) Utilization in the United States: A Comprehensive Analysis Using the National Surgical Quality Improvement Program (NSQIP) Database (2011-2020)", 2024, https://doi.org/10.1089/end.2023.0612

4. Geeta Joshi, Aditi Jain, Shalini Reddy Araveeti, Sabina Adhikari, Harshit Garg, **Mukund Bhandari***, "FDA approved Artificial Intelligence and Machine Learning (AI/ML)-Enabled Medical Devices: An updated landscape", 2024, https://doi.org/10.3390/electronics13030498, ***(*corresponding Author)***

5. Sepideh Mohammadhosseinpour**, Mukund Bhandari*,** Dallas Lee, Beatrice Clack, "Anti-Proliferative and Apoptotic Activities of *Rumex crispus"* (Life, 2023) http://tinyurl.com/mve3m3kz ***(*corresponding Author)***

6. Harshit Garg**, Mukund Bhandari**, Shannon Hall, Onika Noel, Furkan Dursun, Michael Liss, Dharam Kaushik, Mohamad Hassan Fakhreddine, Chethan Ramamurthy, Robert Svatek, Ahmed Mansour. A comparative analysis of radical cystectomy with perioperative chemotherapy, chemoradiation therapy or systemic therapy in patients with clinically advanced node-positive bladder cancer (cN2/N3), Frontiers in Oncology, 2023, https://tinyurl.com/44tj3yhv

7. Muktar Musa Shallangwa, Nathan Isaac Dibal, **Mukund Bhandari**, Shuaibu Saidu Musa, Hassan Muhammad Bello, "Malnutrition and its associated factors among people living with HIV/AIDS (PLHIV) in resource limited settings: A single-centred study" (Clinical Epidemiology and Global Health, 2023) https://tinyurl.com/352y5k3e

8. Garg H, Whalen P, Marji H, Cooper R, Dursun F, **Bhandari M**, Khanna L, Jayakumar L, Liss MA, Svatek RS, Rodriguez R, Kaushik D, Pruthi D. "Patency outcomes of primary Inferior vena cava repair in radical nephrectomy & tumor thrombectomy" (Journal of Vascular Surgery, 2023) https://tinyurl.com/5fr3rwmy

9. Geeta Joshi, Aditi Jain, Harshit Garg, **Mukund Bhandari***, "Three Decades of Novel Drug Approval: A Comprehensive Analysis", https://tinyurl.com/w82vexah ***(*corresponding Author)***

10. Subash Khadka, Deegendra Khadka, Ram Chandra Poudel, **Mukund Bhandari**, Purnima Baidya, Jaishree Sijapati, Jyoti Maharjan, "Production Optimization and Biochemical Characterization of Cellulase from *Geobacillus* sp. KP43 Isolated from Hot Spring Water of Nepal", *BioMed Research International*, 2022 https://tinyurl.com/3cr3mtem

11. Yi Li, Zhiqing Liu, Galina Aglyamova, Jianping Chen, Haiying Chen, **Mukund Bhandari**, Mark A. White, Gabrielle Rudenko, Jia Zhou, "Discovery of phenanthridine analogues as novel chemical probes disrupting the binding of DNA to ΔFosB homodimers and ΔFosB/JunD heterodimers", Bioorganic & Medicinal Chemistry Letters, 2020 https://tinyurl.com/us27464u

12. Zhou Yin, Harikanth Venkannagari, Haley Lynch, Galina Aglyamova, **Mukund Bhandari**, Mischa Machius, Eric J. Nestler, Alfred J. Robison, Gabby Rudenko, "Self-assembly of the bZIP transcription factor ΔFosB", Current Research in Structural Biology, 2020 https://tinyurl.com/596ssbk5

13. Janardan Lamichhane, Surya B Chhetri, **Mukund Bhandari**, Sameer Pokhrel, Anaya Pokhrel & Jae Kyung Sohng,"Ethnopharmacological survey, Phyto-chemical screening and Antibacterial activity measurements of high altitude medicinal plants of Nepal: A bioprospecting approach", Indian Journal of Traditional Knowledge, Vol.13 (3), July 2014 https://tinyurl.com/2p8ew47x

14. Janardan Lamichhane, Surya B Chhetri, **Mukund Bhandari**, Sameer Pokhrel, Rupak Timilsina and Tirtha Maiya Shrestha, "Antiproliferative bioassay of extremophilic medicinal plants from Langtang Himalayan range of Nepal", J. Biomolecule Reconstruction, 2012, https://tinyurl.com/453hd4dz

Publications under Review (7):

1. **Mukund Bhandari**, Funan He, Anna Rogojina, Abhik M Bandyopadhyay, Zhao Lai, Gail Tomlinson Siyuan Zheng, Yidong Chen, Peter Houghton, Xiaojing Wang, "Benchmarking Mouse Contamination Removing Protocols in Patient-Derived Xenografts Genomic Profiling" (under review)

2. Santosh Timilsina, Nourhan Abdelfattah, Daisy Medina, Deepika Singh, Shahad Abdulsahib, Jian Yu Huang, Panneerdoss Subbarayalu, Trong Phat Do, Prabhakar Pitta Venkata, Saif Nirzhor, **Mukund Bhandari**, Siyuan Zheng, Yidong Chen, Robert Hromas, Patrick Sung, Virginia Kaklamani, Ratna Vadlamudi, and Nu Zhang, Majeet Rao, FOXM1 Blockade Promotes Tumor Regression by Inducing DNA Sensing and Stress Ligand-Dependent Antitumor Immunity and Immune Memory (under review)

3. Deepika Singh, Benjami Onyeagucha, Daisy Medina, Panneerdoss Subbarayalu, Rahul Mojidra, Dongwen Lv, **Mukund Bhandari,** Santosh Timilsina, Prabhakar Venkata, Saif Nirzhor, Shahad Abdulsahib, Trong Phat Do, Yidong Chen, Alex Taylor, JEAN JIANG, Patrick Sung, Daohong Zhou, Ratna Vadlamudi, Robert Hromas, and Manjeet Rao, "Antibody Targeting Secretory Protein SCUBE3 Suppresses Cancer Growth and Metastasis by Inhibiting Pro-Tumorigenic Signaling and Inducing Anti-Tumor Immunity" (under review)

4. Shaun Trecarten, **Mukund Bhandari**, Ahmad Abdel-Aziz, Onika Noel, Michael Liss, Furkun Dursun, Robert Svatek, Ahmad Mansour "An analysis of rates, trends and predictors of conversion to open for robotic and laparoscopic radical nephroureterectomy" (under review)

5. Emad Eddin Dalla; **Mukund Bhandari**; Ahmad Abdelaziz; Michael Liss, Ahmed M. Mansour, "Safety and Efficacy of Holmium Laser Enucleation of the Prostate (HoLEP) in Octogenarians: A Retrospective Cohort Analysis Using ACS-NSQIP Database (2011-2020) (under review)"

6. Harshit Garg, **Mukund Bhandari**, Monica Sridhar, Onika Noel, Furkan Dursun, Michael Liss, Dharam Kaushik, Robert Svatek, Chethan Ramamurthy, Ahmed Mansour. "Time trends in systemic treatments and survival in patients with metastatic urothelial bladder cancer: From the era of chemotherapy to immunotherapy" (under review)

7. Harshit Garg, Philip Whalen, Akbar Minahil, **Mukund Bhandari**, Michael A. Liss, Ahmed M. Mansour, Robert S. Svatek, Dharam Kaushik, Deepak K. Pruthi, "Urine Analysis: An Often-Overlooked Marker for Renal Function in Kidney Cancer Surgery" (under review)

Publications under Preparation (2):

1. Saif Nirzhor, Panneerdoss Subbrayalu, Prabhaar Pitta Venkata, Santosh Timilsina, Shahad Abdulsahib, **Mukund Bhandari**, Siyuan Zheng, Majeet Rao, "SKP2: a critical facilitator of Medulloblastoma growth and progression (in-preparation)

2. Ahmad Abdelaziz, **Mukund Bhandari**, Ahmed Elshabrawy, Shaun Trecarten,Emad Eddin Dalla, Kamel A. Samara, Fadi Alsayegh, Michael Liss, Ahmed M.Mansour, "Factors Influencing Overall Survival in Metastatic Upper Urinary Tract Urothelial Tumors: A Retrospective Analysis Using NCDB Data" (in-preparation)

Conference Abstracts Published (23):

1. Shaun Trecarten, Anand Iyer, **Mukund Bhandari**, Chethan Ramamurthy, Deepak Pruthi, Financial toxicity and quality of life post chemotherapy for testicular germ cell tumors, https://doi.org/10.1097/01.JU.0001009376.16371.fb.02

2. Ahmad Abdelaziz, Mukund Bhandari, Shaun Trecarten,Emad Eddin Dalla, Onika Noel, Deepak Pruthi, Michael Liss, Furkan Dursan, Ahmed M.Mansour, Assessing the impact of renal mass biopsy on the outcomes of active surveillance for small renal masses, https://doi.org/10.1016/S0302-2838(24)01044-3

3. Onika Noel, Tej Desai, **Mukund Bhandari**, Harhist Garg, Furkan Dursan, Michael Liss, Robert Svatek, Ahmed M.Mansour, Utilization of palliative care in bladder cancer: Delineating patterns of care and associated disparities, https://doi.org/10.1016/S0302-2838(24)00282-3

4. Harshit Garg, **Mukund Bhandari**, Onika V. Noel, Furkan Dursun, Michael Liss, Dharam Kaushik, Robert S. Svatek, Chethan Rammamurthy, Ahmed M. Mansour, "Adjuvant immunotherapy for patients with renal cell carcinoma at increased risk of recurrence following resection: A National Cancer Database Analysis", Journal of Clinical Oncology, 2023, https://tinyurl.com/2hztk8mn **(Received best poster award for ASCO 2023)**

5. Onika Noel, Harshit Garg, Kennedy E Okhawere, **Mukund Bhandari**, Indu Sinai, Laura Zuluaga, Ronney Abaza, Daniel D. Eun, Akshay Bhandari, Ashok K. Hemal, James Porter, Michael D Stifelman, Jihad Kaouk, Simone Crivellaro , Craig Rogers, Philip Pierorazio, Ketan K Badani, Ahmed Mansour, "A Comparative Analysis of Robot-assisted Retroperitoneoscopic Partial nephrectomy (RARPN) for Anterior vs Posterior Renal tumors: A Propensity Score Matched Analysis in a Multi-Institutional Cohort ", The Journal of Urology, 2023, https://tinyurl.com/2wha57rm

6. Geeta Joshi, Aditi Jain, Sabina Adhikari, Harshit Garg, **Mukund Bhandari**, "AI and Machine Learning (AI/ML)-Enabled Medical Devices in Health Care: Trends in Cardiology", 6th Cardio Renal Connection, San Antonio, 2023, https://www.cardiorenalconnections.org

7. Geeta Joshi, Aditi Jain, Harshit Garg, **Mukund Bhandari**, "Comprehensive analysis of the last 3 decades in novel drug approval by FDA", 6th Cardio Renal Connection, San Antonio, 2023, https://www.cardiorenalconnections.org

8. Harshit Garg, **Mukund Bhandari**, Gilda Digman, Onika Noel, Furkan Dursun, Dharam Kaushik, Deepak Pruthi, Michael Liss,Chethan Ramamurthy, Ahmed Mansour, "Open versus minimal invasive retroperitoneal lymph node dissection: a National Cancer Database analysis" , The Journal of Urology, 2023, https://tinyurl.com/bddstjaj

9. Harshit Garg, **Mukund Bhandari**, Monika Gasiorek, Onika Noel, Furkan Dursun, Michael Liss, Dharam Kaushik, Chethan Ramamurthy, Ahmed Mansour, "Role of adjuvant immunotherapy for patients with renal cell carcinoma at increased risk of recurrence following resection", The Journal of Urology, 2023, https://tinyurl.com/ap2hphkb

10. Harshit Garg, **Mukund Bhandari**, Monica Sridhar, Onika Noel, Furkan Dursun, Michael Liss, Dharam Kaushik, Robert Svatek, Chethan Ramamurthy, Ahmed Mansour, "Time trends in systemic treatments and survival in patients with metastatic urothelial bladder cancer: From the era of chemotherapy to immunotherapy", The Journal of Urology, 2023, https://tinyurl.com/bdh3z9f4

11. Harshit Garg, **Mukund Bhandari**, Furkan Dursun, Michael Liss, Dharam Kaushik, Mohamad Hassan Fakhreddine, Chethan Ramamurthy, Robert Svatek, Ahmed Mansour, "A comparative analysis of outcomes of radical cystectomy, concurrent chemoradiation or systemic therapy in patients with urothelial bladder cancer and advanced lymph nodal (cN2/N3) disease", Society of Urologic Oncology, SUO 2022 https://tinyurl.com/msx2dnep

12. Harshit Garg, Philip Whalen, Minahil Akbar, **Mukund Bhandari**, Michael Liss, Ahmed Mansour, Robert Svatek, Dharam Kaushik, Deepak Pruthi, "Urine analysis: An often-over-looked marker for renal function in kidney cancer surgery, Society of Urologic Oncology, SUO 2022" https://tinyurl.com/yttfs9tx

13. Harshit Garg, **Mukund Bhandari**, Onika Noel, Furkan Dursun, Michael Liss, Dharam Kaushik, Chethan Ramamurthy, Ahmed M. Mansour, Utility of adjuvant immunotherapy in high-risk non-metastatic renal cell carcinoma: A real-world experience using National Cancer Database Analysis, European Urology 2023, https://tinyurl.com/mrxuexax

14. Harshit Garg, Philip Whalen, Minahil Akbar, **Mukund Bhandari**, Michael Liss, Ahmed Mansour, Robert Svatek, Dharam Kaushik, Deepak Pruthi, "Urine analysis: A convenient and strong indicator for renal function assessment in surgery for renal cancer", https://tinyurl.com/79xaumut

15. Harshit Garg, **Mukund Bhandari**, Onika Noel, Furkan Dursun, Michael Liss, Dharam Kaushik, Chethan Ramamurthy, Ahmed M. Mansour, Impact of systemic treatments on overall survival in metastatic urothelial bladder cancer: A time-trend analysis, European Urology 2023, https://tinyurl.com/2s3h4k8d

16. Harshit Garg, **Mukund Bhandari**, Furkan Dursun, Dharam Kaushik, Deepak K.Pruthi, Michael liss, Robert S. Svatek, Ahmed M. Mansour, A comparative analysis of open vs minimal invasive lymph node dissection for testicular cancer using National Cancer Database, European Urology '23, https://tinyurl.com/ywjxrpzj

17. Harshit Garg, **Mukund Bhandari**, Furkan Dursun, Michael Liss, Dharam Kaushik, Ahmed M. Mansour, Comparison of contemporary treatment strategies for locally advanced (stage IIIB) urothelial bladder cancer using National Cancer Database, European Urology, 2023, https://tinyurl.com/2krz4js4

18. **Bhandari, M**., Lockwood H., and Clack B., Induction of Apoptosis in DLD-1 Colorectal Cancer Cells using water soluble compounds from Rumex Crispus. The FASEB Journal vol 30.1. April 2016, https://tinyurl.com/d4svxmys

19. **Bhandari, M** and Clack, B., Extraction of Anti-Cancer Water Soluble Compounds from *Rumex Crispus*. FASEB, 2015 https://tinyurl.com/yu4zydez

20. Shaun Trecarten, **Mukund Bhandari,** Ahmad Abdel-Aziz, Onika Noel, Michael Liss, Furkan Dursun, Robert Svatek, Ahmed M. Mansour, "An Analysis of Rates, Trends, and Predictors of Conversion to Open for Robotic and Laparoscopic Radical Nephroureterectomy.", 2024, 103rd Annual Meeting of the South Central Section of the AUA

21. Ahmad Abdelaziz, Shannon Hall, Emad Eddin Dalla, **Mukund Bhandari**, Shaun Trecarten, Michael Liss, Ahmed M. Mansour, "Factors Influencing Overall Survival in Metastatic Upper Urinary Tract Urothelial Tumors: A Retrospective Analysis Using NCDB Data", 2024, 103rd Annual Meeting of the South Central Section of the AUA

22. Ahmad Abdelaziz, Tej Desai, Emad Eddin Dalla, **Mukund Bhandari**, Shaun Trecarten, Michael Liss, Ahmed M. Mansour, "Assessing the Impact of Renal Mass Biopsy on the Outcomes of Active Surveillance for Small Renal Masses", 2024, 103rd Annual Meeting of the South Central Section of the AUA

23. Emad Eddin Dalla, Shannon Hall, Ahmad Abdelaziz, **Mukund Bhandari**, Shaun Trecarten, Michael Liss, Ahmed M. Mansour, "Safety And Efficacy of Holmium Laser Enucleation of the Prostate (HOLEP) in Octogenarians: A Retrospective Cohort Analysis Using ACS-NSQIP Database (2011-2020)", 2024, 103rd Annual Meeting of the South Central Section of the AUA

ORAL PRESENTATION AT CONFERENCES:

1. **Mukund Bhandari**[*], Funan He, Anna Rogojina, Abhik M Bandyopadhyay, Zhao Lai, Gail Tomlinson, Siyuan Zheng, Yidong Chen, Peter Houghton, Xiaojing Wang, "Benchmarking Mouse Contamination Removing Protocols in Patient-Derived Xenografts Genomic Profiling" San Antonio Pediatric Cancer Symposium, Feb 2023

2. **Mukund Bhandari**[*]**,** Funan He, Anna Rogojina, Abhik M Bandyopadhyay, Zhao Lai, Gail Tomlinson, Siyuan Zheng, Yidong Chen, Peter Houghton, Xiaojing Wang, "Genomic Profiling of Patient-Derived Xenografts" Greehey Children Cancer Research Institute, Nov 10, 2022

3. **Mukund Bhandari,** Beatrice Clack, "Extraction of Anti-Cancer Water Soluble Compounds from *Rumex crispus*." Experimental Biology 2015, Boston, USA

4. **Mukund Bhandari*,** Beatrice Clack, "Induction of Apoptosis in DLD-1 Colorectal Cancer Cells using water soluble compounds from Rumex Crispus", Experimental Biology 2016, California, USA

5. **Mukund Bhandari*,** Beatrice Clack, "Extraction of Anti-Cancer Water Soluble Compounds from *Rumex crispus*.", Bright Ideas Conference, April 29, 2015, SFA State University, Nacogdoches, Texas

HONORS AND AWARDS:

2015 Graduate or Postdoctoral Travel Award
Awarding Institution: American Society of Biochemistry and Molecular Biology (ASBMB)

CERTIFICATIONS:

Data Scientist with R 2024
Machine Learning Scientist with Python 2024

Practical Data Science with Amazon Sagemaker 2023
The Data Science of Healthcare, Medicine and Public Health 2023

STEM JUDGING:

Invited Judge, 2023 Academic Research Symposium, San Antonio
Invited Judge, 2023 Research Showcase, St. Mary University
Invited Judge, 2023 Alamo Regional Science and Engineering Fair (ARSEF)
Invited Judge, 2022 Jay Science and Engineering Academy (SEA)
Invited Judge, 2021 Almo Reginal Science and Engineering Fair (ARSEF)
Invited Judge, 2021 Jay Science and Engineering Academy (SEA)

PRESENT AND PAST MEMBERSHIPS:

Member, American Association for Cancer Research
Member, American Society of Biochemistry and Molecular Biology
Member, Mays Cancer Center, San Antonio, Texas
Member, Greehey Children's Cancer Research Institute, San Antonio, Texas
Gulf Coast Consortia for Quantitative Biomedical Sciences

COMMITTEE RESPONSIBILITIES/INVOLVEMENT:

Executive Committee Member, GCCRI Trainee Workshop Series 2023-2024
Vice President, GSIC, UTHealth San Antonio 2010-2020
Secretary, Biotech Club, Stephen F Austin State University 2014-2015
Executive Member, KUBiC 2009-2010

TEACHING:

R programming Aug 2021
Graduate course, *UTHealth San Antonio, Integrated Biomedical Sciences*, 2021
Instructed graduate pre-mat R programming course to the class of above 30 students.

Teaching Assistant Aug 2020
Bioinformatics workshop, BIG Bioinformatics
Helped students with installation, troubleshooting, and basics of coding language

Teaching Assistant
BIOL101, *Stephen F Austin State University, Department of Biology*, 2013-2015
Instructed undergrad BIOL101 course to a class of above 50 students.

TED Talk April 2019
TEDx Youth at The Woodlands, Houston, TX,

SCIENTIFIC PROFILES:

LinkedIn: https://www.linkedin.com/in/mukundbhandari
Google Scholar: https://scholar.google.com/citations?user=IftooZgAAAAJ&hl=en
ORCID: https://orcid.org/0000-0001-9648-4844
Research gate: https://www.researchgate.net/profile/Mukund-Bhandari
BIG Bioinformatics: https://www.bigbioinformatics.org/about
GitHub: https://mukund-bhandari.github.io/