

## CURRICULUM VITAE

University of Pittsburgh  
School of Medicine

### BIOGRAPHICAL

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### EDUCATION and TRAINING

#### UNDERGRADUATE:

Dates Attended	Name and Location of Institution	Degree Received and Year	Major Subject
1975 - 1979	University of California Berkeley, California	B.A. 1979	Zoology

#### GRADUATE:

Dates Attended	Name and Location of Institution	Degree Received or Position	Major Subject
1981- 1982	University of California Berkeley, California	MPH 1982	Public Health
1984 - 1990	University of Pittsburgh Pittsburgh, Pennsylvania	PhD 1990	Biology Advisor: Dr. Roger Hendrix
1996 - 1999	University of Pittsburgh Pittsburgh, Pennsylvania	MSIS 1999	Information Science

## POSTGRADUATE

<b>Dates Attended</b>	<b>Name and Location of Institution</b>	<b>Degree Received or Position</b>	<b>Major Subject</b>
1991-1998	University of Pittsburgh Pittsburgh, Pennsylvania	Postdoctoral Associate – Biological Sciences – Dr. Don Defranco Laboratory	Biology

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## APPOINTMENTS and POSITIONS

### ACADEMIC

<b>Years Inclusive</b>	<b>Name and Location of Institution</b>	<b>Rank/Title</b>
3/1991 - 8/1998	University of Pittsburgh Pittsburgh, PA	Senior Research Associate Biological Sciences
11/1998 - 12/1999	Computerm Corporation Pittsburgh, PA	Application Developer
5/2000 - 12/2000	MSA Corporation Pittsburgh, PA	Scientific Consultant
5/2000 - 12/2000	Proteome Inc. Beverly, MA	Scientific Curator
3/2001 - 6/2006	University of Pittsburgh Pittsburgh, PA	Systems Programmer Department of Pathology
7/2006 – 6/2007	University of Pittsburgh Pittsburgh, PA	Systems Programmer Department of Biomedical Informatics
7/1/2007 - 11/30/2015	University of Pittsburgh Pittsburgh, PA	Research Associate of Biomedical Informatics
12/1/2015 – 1/31/2017	University of Pittsburgh Pittsburgh, PA	Visiting Research Associate Professor of Biomedical Informatics
2/1/2017 - Present	University of Pittsburgh Pittsburgh, PA	Research Associate Professor of Biomedical Informatics

12/1/2022 – Present	University of Pittsburgh Clinical and Translational Science Institute (CTSI)	Research Associate Professor of Bioinformatics
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**NON-ACADEMIC**

<b>Years Inclusive</b>	<b>Name and Location of Institution</b>	<b>Rank/Title</b>
3/1/2001 – 8/31/2005	University of Pittsburgh Department of Pathology	Member of NCI’s Director’s Challenge Towards the Molecular Classification of Tumors
9/1/2004 – 8/31/2006	University of Pittsburgh Cancer Institute	Co-Director, Microarray Analysis Services
9/1/2006 – 8/31/2014	University of Pittsburgh Cancer Institute	Co-Director, Cancer Informatics Services
9/1/2014 – Present	Hillman Cancer Center	Co-Director, Cancer Bioinformatics Services
6/1/2016 – Present	University of Pittsburgh	Director, Genomics Analysis Core

**MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES**

<b>Organization</b>	<b>Year</b>
American Medical Informatics Association (AMIA), Member	5/15/2015 - Present
Association of Biomolecular Resource Facilities, Member	5/15/2015 - Present

**AWARDS and HONORS**

<b>Title of Award and Honor</b>	<b>Year</b>
Post-Doctoral Fellowship in Reproductive Physiology, Institutional National Research Service Award (NRSA) IT32HD)7332 - Center for Reproductive Physiology, School of Medicine, University of Pittsburgh, Pittsburgh, PA	1991 – 1992

National Research Service Award (NRSA) IF32HDO7593-01A1

1992 – 1994

Endocrine Society Travel Award to present at the 10<sup>th</sup> International Congress of Endocrinology, San Francisco, CA

1996 – 1996

## PUBLICATIONS

### 1. ORIGINAL PEER REVIEWED ARTICLES:

#### **Original Peer Reviewed Journal Articles:**

1. **Chandran UR**, DeFranco DB. Internuclear migration of chicken progesterone receptor, but not SV40 large tumor antigen, in transient heterokaryons. *Mol. Endocrinol.* 1992; 6:837-844.
2. DeFranco DB, Attardi B, **Chandran UR**. Glucocorticoid receptor-mediated repression of GnRH gene expression in a hypothalamic GnRH-secreting neuronal cell line. IN *Brain Corticosteroid Receptors, Studies on the Mechanism Function, and Neurotoxicity of Corticosteroid Action*. Annals of the New York Academy of Sciences. 1994; 746:473-475.
3. DeFranco DB, Madan AP, Tang Y, **Chandran UR**, Xiao N, Yang J. Nucleocytoplasmic shuttling of steroid receptors. In *Vitamins and Hormones*. Academic Press. 1994; 51:315-338.
4. **Chandran UR**, Attardi B, Friedman R, Dong KW, Roberts JL, DeFranco DB. Glucocorticoid receptor-mediated repression of gonadotropin-releasing hormone promoter activity in GT1 hypothalamic cell lines. *Endocrinol.* 1994; 134:1467-1474. PMID: 8119188
5. **Chandran UR**, Attardi B, Friedman R, Zheng ZW, Roberts JL, DeFranco DB. Glucocorticoid repression of the mouse gonadotropin-releasing hormone gene is mediated by promoter elements that are recognized by heteromeric complexes containing glucocorticoid receptor. *J. Biol. Chem.* 1996; 271:20412-20420. PMID: 870277
6. Attardi B, Tsujii T, Friedman R, Zeng Z, Roberts JL, Dellovade T, Pfaff D, **Chandran UR**, DeFranco DB. Glucocorticoid repression of gonadotropin-releasing hormone gene expression and secretion in morphologically distinct subpopulations of GT1-7 cells. *Mol. Cell. Endocrinol.* 1997; 131:241-255.
7. **Chandran UR**, Warren BS, Baumann CT, Hager GL, DeFranco DB. The glucocorticoid receptor is tethered to DNA-bound Oct-1 at the mouse GnRH distal negative glucocorticoid response element. *J. Biol. Chem.* 1999; 274:2372-2378. PMID: 9891005.
8. **Chandran UR**, DeFranco DB. Regulation of gonadotropin-releasing hormone gene transcription. *Behavioural Brain Research.* 1999; 105:29-36. PMID: 10553688.
9. **Chandran UR**, Dhir R, Ma C, Michalopoulos GK, Becich MJ, Gilbertson JR. Differences in gene expression in prostate cancer, normal appearing prostate tissue adjacent to cancer and prostate tissue from cancer free organ donors. *BMC Cancer.* 2005, 13;5:45. doi: 10.1186/1471-2407-5-45. PubMed PMID: 15892885; PubMed Central PMCID: PMC1173092
10. Varambally S, Yu J, Laxman B, Rhodes DR, Mehra R, Tomlins SA, Shah RB, **Chandran U**, Monzon FA, Becich MJ, Wei JT, Pienta KJ, Ghosh D, Rubin MA, Chinnaiyan AM. Integrative genomic and proteomic analysis of prostate cancer reveals signatures of metastatic progression. *Cancer cell.* 2005 Nov; 8 (5):393-406. PMID: 16286247.
11. Shah UZ, Dhir R, Gollin SM, **Chandran UR**, Lewis D, Acquafondata M, Pflug BR. Fatty Acid Synthase Gene Expression Amplification in Prostate Adenocarcinoma. *Hum Pathol.* 2006; 4:401-409.

12. Kelavkar U, Lin Y, Landsittel D, **Chandran U**, Dhir R. The yin and yang of 15-lipoxygenase-1 and delta-desaturases: dietary omega-6 linoleic acid metabolic pathway in prostate. *Journal of carcinogenesis*. 2006; 5:9. PMID: 16566819. PMCID: PMC1440856.
13. Chiosea S, Jelezcova E, **Chandran U**, Acquafondata M, McHale T, Sobol RW, Dhir R. Up-regulation of dicer, a component of the MicroRNA machinery, in prostate adenocarcinoma. *The American journal of pathology*. 2006 Nov; 169 (5):1812-20 PMID: 17071602. PMCID: PMC1780192.
14. **Chandran UR**, Ma C, Dhir R, Bisceglia M, Lyons-Weiler M, Liang W, Michalopoulos G, Becich M, Monzon FA. Gene expression profiles of prostate cancer reveal involvement of multiple molecular pathways in the metastatic process. *BMC Cancer*. 2007 Apr 12;7:64. PMID: 17430594; PMCID: PMC1865555.
15. Kelavkar UP, Harya NS, Hutzley J, Bacich DJ, Monzon FA, **Chandran U**, Dhir R, O'Keefe DS. DNA methylation paradigm shift: 15-lipoxygenase-1 upregulation in prostatic intraepithelial neoplasia and prostate cancer by atypical promoter hypermethylation. *Prostaglandins & other lipid mediators*. 2007 Jan; 82 (1):185-97. PMID: 17164146.
16. Chiosea S, Jelezcova E, **Chandran U**, Luo J, Mantha G, Sobol RW, Dacic S. Overexpression of Dicer in precursor lesions of lung adenocarcinoma. *Cancer research*. 2007 Mar 1; 67 (5):2345-50. PMID: 17332367.
17. Yin M, Bastacky S, **Chandran U**, Becich MJ, Dhir R. Prevalence of incidental prostate cancer in the general population: a study of healthy organ donors. *The Journal of Urology*. 2008 Mar; 179 (3):892-5; discussion 895. PMID: 18207193.
18. Monzon FA, Hagenkord JM, Lyons-Weiler MA, Balani JP, Parwani AV, Sciulli CM, Li J, **Chandran UR**, Bastacky SI, Dhir R. Whole genome SNP arrays as a potential diagnostic tool for the detection of characteristic chromosomal aberrations in renal epithelial tumors. *Modern Pathology : An Official Journal of The United States and Canadian Academy of Pathology, Inc*. 2008 May; 21 (5):599-608. doi: 10.1038/modpathol.2008.20. PMID: 18246049
19. Escamilla-Hernandez R, Little-Ihrig L, Orwig KE, Yue J, **Chandran U**, Zeleznik AJ. Constitutively active protein kinase A qualitatively mimics the effects of follicle-stimulating hormone on granulosa cell differentiation. *Molecular endocrinology (Baltimore, Md.)*. 2008 Aug; 22 (8):1842-52. PMID: 18535249.
20. Chang G, Xu S, Dhir R, **Chandran U**, O'Keefe DS, Greenberg NM, Gingrich JR. Hypoexpression and epigenetic regulation of candidate tumor suppressor gene CADM-2 in human prostate cancer. *Clinical cancer research: an official journal of the American Association for Cancer Research*. 2010 Nov 15; 16 (22):5390-401. PMID: 21062931. PMCID: PMC3541035.
21. Day RS, McDade KK, **Chandran UR**, Lisovich A, Conrads TP, Hood BL, Kolli VS, Kirchner D, Litzi T, Maxwell GL. Identifier mapping performance for integrating transcriptomics and proteomics experimental results. *BMC bioinformatics*. 2011; 12:213. PMID: 21619611. PMCID: PMC3124437.
22. Lisovich A, **Chandran UR**, Lyons-Weiler MA, LaFramboise WA, Brown AR, Jakacki RI, Pollack IF, Sobol RW. A novel SNP analysis method to detect copy number alterations with an unbiased reference signal directly from tumor samples. *BMC medical genomics*. 2011; 4:14. PMID: 21269491. PMCID: PMC3041647.
23. Boyd LB, Hunicke-Smith SP, Stafford GA, Freund ET, Ehlman M, **Chandran U**, Dennis R, Fernandez AT, Goldstein S, Steffen D, Tycko B, Klemm JD. The caBIG® Life Science Business Architecture Model. *Bioinformatics (Oxford, England)*. 2011 May 15; 27 (10):1429-35. PMID: 21450709. PMCID: PMC3087952.

24. Maxwell GL, Hood BL, Day R, **Chandran U**, Kirchner D, Kolli VS, Bateman NW, Allard J, Miller C, Sun M, Flint MS, Zahn C, Oliver J, Banerjee S, Litzi T, Parwani A, Sandburg G, Rose S, Becich MJ, Berchuck A, Kohn E, Risinger JI, Conrads TP. Proteomic analysis of stage I endometrial cancer tissue: identification of proteins associated with oxidative processes and inflammation. *Gynecologic oncology*. 2011 Jun 1; 121 (3):586-94. PMID: PMC Not Applicable. PMID: 21458040.
25. Bartholow TL, Becich MJ, **Chandran UR**, Parwani AV. Immunohistochemical staining of slit2 in primary and metastatic prostatic adenocarcinoma. *Translational oncology*. 2011 Oct; 4 (5):314-20. PMID: 21966548. PMID: PMC3162306.
26. Bartholow TL, **Chandran UR**, Becich MJ, Parwani AV. Immunohistochemical staining of radixin and moesin in prostatic adenocarcinoma. *BMC Clin Pathol*. 2011 Jan 14;11:1. PMID: 21235778; PMID: PMC3029218.
27. Bartholow TL, Becich MJ, **Chandran UR**, Parwani AV. Immunohistochemical analysis of ezrin-radixin-moesin-binding phosphoprotein 50 in prostatic adenocarcinoma. *BMC Urol*. 2011 Jun 14;11:12. PMID: 21672215; PMID: PMC3132203.
28. Bartholow TL, **Chandran UR**, Becich MJ, Parwani AV. Immunohistochemical profiles of claudin-3 in primary and metastatic prostatic adenocarcinoma. *Diagn Pathol*. 2011 Jan 21;6:12. PMID: 21255442; PMID: PMC3033791.
29. Manohar R, Komori J, Guzik L, Stolz DB, **Chandran UR**, LaFramboise WA, Lagasse E. Identification and expansion of a unique stem cell population from adult mouse gallbladder. *Hepatology (Baltimore, Md.)*. 2011 Nov; 54 (5):1830-41. PMID: 21793026. PMID: PMC3205206.
30. LaFramboise WA, Dhir R, Kelly LA, Petrosko P, Krill-Burger JM, Sciulli CM, Lyons-Weiler MA, **Chandran UR**, Lomakin A, Masterson RV, Marroquin OC, Mulukutla SR, McNamara DM. Serum protein profiles predict coronary artery disease in symptomatic patients referred for coronary angiography. *BMC medicine*. 2012; 10:157. PMID: 23216991. PMID: PMC3566965.
31. Li J, Luthra S, Wang XH, **Chandran UR**, Sobol RW. Transcriptional profiling reveals elevated Sox2 in DNA polymerase  $\beta$  null mouse embryonic fibroblasts. *American journal of cancer research*. 2012; 2 (6):699-713. PMID: 23226616. PMID: PMC3512183.
32. Krill-Burger JM, Lyons MA, Kelly LA, Sciulli CM, Petrosko P, **Chandran UR**, Kubal MD, Bastacky SI, Parwani AV, Dhir R, LaFramboise WA. Renal cell neoplasms contain shared tumor type-specific copy number variations. *The American journal of pathology*. 2012 Jun; 180 (6):2427-39. PMID: 22483639. PMID: PMC3378847.
33. Risinger JI, Allard J, **Chandran U**, Day R, Chandramouli GV, Miller C, Zahn C, Oliver J, Litzi T, Marcus C, Dubil E, Byrd K, Cassablanca Y, Becich M, Berchuck A, Darcy KM, Hamilton CA, Conrads TP, Maxwell GL. Gene expression analysis of early-stage endometrial cancers reveals unique transcripts associated with grade and histology but not depth of invasion. *Frontiers in oncology*. 2013; 3:139. PMID: 3785665. PMID: PMC3683664.
34. Maxwell GL, Allard J, Gadisetti CV, Litzi T, Casablanca Y, **Chandran U**, Darcy KM, Levine DA, Berchuck A, Hamilton CA, Conrads TP, Risinger JI. Transcript expression in endometrial cancers from Black and White patients. *Gynecologic oncology*. 2013 Apr 17. PMID: 23603370. PMID: PMC Not Applicable
35. Mao P, Joshi K, Li J, Kim SH, Li P, Santana-Santos L, Luthra S, **Chandran UR**, Benos PV, Smith L, Wang M, Hu B, Cheng SY, Sobol RW, Nakano I. Mesenchymal glioma stem cells are maintained by activated glycolytic metabolism involving aldehyde dehydrogenase 1A3. *Proceedings of the National Academy of Sciences of the United States of America*. 2013 May 21; 110 (21):8644-9. PMID: 23650391. PMID: PMC3666732.

36. Sikora MJ, Cooper KL, Bahreini A, Luthra S, Wang G, **Chandran UR**, Davidson NE, Dabbs DJ, Welm AL, Oesterreich S. Invasive lobular carcinoma cell lines are characterized by unique estrogen-mediated gene expression patterns and altered tamoxifen response. *Cancer Research*. 2014 Mar 1; 74 (5):1463-74. PMID: 24425047. PMCID: PMC3955299.
37. Peffer ME, **Chandran UR**, Luthra S, Volonte D, Galbiati F, Garabedian MJ, Monaghan AP, DeFranco DB. Caveolin-1 regulates genomic action of the glucocorticoid receptor in neural stem cells. *Molecular and Cellular Biology*. 2014 Jul; 34 (14):2611-23. doi: 10.1128/MCB.01121-13. PMID: 24777604. PMCID: PMC4097667.
38. Geskin A, Legowski E, Chakka A, **Chandran UR**, Barmada MM, LaFramboise WA, Berg J, Jacobson RS. Needs Assessment for Research Use of High-Throughput Sequencing at a Large Academic Medical Center. *PloS One*. 2015; 10 (6):e0131166. doi: 10.1371/journal.pone.0131166. PMID: 26115441. PMCID: PMC4483235.
39. Liao S, Hartmaier RJ, McGuire KP, Puhalla SL, Luthra S, **Chandran UR**, Ma T, Bhargava R, Modugno F, Davidson NE, Benz S, Lee AV, Tseng GC, Oesterreich S. The molecular landscape of premenopausal breast cancer. *Breast Cancer Research: BCR*. 2015; 17:104. doi: 10.1186/s13058-015-0618-8. PMID: 26251034 PMCID: PMC4531812.
40. Gau DM, Lesnock JL, Hood BL, Bhargava R, Sun M, Darcy K, Luthra S, **Chandran U**, Conrads TP, Edwards RP, Kelley JL, Krivak TC, Roy P. BRCA1 deficiency in ovarian cancer is associated with alteration in expression of several key regulators of cell motility - A proteomics study. *Cell Cycle (Georgetown, Tex.)*. 2015; 14 (12):1884-92. doi: 10.1080/15384101.2015.1036203. PMID: 25927284. PMCID: PMC4614952.
41. Manohar R, Li Y, Fohrer H, Guzik L, Stolz DB, **Chandran UR**, LaFramboise WA, Lagasse E. Identification of a candidate stem cell in human gallbladder. *Stem Cell Research*. 2015 May; 14 (3):258-69. doi: 10.1016/j.scr.2014.12.003. PMID: 25765520. PMCID: PMC4439375.
42. **Chandran UR**, Luthra S, Santana-Santos L, Mao P, Kim SH, Minata M, Li J, Benos PV, DeWang M, Hu B, Cheng SY, Nakano I, Sobol RW. Gene expression profiling distinguishes proneural glioma stem cells from mesenchymal glioma stem cells. *Genomics Data*. 2015 Sep 1; 5:333-336. doi: 10.1016/j.gdata.2015.07.007. PMID: 26251826. PMCID: PMC4523279
43. McDade KK, **Chandran U**, Day RS. Improving Cancer Gene Expression Data Quality through a TCGA Data-Driven Evaluation of Identifier Filtering. *Cancer Informatics*. 2015; 14:149-61. doi: 10.4137/CIN.S33076. PMID: 26715829. PMCID: PMC4686346.
44. Frahm KA, Peffer ME, Zhang JY, Luthra S, Chakka AB, Couger MB, **Chandran UR**, Monaghan AP, DeFranco DB. Research Resource: The Dexamethasone Transcriptome in Hypothalamic Embryonic Neural Stem Cells. *Molecular Endocrinology (Baltimore, Md.)*. 2016 Jan; 30 (1):144-54. doi: 10.1210/me.2015-1258. PMID: 26606517. PMCID: PMC4695633.
45. Concha-Benavente F, Srivastava RM, Trivedi S, Lei Y, **Chandran U**, Seethala RR, Freeman GJ, Ferris RL. Identification of the Cell-Intrinsic and -Extrinsic Pathways Downstream of EGFR and IFN $\gamma$  That Induce PD-L1 Expression in Head and Neck Cancer. *Cancer Research*. 2016 Mar 1; 76 (5):1031-43. doi: 10.1158/0008-5472.CAN-15-2001 PMID: 26676749. PMCID: PMC4775348
46. Puri P, Little-Ihrig L, **Chandran U**, Law NC, Hunzicker-Dunn M, Zeleznik AJ. Protein Kinase A: A Master Kinase of Granulosa Cell Differentiation. *Sci Rep*. 2016 June; 6:28132. doi: 10.1038/srep28132 PMID: 27324437. PMCID: PMC4914995.

47. **Chandran UR**, Medvedeva OP, Barmada MM, Blood PD, Chakka A, Luthra S, Ferreira A, Wong KF, Lee AV, Zhang Z, Budden R, Scott JR, Berndt A, Berg JM, Jacobson RS. TCGA Expedition: A Data Acquisition and Management System for TCGA Data. *PLoS One*. 2016 Oct 27;11(10):e0165395. doi: 10.1371/journal.pone.0165395, PMID: 27788220; PMCID:PMC5082933
48. Andersen CL, Sikora MJ, Boisen MM, Ma T, Christie A, Tseng G, Park Y, Luthra S, **Chandran U**, Haluska P, Mantia-Smaldone GM, Odunsi K, McLean K, Lee AV, Elishaev E, Edwards RP, Oesterreich S. Active Estrogen Receptor-alpha Signaling in Ovarian Cancer Models and Clinical Specimens. *Clin Cancer Res*. 2017 Jul 15;23(14):3802-3812. doi: 10.1158/1078-0432.CCR-16-1501. Epub 2017 Jan 10. PMID: 28073843. PMCID: PMC5503796
49. Frahm KA, Waldman JK, Luthra S, Rudine AC, Monaghan-Nichols AP, **Chandran UR**, DeFranco DB. A comparison of the sexually dimorphic dexamethasone transcriptome in mouse cerebral cortical and hypothalamic embryonic neural stem cells. *Mol Cell Endocrinol*. 2017 May 26. pii: S0303-7207(17)30295-2. doi: 10.1016/j.mce.2017.05.026. PMID: 28554804. PMCID: PMC5702594
50. Eshbach ML, Sethi R, Avula R, Lamb J, Hollingshead DJ, Finegold DN, Locker JD, **Chandran UR**, Weisz OA. The transcriptome of the Didelphis virginiana opossum kidney OK proximal tubule cell line. *Am J Physiol Renal Physiol*. 2017 Sep 1;313(3):F585-F595. doi: 10.1152/ajprenal.00228.2017. PMID: 28615248. PMCID: PMC5625107
51. Ramaswamy S, Walker WH, Aliberti P, Sethi R, Marshall GR, Smith A, Nourashrafeddin S, Belgorosky A, **Chandran UR**, Hedger MP, Plant TM. The testicular transcriptome associated with spermatogonia differentiation initiated by gonadotrophin stimulation in the juvenile rhesus monkey (*Macaca mulatta*). *Hum Reprod*. 2017 Oct 1;32(10):2088-2100. doi: 10.1093/humrep/dex270. PMID: 28938749. PMCID: PMC5850871
52. Pascal LE, Masoodi KZ, Liu J, Qiu X, Song Q, Wang Y, Zang Y, Yang T, Wang Y, Rigatti LH, **Chandran U**, Colli LM, Vencio RZN, Lu Y, Zhang J, Wang Z. Conditional deletion of ELL2 induces murine prostate intraepithelial neoplasia. *J Endocrinol*. 2017 Nov;235(2):123-136. doi: 10.1530/JOE-17-0112. PMID: 28870994. PMCID: PMC5679084.
53. Pascal LE, Wang Y, Zhong M, Wang D, Chakka AB, Yang Z, Li F, Song Q, Rigatti LH, Chaparala S, **Chandran U**, Parwani AV, Wang Z. EAF2 and p53 Co-Regulate STAT3 Activation in Prostate Cancer. *Neoplasia*. 2018 Mar 5;20(4):351-363. doi: 10.1016/j.neo.2018.01.011. Epub 2018 Mar 6. PMID: 29518696. PMCID: PMC5909677
54. Luthra S, **Chandran U**, Diergaard B, Becich M, Lee AV, Neumann CA. Expression of reactive species related genes is associated with patient survival in luminal B breast cancer. *Free Radic Biol Med*. 2018 May 20;120:170-180. doi: 10.1016/j.freeradbiomed.2018.03.011. Epub 2018 Mar 12. PMID: 29545070. PMCID: PMC5940524
55. Carson RA, Rudine AC, Tally SJ, Franks AL, Frahm KA, Waldman JK, Silswal N, Burale S, Phan JV, **Chandran UR**, Monaghan AP, DeFranco DB. Statins impact primary embryonic mouse neural stem cell survival, cell death, and fate through distinct mechanisms. *PLoS One*. 2018 May 8;13(5):e0196387. doi: 10.1371/journal.pone.0196387. eCollection 2018. PMID: 29738536. PMCID: PMC5940229.
56. Cao C, Wu H, Vasilatos SN, **Chandran U**, Qin Y, Wan Y, Oesterreich S, Davidson NE, Huang Y. HDAC5-LSD1 axis regulates antineoplastic effect of natural HDAC inhibitor sulforaphane in human breast cancer cells. *Int J Cancer*. 2018 Sep 15;143(6):1388-1401. doi: 10.1002/ijc.31419. Epub 2018 Apr 20. PMID:29633255. PMCID: PMC6105499



57. Martin JM, Avula R, Nowalk MP, Lin CJ, Horne WT, **Chandran UR**, Nagg JP, Zimmerman RK, Cole KS, Alcorn JF. Inflammatory Mediator Expression Associated with Antibody Response Induced by Live Attenuated vs Inactivated Influenza Virus Vaccine in Children. *Open Forum Infect Dis*. 2018 Oct 24;5(11):ofy277. doi: 10.1093/ofid/ofy277. eCollection 2018 Nov. PMID: 30515427; PMCID: PMC6262113.
58. Concha-Benavente F, Kansy BA, Moskovitz J, Moy JD, **Chandran UR**, Ferris RL. PD-L1 mediates dysfunction in activated PD-1+ NK cells in head and neck cancer patients. *Cancer Immunol Res*. 2018 Oct 3. pii: canimm.0062.2018. doi: 10.1158/2326-6066.CIR-18-0062. [Epub ahead of print] PMID: 30282672. PMCID: PMC6512340.
59. Aliberti P, Sethi R, Belgorosky A, **Chandran UR**, Plant TM, Walker WH. Gonadotrophin-mediated miRNA expression in testis at onset of puberty in rhesus monkey: predictions on regulation of thyroid hormone activity and DLK1-DIO3 locus. *Mol Hum Reprod*. 2019 Mar 1;25(3):124-136. doi: 10.1093/molehr/gay054. PMID: 30590698. PMCID: PMC6396851
60. Faden DL, Concha-Benavente F, Chakka AB, McMichael EL, **Chandran U**, Ferris RL. Immunogenomic correlates of response to cetuximab monotherapy in head and neck squamous cell carcinoma. *Head Neck*. 2019 Mar 4. doi: 10.1002/hed.25726. [Epub ahead of print] PMID: 30828910. PMCID: PMC6625877
61. Liu Q, Dwyer GK, Zhao Y, Li H, Mathews LR, Chakka AB, **Chandran UR**, Demetris JA, Alcorn JF, Robinson KM, Ortiz LA, Pitt BR, Thomson AW, Fan MH, Billiar TR, Turnquist HR. IL-33-mediated IL-13 secretion by ST2+ Tregs controls inflammation after lung injury. *JCI Insight*. 2019 Mar 21;4(6). pii: 123919. doi: 10.1172/jci.insight.123919. eCollection 2019 Mar 21. PMID: 30779711. PMCID: PMC6482994
62. Butterfield LH, Vujanovic L, Santos PM, Maurer DM, Gambotto A, Lohr J, Li C, Waldman J, **Chandran U**, Lin Y, Lin H, Tawbi HA, Tarhini AA, Kirkwood JM. Multiple antigen-engineered DC vaccines with or without IFN $\alpha$  to promote antitumor immunity in melanoma. *J Immunother Cancer*. 2019 Apr 24;7(1):113. doi: 10.1186/s40425-019-0552-x. PMID: 31014399; PMCID: PMC6480917
63. Yang Z, Wang D, Johnson JK, Pascal LE, Takubo K, Avula R, Chakka AB, Zhou J, Chen W, Zhong M, Song Q, Ding H, Wu Z, **Chandran UR**, Maskrey TS, Nelson JB, Wipf P, Wang Z. A novel small molecule targets androgen receptor and its splice variants in castration-resistant prostate cancer. *Mol Cancer Ther*. 2020 Jan;19(1):75-88. doi: 10.1158/1535-7163.MCT-19-0489. Epub 2019 Sep 25. PMID: 31554654. PMCID: PMC6946849.
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65. Alcorn JF, Avula R, Chakka AB, Schwarzmann WE, Nowalk MP, Lin CJ, Ortiz MA, Horne WT, **Chandran UR**, Nagg JP, Zimmerman RK, Cole KS, Moehling KK, Martin JM. Differential gene expression in peripheral blood mononuclear cells from children immunized with inactivated influenza vaccine. *Hum Vaccin Immunother*. 2020 Aug 2;16(8):1782-1790. doi:10.1080/21645515.2020.1711677. Epub 2020 Apr 16. PMID: 32298194. PMCID: PMC7482876
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81. Sun R, Guo S, Shuda Y, Chakka AB, Rigatti LH, Zhao G, Ali MAE, Park CY, **Chandran U**, Yu J, Bakkenist CJ, Shuda M, Moore PS, Chang Y. Mitotic CDK1 and 4E-BP1 I: Loss of 4E-BP1 serine 82 phosphorylation promotes proliferative polycystic disease and lymphoma in aged or sublethally irradiated mice. *PLoS One.* 2023 May 5;18(5):e0282722. doi: 10.1371/journal.pone.0282722. PMID: 37145994; PMCID: PMC10162543.
82. Parikh UM, Penrose KJ, Heaps AL, Sethi R, Goetz BJ, Szydlo D, **Chandran U**, Palanee-Phillips T, Mgodini NM, Baeten JM, Mellors JW; MTN-025/HOPE Study Team. Brief Report: HIV Drug Resistance Assessment Among Women Who Seroconverted During the MTN-025/HOPE Open-Label Extension Dapivirine Vaginal Ring Trial. *J Acquir Immune Defic Syndr.* 2024 Jan 1;95(1):35-41. doi: 10.1097/QAI.0000000000003308. PMID: 37732881 PMCID: PMC Journal - In Process

### Original Peer Reviewed Conference Proceedings:

1. **Chandran U**, Monzon FA, Becich MJ, Gilbertson J. A new pathology biomarker laboratory. Proc. Medinfo. CD). 2004; 1546.
2. **Chandran UR**, Lyons-Weiler J, Sciulli C, Monzon FA. Informatics requirements of a high throughput genomics laboratory. AMIA Summit on Translational Bioinformatics. 2008.

### BOOKS, BOOK CHAPTERS AND MONOGRAPHS:

1. DeFranco DB, **Chandran UR**. Subnuclear trafficking of glucocorticoid receptors: general mechanisms and specific recruitment to a unique target site by tethering to a DNA-bound POU domain protein. In Gene Engineering and Molecular Models in Endocrinology (Conn, P.M., and Shupnick, M. eds). 2000; 88-89.
2. Amin W, **Chandran U**, Parwani AV, Becich MJ. Biomedical Informatics for Anatomical Pathology. In: Essentials of Anatomical Pathology. 3rd edition. Totowa, New Jersey: Humana Press, 2011.
3. Hartman D, **Chandran U**, Davis M, Dhir R, Shirey W, Silverstein J, Becich MJ, Clinical and Research Informatics Data Strategy for Precision Oncology. In: Wiley Online Library, Published October 21, 2022, doi.org/10.1002/9781119000822.hfcm022.pub2

## PROFESSIONAL ACTIVITIES

### TEACHING

#### Undergraduate Student Teaching:

Years	Course Number and Title	Role
2012 - 2013	Intro to Bioinformatics	Guest Lecturer

#### Graduate Student Teaching:

Years	Course Number and Title	Role
2013	Translational Bioinformatics	Guest Lecturer
2013 - 2019	Intro to Bioinformatics	Guest Lecturer
10/22/2014	Bioinformatics in Human Genetics	Guest Lecturer

#### Postgraduate Student Teaching:

Years	Course Number and Title	Role
7/2002 - Present	Introduction to Bioinformatics to Pathology Residents	Guest Lecturer
3/2007 – Present	Introduction to Microarray Analysis	Instructor
10/21/2014	Genomics and Research and Informatics in Pathology	Guest Lecturer

10/2019 - Present      Genomics Education - Hands on RNA Seq Analysis,      Lecturer  
Metagenomics, Single cell analysis – Center for  
Research Computing – Funded by Pitt Seed Grant  
(PI: Fangping Mu, PhD)

**Mentoring and Advising:**

**Research Advising:**

*Primary Research Advisor to the following students in the Certificate Program:*

2022    Sandra Karcher, PhD – Biomedical Informatics Training Program

*Primary Research Advisor to high school students:*

- 2014    Sophia Lee in the University of Pittsburgh Cancer Institute Summer Academy and the Computational and Systems Biology and Biomedical Informatics (CoSBBI) program for high school students
- 2016    Cece Beak in the University of Pittsburgh Cancer Institute Summer Academy and the Computational and Systems Biology and Biomedical Informatics (CoSBBI) program for high school students
- 2017    Gibran Biswas in the University of Pittsburgh Cancer Institute Summer Academy and the Computational and Systems Biology and Biomedical Informatics (CoSBBI) program for high school students
- 2019    Taylor Gaito in the University of Pittsburgh Cancer Institute Summer Academy and the Computational and Systems Biology and Biomedical Informatics (CoSBBI) program for high school students
- 2020    Marcus Waller in the University of Pittsburgh Cancer Institute Summer Academy and the Computational and Systems Biology and Biomedical Informatics (CoSBBI) program for high school students
- 2020    Eduardo Ramirez in the University of Pittsburgh Cancer Institute Summer Academy and the Computational and Systems Biology and Biomedical Informatics (CoSBBI) program for high school students
- 2022    Olutoboa Ojo in the University of Pittsburgh Cancer Institute Summer Academy and the Computational and Systems Biology and Biomedical Informatics (CoSBBI) program for high school students
- 2023    Paris Kiehl, Accessible and Inclusive Biomedical Informatics and Data Science (AIBIDS) summer program

*Research Staff Mentoring and Training:*

- 2007 – 2009      Alex Lisovich, MS, University of Pittsburgh Department of Biomedical Informatics
- 2010 – 2011      Irtisha Singh, MS, University of Pittsburgh Department of Biomedical Informatics

2011 – 2016	Soumya Luthra, MS, University of Pittsburgh Department of Biomedical Informatics
2011 – 2021	Anish Chakka, MS, University of Pittsburgh Department of Biomedical Informatics
2014 – Present	Rahil Sethi, MS, University of Pittsburgh Department of Biomedical Informatics
2016 – 2018	Raghu Avula, BS, University of Pittsburgh Department of Biomedical Informatics
2018 – 2019	Abhi Reddy, BS, University of Pittsburgh Department of Biomedical Informatics
2018 – Present	Alex Chang, BS, University of Pittsburgh Department of Biomedical Informatics
2020 – Present	Vishal Soman, BS, University of Pittsburgh Department of Biomedical Informatics
2020 – Present	Paul Cantalupo, MS, University of Pittsburgh Department of Biomedical Informatics
2022 – Present	Xiefei Wang, PhD, University of Pittsburgh Department of Biomedical Informatics

**Other Research Mentoring:**

1/2011-4/2011	Amy Scarborough in the University of Pittsburgh Department of Biological Sciences, Bioinformatics Capstone Project
1/2011-4/2015	Marnik Wijesinha in the University of Pittsburgh Department of Biological Sciences, Bioinformatics Capstone Project
1/2013-4/2013	James A Castiglione in the University of Pittsburgh Department of Biological Sciences, Bioinformatics Capstone Project
1/2013-4/2013	Michael Straudt in the University of Pittsburgh Department of Biological Sciences, Bioinformatics Capstone Project
2020 – present	Kimberly Berry, PhD student, Department of Pharmacology and Chemical Biology; Ms. Berry is the 2022 recipient of a Provost Dissertation Year Fellowship for Historically Underrepresented Doctoral Students
2021 – present	Allison Bean, K-12 Scholar

**Academic and Career Advising:**

**Academic Advisor to the following students in Biomedical Informatics Training Program:**

2019-2021	Shuyu Frank Lu – MS Trainee
2021-Present	Israel Dilan Pantojas – PhD Trainee

**Graduate Committees:**

**Member of the MS Thesis Committees of the following graduate students:**

2011-2012	Mari Mori, MD, MS – Biomedical Informatics Training Program
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Member of the PhD Thesis Committees of the following graduate students:

2020-2025 Aidan Lakshman – Biomedical Informatics Training Program  
2022-2023 Max Reynolds – Biomedical Informatics Training Program

Member of the PhD Dissertation Committees of the following graduate students:

2015-2017 Kevin McDade, PhD – Biomedical Informatics Training Program  
2020-2021 Lauren Rost, PhD – Biomedical Informatics Training Program  
2022-Present Joy Roy, BS, BA – Biomedical Informatics Training Program  
2022-Present Eddie Perez, BS, MS - Biomedical Informatics Training Program

## RESEARCH

### Current Grant Support:

Grant Number (funded)	Grant Title	Role in Project % Effort	Years Inclusive	Source \$ Amount
5P30 CA047904 NIH/NCI (Ferris)	Cancer Center Support Grant (CCSG)	Co-I (20%) 6.0 calendar	09/10/1997- 07/31/2025	NIH/NCI \$714,485
Breast Cancer Research Foundation (Silverstein)	BCRF Data Coordination Center	Co-I (20%) 2.40 calendar	01/2022- 12/2024	Breast Cancer Research Foundation \$396,779
R01 HD104215 NIH (Defranco)	A Safer Glucocorticoid to Treat Neonatal Lung Injury with Limited Adverse Neurologic Effects	Co-I (2%) 0.24 Calendar In Years 2-4	07/01/2021- 06/30/2026	NIH \$17,613
R01 DK134580-01 NIDDK-NIH (Wang & Yoshimura)	Role of E-cadherin down-regulation in prostatic inflammation and lower urinary tract dysfunction	Co-I (2%) 0.18 calendar	09/01/2022- 08/31/2027	NIH-NIDDK \$9,933
TBCRC AURORA DCC (Lee)	AURORA	Co-I (5%)	1/1/2018- 12/31/2024	BCRF \$694,081
Astra Zeneca (Jacobs)	PrEP C-19: Pre-Exposure Prophylaxis of COVID-19 in Immunocompromised Patients using the Monoclonal Antibody EVUSHELD	Co-I (2%)	9/1/2022- 1/31/2024	Pfizer \$24,198

Genomics Analysis Core University of Pittsburgh (Chandran)	Genomics Analysis Core (GAC)	Director (40%) 4.80 calendar	07/01/2019-06/30/2024	University of Pittsburgh \$340,000
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**Pending Grant Support:**

Grant Number	Grant Title	Role in Project % Effort	Years Inclusive	Source \$ Amount
NIA – NIA (Birder)	Purine dysregulation as a molecular mechanism underlying age-related changes in kidney-bladder axis	Co-I (2%) 0.24 calendar	4/1/2024-3/31/2029	NIA-NIH \$101,355
NIH Yijen Wu	Maternal Environment-Gene Interactions Impacting Congenital Heart Defects	Co-I (5%) 0.60 calendar	4/1/2024-3/31/2029	NIH \$247,396
NCI (Ferris) 5P30 CA047904-33 2 year merit extension	Cancer Center Support Grant	Co-I (20%) 2.40 Calendar <i>Current NOA is active until 07/31/25</i>	08/01/2025-7/31/2027	NCI \$360,112
NIH (Wu)	In vivo Imaging Characterization of Prenatal Alcohol Exposure in Mice	Co-I (5%) 0.60 calendar	9/1/2024 – 8/31/26	NIH \$45,936
DOD (Schoedel)	Generation, Characterization and Testing of a Novel Chondrosarcoma Biobank	Co-I (5%) 0.60 calendar	06/01/2024-5/2027	DOD \$92,668
NCI (Basu)	Targeting Molecular Determinants of Clonogenicity in Large/Giant Melanocytic Nevi for Regression and Cancer Prevention	Co-I (5%) 0.60 calendar	07/2024-06/2029	NCI \$78,632



NIH (E. Jackson)	Role of Inosine-A2B Receptor Signaling in 8-Aminopurine Pharmacology	Co-I (5%) 0.60 calendar	7/1/2024 - 6/30/2029	NIH \$112,470
NIH (Wu)	MuSIC for PCA- Multi-System Imaging Characterization for Peri-conceptional Alcohol Exposure	Co-I (5%) 0.60 calendar	9/1/2024 - 8/31/2029	NIH \$45,936

**Prior Grant Support:**

<b>Grant Number (funded)</b>	<b>Grant Title</b>	<b>Role in Project % Effort</b>	<b>Years Inclusive</b>	<b>Source \$ Amount</b>
5R01NS037704 NIH (Pollack)	Molecular Markers as Predictors of Outcome in Gliomas	Research Associate (11%) 1.32 calendar	09/01/1998- 01/31/2017	NIH \$24,939
9R01 CA186780 PA NIH (Wang)	Roles of EAF2 in Androgen Action in the Prostate	Co-I (5%) 0.60 calendar	12/18/1996- 02/28/2019	NIH \$21,872
P50CA121973 NIH (Kirkwood)	Spore in Skin Cancer	Co-I (9%) calendar	07/01/2006- 06/30/2018	NIH \$33,472
RSG-09-023-01-CNE American Cancer Society (Maranchie)	Nox4 Induction of HIF-alpha in Renal Tumorigenesis	Co-I (5%) 0.60 calendar	01/01/2009- 12/31/2012	American Cancer Society \$21,414
W81XWH-09-20075 DOD (Davidson)	Gynecological Cancer Center of Excellence	Co-I (16%) 1.92 calendar	04/01/2010- 09/30/2014	DOD \$48,910
R44 GM087798 Trevigen NIH Sobol	Phase II: DNA repair deficient human cells for genomic variation analysis	Co-I, (6.5%) 0.72 calendar	9/13/2010 – 8/31/2013	NIH \$18,803
U01 HL112707 NIH Kaminski	Sarcoidosis and A1AT Genomics & Informatics Center	Co-I, (3%) 0.36 calendar months	5/1/2012 – 4/30/2015	NIH \$5,554
R21 OD011125 NIH Steinman	A mouse model enabling in vivo labeling of fibroblast-specific transcription	Co-I, (4%) 0.48 calendar months	7/1/2012 – 6/30/2013	NIH \$7,110
U24 DK097748 NIH/NURSA DeFranco	The Chromatin Landscape of Fetal Hypothalamic Neural Stem Cells	Co-I, (15%) 1.08 calendar months	9/1/2013 – 5/31/2015	NIH/NURSA \$24,761

5UM1 AI106707 NIH Rohan/Mellors	Laboratory Center (LC): Microbicide Trials Network	Co-I, (5%) 0.6 Calendar months	1/1/2014 - 11/30/2020	NIH \$22,256
OPP1115715 JHU/Bill & Melinda Gates Foundation Siliciano	New Approaches to Assessing HIV Reservoirs and their Depletion	Co-I, (1%) 0.12 calendar months	11/18/2014– 3/31/2020	JHU/Bill & Melinda Gates Foundation \$28,467
SAP4100070287 PA DOH Cooper	Big Data for Better Health (BD4BH) in Pennsylvania	Co-I, (9%) 1.08 calendar months	6/1/2015 – 5/31/2019	PA DOH \$17,050
5R01HD072189 NIH Plant	Molecular Bases Committing Primate Spermatogonia to a Pathway of Differentiation	Co-I, (1%) 0.12 calendar months	2/1/2016 – 1/31/2017	NIH \$7,325
BIO140013 NSF Chandran	Bioinformatics Pipeline and Infrastructure Development for Cancer Genomics	PI (sole), (N/A %)	4/1/2016 – 3/31/2017	NSF \$37,492
01GM108618 NIH Carcillo	Inflammation Phenotypes in Pediatric Sepsis Induced Multiple Organ Failure	Co-I, (2%) 0.24 calendar months	7/15/2016 – 2/28/2018	NIH \$19,734
R61AR076819 NIH Lafyatis	Open chromatin and transcriptional regulation of dermal myofibroblasts in SSc	Co-I, (10%) 1.2 calendar months	9/19/2019 – 8/31/2020	NIH \$30,623
U54DK112079 NIH/NIDDK Wang	University of Pittsburgh O'Brien Cooperative Research Center Program (Proj. 3)	Co-I (7%) 0.84 Calendar months	9/22/2016 – 7/31/2021	NIH/NIDDK \$17,323
U24OH009077 CDC NIOSH Becich	National Mesothelioma Virtual Bank (NMVB), Continued Innovation	Co-I (4%) 0.5 Calendar months	9/1/2016 – 8/31/2021	CDC NIOSH \$767,793
Peritoneal MESO Mesothelioma Applied Research Foundation Ganapathiraju	Genetic variants, pathways and drug targets of peritoneal mesothelioma	Co-I (4%) 0.5 Calendar months	1/1/2019 – 6/30/2021	Peritoneal MESO Mesothelioma Applied Research Foundation \$43,478
TBCRC AURORA ProDCC Amend 3 (A Wolff)	Aurora Data Coordinating Center	Co-I (5%) 0.60 calendar	02/01/2018– 12/31/2022	TBCRC AURORA \$113,449

R01 HD104215 NIH (Defranco)	A Safer Glucocorticoid to Treat Neonatal Lung Injury with Limited Adverse Neurologic Effects	Co-I (2%) 0.24 Calendar In Years 2-4	07/01/2021- 06/30/2026	NIH \$13,932
R01 CA251784 NIH Huang	Role of LSD1 in Triple Negative Breast Cancer Development and Therapeutic Response	Co-I (3%) 0.30 calendar	03/01/2021- 02/28/2026	NIH \$5,097

**Other Research Related Activities:**

**Manuscript Reviewer:**

Present Pathology Informatics  
Present AMIA conference on Translational Bioinformatics  
Present British Journal of Medicine and Medical Research  
Present British Journal of Medical Genomics  
Present BMC Cancer  
Present Clinical Cancer Research  
Present Journal of Immunotherapy of Cancer

**Grant Reviewer:**

3/2011 - Present Competitive Medical Research Fund, University of Pittsburgh School of Medicine  
3/2019 - Present Children's Hospital, RAC Fund

**LIST of CURRENT RESEARCH INTERESTS**

1. Cancer Genomics
2. Integrative Genomics Analysis
3. Cloud Computing for Genomics
4. Software Development for Genomics Data Visualization
5. Bioinformatics Pipelines using Containerization Tools
6. Bioinformatics Workflow Tools
7. Bioinformatics Education in Collaboration with CRC
8. Data Coordination Activities for Large Consortia Projects

## INVITED SEMINARS AND LECTURESHIPS

### Local Presentations:

- Microarray Analysis  
Bioinformatics Presented at: APIII 2003; 2003 Oct 8-10; Pittsburgh, PA  
Practical Applications in Pathology. Presented at: APIII 2009; 2009 Sep23;  
Pittsburgh, PA
- The Cancer Genome Atlas Presented at: Magee Women's Research Institute Annual Retreat; 2013  
Nov 15-16; Nemaquin Woods, PA
- PGRR Intro to the Cancer Genome Atlas. Presented at: UPCI Annual Retreat  
2014; 2014 Jun 18-19; University of Pittsburgh Greensburg.
- Introduction to Translational  
Bioinformatics Presented to Pediatric Endocrinology, 11/14/2016, Pittsburgh, PA
- Genomics Analysis Core  
RNA seq data analysis Presentation to the Genomics Research Core. 4/18/2017; Pittsburgh, PA  
Presented to Dr. Fabrisia Ambrosio's group. Department of Physical  
Medicine and Rehabilitation. 1/22/2022; Pittsburgh, PA
- Genomics Presentation to Graduate Students, Department of Biology, 1/18/2023;  
Pittsburgh, PA

### National Presentations:

- Bioinformatics Workflows Presented at: CaBIG ICR Face to Face Meeting; 2007 Sep 18-19; Bethesda,  
MD
- Bioinformatics Practical Applications in Pathology. Presented at: APIII 2010; 2010 Sep 19-  
22; Boston, MA.
- Bioinformatics Presented at: Informatics and Data Science in the CCSG Annual CI4CC  
Conference, September 19-21, 2023; Kauai, HI

### International Presentations:

- Introduction to  
Bioinformatics Presented at: APIII 2006; 2006 Aug 15-18; Vancouver, BC.

## SERVICE

### University and Medicine Committees:

3/15/2011 - Present	Grant Reviewer, SoM, Competitive Medical Research Fund (CMRF)
4/1/2012 – 9/1/2014	Committee Member, NGS Working Group
3/1/2019 – Present	Children’s Hospital, RAC Grant Reviewer
2/1/2022 – Present	Human Genetics, Bioinformatics Faculty Search Committee

### Departmental Committees:

9/01/2013 – 12/1/2015	Committee Member, Personalized Medicine Task Force
9/01/2013 – Present	Thesis Committee Member, PhD Candidate
1/29/2016 – Present	Training Program Member, Training Program Committee
1/01/2017 – Present	DBMI Graduate Admissions Committee
5/01/2019 – Present	DBMI Strategic Planning Group member
9/01/2018 – Present	CRC Advisory Committee

### Service to External Organizations:

1/1/2016 - 6/1/2016	Program Planning, Mid Atlantic Directors and Staff of Scientific Cores Meeting, June 2016
7/1/2016 - Present	National Institute of Environmental Health Sciences (NIEHS) Special Emphasis Panel
5/1/2017 - Present	Review Translational Bioinformatics, AMIA
6/1/2018 - Present	CSR SBIR/STTR Review Committee
8/1/2020 - Present	U54 CoVID Serology Review Committee
1/1/2021 - Present	Review panel for the new Rare Cancer Research Program of the Congressionally Directed Medical Research, Jan 2021
2/1/2021 - Present	SBIR Tech Eval Panel
10/2021 - Present	SPORE Special Emphasis Panel