CURRICULUM VITAE

<u>Name</u>: Udayan Guha, M.D., Ph.D. email: udayan.guha@nih.gov

Phone: 3019194218

Citizenship: United States

Education:

2003	Ph.D., (Neuroscience), Albert Einstein College of Medicine, Bronx, NY
1995	M.B.B.S., All India Institute of Medical Sciences, New Delhi, India
1990	B.S., R.K.M.Residential College, Narendrapur, India

Brief Chronology of Employment:

2023-current	Senior Vice President, Clinical and Translational Development, NextCure Inc.,
	Beltsville, MD
2022-2023	Vice President, Head of Clinical Development, TCR ² Therapeutics, Cambridge,
	MA
2021-2022	Senior Director, Early Clinical Development, Bristol-Myers Squibb, Princeton
	Pike, Lawrenceville, NJ
2020-2021	Director, Early Clinical Development, Bristol-Myers Squibb, Princeton Pike,
	Lawrenceville, NJ
2020-present	Senior Clinical Advisory Staff, National Cancer Institute (NCI), NIH Clinical
	Center and Special Volunteer, Thoracic and GI Malignancies Branch, Center for
	Cancer Research, National Cancer Institute, Bethesda, MD
2011-2020	Investigator, Thoracic and GI Malignancies Branch, Center for Cancer Research,
	National Cancer Institute, Bethesda, MD
2008-2011	Clinical Fellow, Hematology and Oncology, Memorial Sloan-Kettering Cancer
	Center, NY, NY
2005-2008	Research Fellow, Cancer Biology and Genetics, Memorial Sloan-Kettering Cancer
	Center, NY, NY (Mentor: Dr. Harold Varmus)
2003-2008	Residency in Internal Medicine, Department of Medicine, Jacobi Medical Center,
2003 2000	Albert Einstein College of Medicine, Bronx, NY
1007 1000	
1996-1998	Research Fellow, Department of Radiation Oncology, Montefiore Medical Center,
	Albert Einstein College of Medicine. (Mentor: Dr. Bhadrasain Vikram, MD)

Certification:

Cornell University Biotech and Pharmaceutical Management Foundations, 2023 e-Cornell Biotech and Pharmaceutical Management Program, 2023 Ph.D, 2003 ECFMG, 1998 M.B.B.S (MD equivalent), 1995.

Medical Licensure:

New York State Licensure, 2008 #247993-1 (active) California State Licensure, 2009 (inactive)

Board Certification:

Diplomat, American Board of Internal Medicine, 2008 Diplomat, Subspecialty of Medical Oncology, 2009 (active)

Professional Memberships:

American Association of Cancer Research (AACR)

American Society of Clinical Oncology (ASCO)

Society for Immunotherapy of Cancer (SITC)

International Association for the Study of Lung Cancer (IASLC)

American Society for Mass Spectrometry (ASMS)

Human Proteome Organization (HUPO)

Honors and Other Special Scientific Recognition:

2015-2018	Major Opportunity Award: Metabolic Basis of Cancer
2012-2013	Lung Cancer Research Foundation Award
2013	NCI Director's Postdoctoral Innovation Award
2012	NCI Director's PI innovation Award
2009-2012	NIH K99/R00 (Howard Temin Pathway to Independence Award; relinquished 2/12/2011 after joining NCI intramural program)
2006-2009	American Cancer Society Postdoctoral Fellowship.
2006-2008	Lung Cancer Research Initiative Award- Labrecque Foundation

Professional Activities:

Scientific Advisory Board Member- Keystone Symposia- 2022-2023

Journal Ad hoc Reviewer:

Nature Biotechnology, Nature Communication, Science Signaling, Cancer Discovery, Cancer Research, Clinical Cancer Research, Oncogene, Journal of Immunotherapy of Cancer, Molecular and Cellular Proteomics, Journal of Clinical Investigation, Proteomics, CSHL Molecular Case Studies, Cancer Prevention Research, Cell Death and Differentiation, Cancers, Scientific Reports, PLOS One, Theronostics

Guest Editor:

Cancers, Special Issue: Proteomics in Cancer, 2021

Ad hoc Grant Reviewer for:

AACR Fellowships in Lung Cancer Research 2016-2018

Medical Research Council Grant- review of grant application under the Developmental Pathway Funding Scheme (DPFS) Devolved Portfolios Pilot to The Severnside Alliance for Translational Research (SARTRE)

Belgian Foundation Against Cancer Grants 2018

External reviewer for the FDA:

2011: external reviewer/consultant for the accelerated approval of Crizotinib for the treatment of patients with locally advanced or metastatic non-small cell lung cancer (NSCLC) that is ALK positive.

2013: external reviewer/consultant for the full approval of Crizotinib for the treatment of locally advanced or metastatic NSCLC that is ALK positive.

Invited Talks (since 2011):

- 2020: FASEB Meeting, Protein Phosphorylation Networks in Health and Disease. Snowmass, CO.
- 2019: IASLC 20th World Conference on Lung Cancer, Barcelona, Spain.
- 2019: Cancer R&D 2019, Baltimore, MD.
- 2019: Department of Hematology/Oncology Grand Rounds, Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, NY
- 2018: IASLC 19th World Conference on Lung Cancer, Toronto, Canada.
- 2018: FASEB meeting, Cell Signaling in Cancer: from Mechanisms to Therapy, Steamboat Springs, Colorado.
- 2018: HPLC 2018 47th International Symposium on High Performance Liquid Phase Separations and Related Techniques.
- 2018: NCI-University of Maryland Partnership for Integrative Cancer Research, Bethesda, MD.
- 2018: Georgetown University, Biochemistry and Molecular and Cellular Biology Department, Research Seminar Series.
- 2017: Precision Medicine World Conference, Silicon Valley, San Diego, California.
- 2017: Jonsson Comprehensive Cancer Center, UCLA, "Leaders in the Field" Research seminar series, Los Angeles, CA.
- 2017: MedImmune/AstraZeneca, Rockville, MD
- 2017: FDA/CDER Genetics and Genomics seminar series, Silver Spring, MD.
- 2017: Oncology Grand Rounds Lecture Series, Georgetown-Lombardi Comprehensive Cancer Center.
- 2017: US HUPO (Human Proteome Organization) 13th Annual Conference, San Diego, CA, USA
- 2017: FDA/OCE Research Projects Presentation, Silver Spring, MD.
- 2016: US HUPO (Human Proteome Organization) 12th Annual Conference, Boston, USA.
- 2016: 12th International Conference of Asian Clinical Oncology Society (ACOS), N. Delhi, India

2016: 9th Annual World Protein and Peptide Conference, Dalian, China

2016: Center for Advanced Preclinical Research (CAPR), Center for Cancer Research, NCI

2015: Lung Cancer Oncogenome Group, Memorial Sloan-Kettering Cancer Center, NY, NY.

2015: Omics meeting, NIH, Bethesda, MD.

2014: Advanced Oncology Education series: Clinical Research Protocols in Oncology- A Systems Approach, NIH, Bethesda, MD.

2013: Department of Biochemistry and Molecular and Cellular Biology, Georgetown University, Washington, D.C.

2011: Laboratory of Cancer Biology and Genetics, Center for Cancer Research, NCI, Bethesda, MD.

Clinical Development / Clinical Trial Experience

NextCure Inc: 2023-current

SVP, Clinical and Translational Development

NextCure Inc. has developed novel first-in-class immunomedicines targeting the LAIR-1 immunecheckpoint expressed on T cells and myeloid cells. NC410 is a LAIR-2 IgG1 fusion protein that is designed to block immunosuppression mediated by LAIR-1. NC525 is an agonistic monoclonal antibody that binds to LAIR-1 to functionally kill AML blast cells and leukemic stem cells. Three Phase ½ first-in-human studies are underway to study the safety, tolerability and preliminary efficacy of immunotherapies targeting the LAIR-1 and B7-H4 pathways.

Study Physician for the following studies:

- A safety, tolerability and efficacy study of NC410 plus pembrolizumab in participants with advanced unresectable or metastatic solid tumors.
- A safety, tolerability and efficacy study of NC525 in subjects with advanced myeloid neoplasms (AML, MDS, CMML)
- A safety and tolerability study of NC762 in subjects with advanced or metastatic solid tumors

Guide the translational and biomarker teams to develop biomarker assays and analyze biomarker data from all clinical studies.

Participate in all Board meetings, executive meetings, and advice on business development for NextCure Inc.

TCR² Therapeutics: 2022-2023

VP, Head of Clinical Development

TCR² Therapeutics has developed a novel autologous T cell therapy platform. This involves T cell receptor fusion construct (TRuC) that consists of a tumor antigen binding domain tethered to CD3ɛ receptor subunit that when expressed in autologous T cells incorporates into endogenous eight subunits-containing T cell receptor (TCR), thus engaging the complete TCR signaling for HLA class non-restricted autologous T cell therapy.

Study Physician for the following studies:

- A Phase ½ single arm open-label clinical trial of TC-510 in patients with advanced mesothelinexpressing cancer
- A Phase ½ single arm open-label clinical trial of gavocabtagene autoleucel (Gavo-cel) in patients with advanced mesothelin-expressing cancer

Provide guidance and collaborate with the Translational Medicine team for translational studies and Discovery for IND-enabling studies at TCR² Therapeutics

Develop clinical developmental strategies for additional tumor antigen-directed TRuC T cell therapies that are in pre-clinical development

Bristol Myers Squibb: 2020-2022

Senior Early Clinical Lead and Director, Bristol Myers Squibb: Jan 2020-2021 Senior Director, Bristol Myers Squibb 2021- 2022

Clinical Lead and Study Director/Medical Monitor for the following studies:

- A Phase I study of BMS-986299 as monotherapy and in combination with nivolumab and ipilimumab in participants with advanced solid cancers (NLRP3 innate agonist)
- A Phase ½ study of BMS-986340 as monotherapy and in combination with nivolumab in participants with advanced solid tumors (anti-CCR8 monoclonal antibody)- IND submission and approval of this first-in-class first-in-human study. Currently enrolling.

Leading clinical protocol development for first-in-human, first-in-class studies for the following assets:

- Oral PD-L1 inhibitor
- Anti-TIGIT bispecific

Clinical Development/protocol strategy for few other early development assets and presentation in Governance meetings

Clinical Development representative in the Diligence team that evaluated the anti-TIGIT bispecific mAb from Agenus that resulted in the licensing of the Agenus bispecific antibody by BMS.

National Cancer Institute (NCI)/ National Institutes of Health (NIH): 2011-2020

Principal Investigator (Investigator-initiated clinical studies) of the following clinical studies:

- A pilot study of local ablative therapy for treatment of oligoprogressive, EGFR-mutated, non-small cell lung cancer (NSCLC) after treatment with Osimertinib (Phase 2 study; Clinical Trial Agreement with AstraZeneca)
- A pilot study of inpatient hospice with procurement of tissue on expiration in thoracic malignancies. (Rapid autopsy study, established first time at the NCI)
- Tissue procurement and natural history study of patients with non-small cell lung cancer, small cell lung cancer, extrapulmonary small cell cancer, pulmonary neuroendocrine tumors, and thymic epithelial tumors. (First Natural History study for Thoracic Malignancies at the NCI)
- Pilot trial of molecular profiling and targeted therapy for advanced Non-Small Cell Lung Cancer, Small Cell Lung Cancer, and Thymic malignancies (Phase 2 study)

Associate Investigator of multiple clinical studies in Thoracic and GI Malignancies Branch at the NCI-2011-2020. – most Immunotherapy studies

BIBLIOGRAPHY

- 1. Roper N, Meskini RE, Maity T, Atkinson D, Day A, Pate N, Cultraro CM, Pack S, Zgonc V, Ohler ZW, **Guha U.** Functional heterogeneity in MET pathway activation in PDX models of Osimertinib resistant EGFR-driven lung cancer. **Cancer Research Communication**. doi: 10.1158/2767-9764.CRC-23-0321. Online ahead of print 2024
- 2. Caswell DR et. al. The role of APOBEC3B in lung tumor evolution and targeted cancer therapy resistance. **Nature Genetics.** 56(1):60-73, 2024
- 3. Ade CM, Sporn MJ, Das S, Yu Z, Hanada K, Qi YA, Maity T, Zhang X, **Guha U**, Andresson T, Yang JC. Identification of neoepitope reactive T-cell receptors guided by HLA A*03:01 and HLA A*11:01 immunopeptidomics. <u>J Immunother Cancer</u>. 11(9):e007097.doi:10.1136/jitc-2023-007097, 2023
- 4. Maity TK, Kim EY, Cultraro CM, Venugopalan A, Khare L, Poddutoori R, Marappan S, Doheri S, Telford WG, Samajdar S, Ramachandra M, **Guha U**. Novel CDK12/13 inhibitors AU-15506 and AU-16770 are potent anti-cancer agents in EGFR mutant lung adenocarcinoma with and without osimertinib resistance. **Cancers.** 15(8) 2263, doi: 10.3390/cancers15082263, 2023
- 5. Wang XX, Myakala K, Libby AE, Krawczyk E, Panov J, Jones BA, Bhasin K, Shults N, Qi Y, Krausz KW, Zerfas PM, Takahashi S, Daneshpajouhnejad P, Titievsky A, Taranenko E, Billon C, Chatterjee A, Walker JK, Albanese C, Kopp JB, Rosenberg AZ, Conzalez FJ, **Guha** U, Brodsky L, Burris TP, Levi M. Estrogen-related receptor agonism reverses mitochondrial dysfunction and inflammation in the aging kidney. **Am J Pathol**. 17:S0002-9440(23)00321-8, 2023
- 6. Myakala K, Wang XX, Shults NV, Krawczyk E, Jones BA, Yang X, Rosenberg AZ, Ginley B, Sarder P, Brodsky L, Jang Y, Na CH, Qi Y, Zhang X, **Guha U**, Wu C, Bansal S, Ma J, Cheema A, Albanese C, Hirschey MD, Yoshida T, Kopp JB, Panov J, Levi M. NAD metabolism modulates iinflammation and mitochondria function in diabetic kidney disease. **J Biol Chem**. 299(8):104975, 2023
- 7. Lissa D, Takahashii N, Desai P, Manukyan I, Schultz CW, Rajapakse V, Velez MJ, Mulford D, Roper N, Nichols S, Vilimas R, Sciuto L, Chen Y, **Guha** U, Rajan A, Atkinson D, El Meskini R, Weaver Ohler Z, Thomas A. Heterogeneity of neuroendocrine transcriptional states in metastatic small cell lung cancers and patient-derived models. **Nature Communication.** 13(10):2023. doi:10.1038/s41467-022-29517-9, 2022
- 8. Wisniewski DJ, Liyasova MS, Korrapatii S, Zhang X, Ratnayake S, Chen Q, Gilbert SF, Catalano A, Voeller D, Meerzaman D, **Guha U**, Porat-Shliom, Annanziata CM, Lipkowitz S. Flotillin-2 regulates epidermal growth factor receptor activation, degradation by Cbl-mediated ubiquitination, and cancer growth. **J Biol Chem**. 299(1):1002766, 2022

- 9. Johnson FD, Ferrarone J, Liiu A, Brandstadter C, Munuganti R, Farnsworth DA, Lu D, Luu J, Sihota T, Jansen S, Nagelberg A, Shii R, Forcina GC, Zhang X, Cheng GSW, Spencer Miko SE, de Rappard-Yuswackz G, Sorensen PH, Dixon SJ, **Guha** U, Becker K, Djaballah H, Somwar R, Varmus H, Morin GB, Lockwood WW. Characterization of a small molecule inhibitor of disulfide reductases that induces oxidative stress and lethality in lung cancer cells. **Cell Reports**. 38(6):110343. doi:10.1016/j.celrep.2022.110343, 2022
- 10. Qi YA, Maity TK, Gao S, Gong T, Bahta M, Venugopalan A, Zhang X, **Guha U.** Alterations in HLA Class I-presented immunopeptidome and Class I-interactome upon Osimertinib resistance in EGFR mutant lung adenocarcinoma. <u>Cancers.</u> 13(19):4977, 2021 https://doi.org/10.3390/cancers13194977
- 11. Qi YA., Maity TK., Cultraro CM, Misra V, Zhang X, Ade C, Gao S, Milewski D, Nguyen KD, Ebrahimabadi MH, Hanada K, Khan J, Sahinalp C, Yang JC, **Guha U**. Proteogenomic analysis unveils the HLA Class I presented immunopeptidome in melanoma and EGFR mutant lung adenocarcinoma. Molecular Cellular Proteomics. 20:100136. doi: 10.1016/j.mcpro.2021.100136 Online ahead of print, 2021
- 12. Brohl AS, sindiri S, Wei JS, Milewski D, Chou HC, Song YK, Wen X, Kumar J, Reardon HV, Mudunuri US, Collins JR, Nagaraj S, Gangalapudi Vv, Tyagi M, Zhu YJ, Masiih KE, Yohe ME, Shern JF, Qi Y, **Guha** U, Catchpoole D, Orentas RJ, Kuznetsov IB, Llosa NJ, Ligon JA, Turpin BK, Leino DG, Iwata S, Andrulis IL, Wunder JS, Toledo SRC, Meltzer PS, Lau C, Teicher BA, Magnan H, Ladanyi M, Khan J. Immuno-transcriptomic profiling of extracranial pediatric solid malignancies. **Cell Reports**. 37(8):110047. doi:10.1016/j.celrep.2021.110047, 2021
- 13. Tanaka K, Yu HA, Yang S, Han S, Selcuklu SD, Kim K, Ramani S, Ganesan YT, Moyer A, Sinha S, Xie Y, Ishizawa K, Osmanbeyoglu HU, Lyu Y, Roper N, **Guha U**, Rudin AM, Kris MG, Hsieh JJ, Cheng EH. Targeting Aurora B kinase prevents and overcomes resistance to EGFR inhibitors in lung cancer by enhancing BIM- and PUMA-mediated apoptosis. **Cancer Cell**. 39(9):1245-1261, 2021
- 14. Kim C, Liqiang X, Cultraro CM, Wei F, Jones G, Cheng J, Shafiei A, Pham TH, Roper N, Akoth E, Ghafoor A, Misra V, Monkash N, Strom C, Tu M, Liao W, Chia D, Morris C, Steinberg SM, Bagheri H, Wong DTW, Raffeld M, **Guha U**. Longitudinal circulating tumor DNA analysis in blood and saliva for prediction of response to Osimertinib and disease progression in EGFR-mutant lung adenocarcinoma. **Cancers**.13:3342, 2021
- 15. Venugopalan A, Lynberg M, Cultraro CM, Nguyen KDP, Zhang X, Waris M, Dayal N, Abebe A, Maity TK, **Guha U**. SCAMP3 is a mutant EGFR phosphorylation target and a tumor suppressor in lung adenocarcinoma. **Oncogene**. 40(18):3331-3346, 2021
- 16. Zhang X, Maity TK, Ross KE, qi Y, Cultraro CM, Bahta M, Pitts, Keswani M, Gao S, Nguyen KDP, Cowart J, Kirkali F, Wu C, **Guha** U. Alterations in the global proteome and phosphoproteome in third-generation EGFR TKI resistance reveal drug targets to circumvent resistance. **Cancer Research**. 81(11):3051-3066, 2021

- 17. Tlemsani C, takahashi N, Pongor L, Rajapakse VN, Tyagi M, Wen X, Fasaye GA, Schmidt KT, Desai P, Kim C, Rajan A, Swift S, Sciuto L, Vilimas R, Webb S, Nichols S, Figg WD, Pommier Y, Calzone K, Steinberg SM, Wei JS, **Guha U**, Turner CE, Khan J, Thomas A. Whole-exome sequencing reveals germline-mutated small cell lung cancer subtype with favorable response to DNA repair-targeted therapies. **Science Translational Medicine**. 13(578):eabc7488. doi:10.1126/scitranslmed.abc7488, 2021.
- 18. Li N, **Guha U**, Kim C, Ye L, Cheng J, Li F, Chia D, Wei F, Wong DTW. Longitudinal monitoring of EGFR and PIK3CA Mutations by saliva-based EFIRM in advanced NSCLC patients with local ablative therapy and osimertinib treatment: two case reports. **Front Oncol**. 24;10:1240. Doi: 10.3389/fonc.2020.01240, 2020
- 19. Roper N, Brown AL, Wei JS, PackS, Trindade C, Kim C, Restifo O, Gao S, Sindiri S, Mehrabadi F, El Meskini R, Ohler ZW, Maity TK, Venugopalan A, Cultraro CM, Akoth E, Padiernos E, Chen H, Kesarwala A, Smart DK, Nilubol N, Rajan A, Piotrowska Z, Xi L, Raffeld M, Panchenko AR, Sahinalp C, Hewitt S, Hoang CD, Khan J, **Guha** U. Clonal evolution and heterogeneity of osimertinib acquired resistance mechanisms in EGFR mutant lung cancer. <u>Cell Reports Medicine</u>. 21;1(1):100007, 2020
- 20. Thomas A, Mian I, Tlemsani C, Pongor L, Takahashi N, Maignan K, Snider J, Li G, Frampton G, Ali S, Kim S, Nichols S, Rajapakse V, **Guha** U, Sharon E, Fujimoto J, Moran CA, Wistuba II, Wei JS, Khan J, Szabo E, Torres AZ, Carson KR. Clinical and genomic characteristics of small cell lung cancer in never-smokers: results from a retrospective multicenter cohort study. **Chest**. 158(4):1723-33, 2020
- 21. Roper R, Gao S, Maity TK, Banday AR, Zhang X, Venugopalan A, Cultraro CM, Patidar R, Sindiri S, Goncearenco A, Panchenko AR, Biswas R, Thomas A, Rajan A, Carter CA, Kleiner D, Hewitt S, Khan J, Prokunina-Olsson L, **Guha U.** APOBEC mutagenesis and copy number alterations are drivers of proteogenomic tumor evolution and heterogeneity in metastatic thoracic tumors. <u>Cell Reports</u>. 26(10):2651-2666.e6, 2019.
- 22. Zhang X, Nguyen KD, Rudnick P, Roper N, Kawaler E, Maity TK, Awasthi S, Gao S, Biswas R, Venugopalan A, Cultraro CM, Fenyo D, **Guha U.** Quantitative mass spectrometry to interrogate proteomic heterogeneity in metastatic lung adenocarcinoma and validate a novel somatic mutation CDK12-G879V. In Press, **Mol. Cell. Proteomics**, 18(4):622-641, 2019.
- 23. Awasthi S, Maity T, Oyler BL, Zhang X, Goodlett DR, **Guha** U. Quantitative targeted proteomic analysis of potential markers of tyrosine kinase inhibitor (TKI) sensitivity in EGFR mutated lung adenocarcinoma. **J. Proteomics**, 189:48-59, 2018.
- 24. Awasthi S, Maity T, Oyler BL, Zhang X, Goodlett DR, **Guha U.** Dataset describing the development, optimization and application of SRM/MRM based targeted proteomics strategy for quantification of potential biomarkers of EGFR TKI sensitivity. **Data Brief**. 19:424-436, 2018.

- 25. Thomas A, Redon CE, Sciuto L, Padierson E, Ji J, Lee MJ, Yuno A, Lee S, Zhang Y, Tran L, Yutzy W, Rajan A, **Guha U**, Chen H, Hassan R, Alewine CC, Szabo E, Bates SE, Kinders RJ, Steinberg SM, Doroshow JH, Aladjen MI, Trepel JB, Pommier Y. Phase I study of ATR inhibitor M6620 in combination with Topotecan in patients with advanced solid tumors. **J. Clin. Oncol.** 36:1594-1602, 2018.
- 26. Conforti F, Zhang X, Rao G, De Pas T, Yonemori Y, Rodriguez JA, McCutcheon JN, Rahhal R, Alberobello AT, Wang Y, Zhang YW, **Guha U**, Giaccone G. Therapeutic Effects of XPO1 Inhibition in Thymic Epithelial Tumors. <u>Cancer Res.</u> 77:5614-5627, 2017.
- 27. Zhang X, Maity T, Kashyap MK, Bansal M, Venugopalan A, Singh S, Awasthi S, Marimuthu A, Jacob HK, Belkina N, Pitts S, Cultraro CM, Gao S, Kirkali G, Biswas R, Chaerkady R, Califano A, Pandey A, **Guha U.** Quantitative tyrosine phosphoproteomics of EGFR tyrosine kinase inhibitor-treated lung adenocarcinoma cells reveals potential novel biomarkers of therapeutic response. <u>Mol. Cell. Proteomics.</u> 16:891-910, 2017.
- 28. Kim C, Szabo E, **Guha** U, Rajan A. Consolidative local therapy in oligometastatic patients. **Lancet Oncol.** 18:e61, 2017.
- 29. S Kim C, Hoang CD, Kesarwala AH, Schrump DS, **Guha** U, Rajan A. Role of local ablative therapy in patients with oligometastatic and oligoprogressive Non-small cell lung cancer. **J. Thorac. Oncol.** 12:179-193, 2017.
- 30. Biswas R, Gao S, Cultraro CM, Maity, TK, Venugopalan A, Abdullaev Z, Shaytan AK, Carter CA, Thomas A, Rajan A, Song Y, Pitts S, Chen K, Bass S, Boland J, Hanada KI, Chen J, Meltzer PS, Panchenko AR, Yang JC, Pack S, Giaccone G, Schrump DS, Khan J, **Guha U.** Biswas R, Gao S, Cultraro CM, Maity, TK, Venugopalan A, Abdullaev Z, Shaytan AK, Carter CA, Thomas A, Rajan A, Song Y, Pitts S, Chen K, Bass S, Boland J, Hanada KI, Chen J, Meltzer PS, Panchenko AR, Yang JC, Pack S, Giaccone G, Schrump DS, Khan J, **Guha U**. Cold Spring Har. Mol. Case Stud. 2:a001263, 2016.
- 31. Venugopalan A, Lee MJ, Niu G, Medina-Echeverz J, Tomita Y, Lizak MJ, Cultraro CM, Simpson RM, Chen X, Trepel JB, **Guha U.** EGFR-targeted therapy results in dramatic early lung tumor regression accompanied by imaging response and immune infiltration in EGFR mutant transgenic mouse models. **Oncotarget**. 7:54137-56, 2016.
- 32. Rajan A, Kim C, Heery CR, **Guha** U, Gulley JL. Nivolumab, anti-programmed death-1 (PD-1) monoclonal antibody immunotherapy: Role in Advanced Cancers. **Hum. Vaccin. Immunother**. 2:1-13, 2016.
- 33. Carter CA, Rajan A, Keen C, Szabo E, Khozin S, Thomas A, Breznian C, **Guha U**, Doyle LA, Steinberg SM, Xi L, Raffeld M, Tomita Y, Lee MJ, Lee S, Trepel JB, Reckamp KL, Koehler S, Gitlitz, B, Salgia R, Gandara D, Vokes E, Giaccone G. Selumetinib with and without erlotinib in KRAS mutant and KRAS wild-type advanced non-small cell lung cancer. **Ann. Oncol.** 27:693-699, 2016.

- 34. Maity TK, Venugopalan A, Linnoila I, Cultraro CM, Giannakou A, Nemati R, Zhang X, Webster JD, Ritt D, Ghosal S, Hoschuetzky H, Simpson RM, Biswas R, Politi K, Morrison DK, Varmus HE, **Guha U.** Loss of Mig6 accelerates initiation and progression of mutant epidermal growth factor receptor-driven lung adenocarcinoma. <u>Cancer Discov.</u> 5:534-549, 2015.
- 35. Lopez-Chavez A, Thomas A, Rajan A, Raffeld M, Morrow B, Kelly R, Carter CA, **Guha U**, Killian K, Lau CC, Abdullaev Z, Xi L, Pack S, Meltzer PS, Corless CL, Sandler A, Beadling C, Warrick A, Liewehr DJ, Steinberg SM, Berman A, Doyle A, Szabo E, Wang Y, Giaccone G. Molecular profiling and targeted therapy for advanced thoracic malignancies: a biomarker-derived, multiarm, multihistory Phase II basket trial. **J. Clin. Oncol.** 33:1000-1007, 2015.
- 36. L Poruchynsky MS, Komlodi-Pasztor E, Trostel S, Wilkerson J, Regairaz M, Pommier Y, Zhang X, Kumar Maity T, Robey R, Burotto M, Sackett D, **Guha U**, Fojo AT. Microtubule-targeting agents augment the toxicity of DNA-damaging agents by disrupting intracellular trafficking of DNA repair proteins. **Proc. Natl. Acad. Sci, USA.** 112:1571-1576, 2015.
- 37. Song X, Fan PD, Bantikassegn A, **Guha** U, Threadgill DW, Varmus H, Politi K. ERBB3-Independent Activation of the PI3K Pathway in EGFR-Mutant Lung Adenocarcinomas. <u>Cancer Res.</u> 75:1035-1045, 2015.
- 38. Thomas A, Rajan A, Berman A, Tomita Y, Brzezniak C, Lee MJ, Lee S, Ling A, Spittler AJ, Carter CA, **Guha** U, Wang Y, Szabo E, Meltzer P, Steinberg SM, Trepel JB, Loehrer PJ, Giaccone G. Sunitinib in patients with chemotherapy-refractory thymoma and thymic carcinoma: an open-label phase 2 trial. **Lancet Oncol.** 16:177-186, 2015.
- 39. Zhang X, Belkina N, Jacob HK, Maity T, Biswas R, Venugopalan A, Shaw PG, Kim MS, Chaerkady R, Pandey A, **Guha U.** Identifying novel targets of oncogenic EGF receptor signaling in lung cancer through global phosphoproteomics. **Proteomics** 15:340-355, 2015.
- 40. Kelly RJ, Thomas A, Rajan A, Chun G, Lopez-Chavez A, Szabo E, Spencer S, Carter CA, **Guha U**, Khozin S, Poondru S, Van Sant C, Keating A, Steinberg SM, Figg W, Giaccone G. A phase I/II study of sepantronium bromide (YM155, survivin suppressor) with paclitaxel and carboplatin in patients with advanced non-small-cell lung cancer. **Ann. Ocol.** 24:2601-6, 2013.
- 41. Kurochkina N, **Guha U.** SH3 domains: modules of protein-protein interactions. <u>Biophy. Rev.</u> 5(1): 29-39, 2013.
- 42. Suehara Y, Arcila M, Wang L, Hasanovic A, Ang D, Ito T, Kimura Y, Drilon A, **Guha** U, Rusch V, Kris MG, Zakowski MF, Rizvi N, Khanin R, Ladanyi M. Identification of KIF5B-RET and GOPC-ROS1 fusions in lung adenocarcinomas through a comprehensive mRNA-based screen for tyrosine kinase fusions. <u>Clin. Cancer Res.</u> 18: 6599-608, 2012.
- 43. Hou Q, Barr T, Gee L, Vickers J, Wymer J, Borsani E, Rodella L, Getsios S, Burdo T, Eisenberg E, **Guha U**, Lavker R, Kessler J, Chittur S, Fiorino D, Rice F, Albrecht P. Keratinocyte expression of calcitonin gene-related peptide β: implications for neuropathic and inflammatory pain mechanisms. Pain 152:2036-51, 2011.

- 44. **Guha** U, Chaerkedy R, Marimuthu A, Scott Patterson A, Kashyap M, Gowda H, Sato M, Bader J, Lash A.E, Minna J.D, Pandey A, Varmus H.E. Comparisons of tyrosine-phosphorylated proteins in immortalized human bronchial epithelial cells and lung adenocarcinoma cell lines expressing lung cancer-specific alleles of *EGFR* and *KRAS*. **Proc. Natl. Acad. Sci. USA** 105:14112-14117, 2008.
- 45. Chalazonitis A, Pham TD, Li Z, Roman D, **Guha** U, Gomes W, Kan L, Kessler JA, Gershon MD. Bone morphogenetic protein regulation of enteric neuronal phenotypic diversity: relationship to timing of cell cycle exit. **J. Comp. Neurol.** 509:474-492, 2008.
- 46. **Guha U**, Gomes WA, Samanta J, Gupta M, Rice FL, Kessler JA. Target-derived BMP signaling limits sensory neuron number and the extent of peripheral innervation in vivo. **Development**, 131:1175-1186, 2004.
- 47. **Guha** U, Mecklenburg L, Cowin P, Kan L, O'Guin WM, Vizio DD, Pestell RG, Paus R, Kessler JA. Bone Morphogenetic Protein signaling regulates postnatal hair follicle differentiation and cycling. **Am. J. Pathol.** 165: 729-740, 2004.
- 48. Chalazonitis A, Autreaux FD', **Guha U**, Pham TD, Chen J, Rothman TP, Kessler JA and Gershon MD. Bone morphogenetic protein-2 and -4 limit the number of enteric neurons but promote development of a TrkC-expressing neurotrophin-3-dependent subset. **J. Neurosci.** 24:4266-82, 2004
- 49. **Guha** U, Gomes WA, Kobayashi T, Pestell RG, Kessler JA. *In vivo* evidence that BMP signaling is necessary for apoptosis in the mouse limb. **Dev. Biol.** 249:108-120, 2002.
- 50. **Guha** U, Hulit J, Pestell RG. Transgenic mice in Cancer Research. In (Ed.), Bertino, J.: **Encyclopedia of Cancer**, Academic Press, Inc, 4:449-458, 2002.
- 51. Guha C, Guha U, Tribius S, Alferei A, Casper D, Chakravarty P, Mellado W, Pandita TJ, Vikram B. Gene Ther. 7:852-858, 2000.