# **CURRICULUM VITAE**

**David N. Boone**

University of Pittsburgh

Department of Biomedical Informatics

#### BIOGRAPHICAL

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| --- | --- |
| **Name:** David N. Boone |  |
| **Home Address:** 721 Brafferton Drive  Pittsburgh, PA 15228 | **Birth Place:** USA |
| **Home Phone:** 724-322-6668 | **Citizenship:** USA |
| **Business Address:** 5607 Baum Boulevard  Fourth Floor, Room 414  Pittsburgh, PA 15206 | **Email address:** [dnb14@pitt.edu](mailto:dnb14@pitt.edu) |
| **Business Phone:** 412-648-7231 | **Business Fax:** 412-648-9118 |

**EDUCATION and TRAINING**

*Dates Attended Name and Location of Degree Received Major Subject*

*Institution and Year*

##### Undergraduate

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| 1999– 2003 | The Pennsylvania State University  State College PA, USA | B.S.  2003 | Biology/Genetics  *Suma Cum Laude* |

**Graduate**

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| 2005– 2011 | Vanderbilt University  School of Medicine  Nashville TN, USA | Ph.D.  2011 | Cell Biology  Adviser: Stephen R. Hann, Ph.D. |

**Postgraduate**

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| 2011-2015 | University of Pittsburgh  Magee Woman’s Research Institute  Pittsburgh PA, USA | Post-Doctoral Scholar  2015 | Breast Cancer |

**APPOINTMENTS and POSITIONS**

**Academic**

1998,1999 Research Assistant/Intern, *West Virginia University,* Morgantown, WV

2001-2003 Research Assistant/NSF-REU Fellow, *Pennsylvania State University*, State College, PA

2002-2003 Teaching Assistant/Tutor, *Pennsylvania State University*, State College, PA

2005-2011 Graduate Student, *Vanderbilt University*, Nashville, TN

2008-2011 NSF Science Teaching Fellow, *Vanderbilt University*, Nashville, TN

2011-2015 Susan G. Komen Postdoctoral Fellow, *University of Pittsburgh*, Pittsburgh, PA

2012-2012 Part-time Teaching Faculty, *Robert Morris University*, Pittsburgh, PA

2015- Assistant Professor, Department of Biomedical Informatics, *University of Pittsburgh*, Pittsburgh

2015- co-Director, UPCI Academy

2015- Director of CoSBBI and iBRIC program

2017- Director, Hillman Academy and Doris Duke Charitable Foundation Undergraduate Internship

**Non-Academic**

2004 Biochemist/Production Technician, *Aalto Scientific Ltd.*, San Diego, CA

#### MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES

2010-2013 American Society for Cell Biology

2011-present American Association for Cancer Research

2012-present Society for Science & the Public

2014-present Endocrinology Society

2014-present Center for the Integration of Research, Teaching and Learning

2016-present American Medical Informatics Association

#### HONORS

1999 High School Valedictorian

1999 Allegheny Energy academic and service excellence scholarship

1999 National Society of Collegiate Scholars

2000 Golden Key International Honor Society

2001 Phi Beta Kappa academic honor society

2002 Eberly College of Science Scholar

2002 Edward C. Hammond Jr. Memorial Scholarship

2002-2003 NSF-REU Fellowship

2003 Evan-Pugh Scholar Award

2005-2007 Ruth L. Kirschstein National Research Service Award Training Grant

2007 Travel award from NIH-VNAC training grant

2009,2010 Travel award from Vanderbilt University Graduate School

2008-2011 NSF GK12 Science Teaching Fellowship

2012,2015,2018 Judge – INTEL International Science Fair

2012-2015 Susan G. Komen Postdoctoral Fellowship

2013-2015 Session Chair – Women’s Cancer Research Center Retreat

2014 “Best Oral Presentation” – Women’s Cancer Research Center Retreat

2014 Statement of Accomplishment – An Introduction to Evidence-Based Undergraduate STEM Teaching

2015 Session Chair – Endocrinology Annual Meeting, San Diego, CA

2015 Associate Level Certification in Teaching the STEM Disciplines – Center for the Integration of Research, Teaching and Learning (CIRTL)

2016 Session chair – Great Lakes Breast Cancer Conference

2017-present Vice-Chair UPCI Education and Training Committee

2018-present Center for Causal Discovery Executive Committee

2019 Invited Speaker to UPR-RP by MARC/RISE students

2019 Hillman Academy awarded Pittsburgh Spotlight by HundrED.org

2019 Hillman Academy awarded 1 of top 100 global educational innovations by HundrED.org

2020 2021 Chancellor’s Distinguished Teaching Award – Nominated

2021 Appointed to editorial board of Journal of Science Outreach

2021-present Many invited speaking roles to discuss internship programs for underrepresented youth

2022 Carnegie Science Center Educator Award – Nominated

#### PUBLICATIONS

**Referred Journal Articles:**

1. Hawrylak N, **Boone D**, Salm AK. The Surface Density of Glial Fibrillary Acidic Protein Immunopositive Astrocytic Processes in the rat Suproaoptic Nucleus is Reversibly Altered by Dehydration and Rehydration. Neuroscience-Letters. Dec. 17, 1999; 277(1) pp57-60. PMID: 10643897.
2. Hawrylak N, Sedlmeyer, **Boone DN**, and Salm AK. Dehydration reversibly alters the surface density of glial fibrillary acidic protein immunoreactivity (GFAP-IR), but not astrocyte numbers, in the rat supraoptic nucleus. Journal of Neurochemistry. 1999. 72:S57.
3. van Rheede T, Bastiaans T, **Boone D**, Hedges SB, de Jong W, and Madsen O. 2006. The platypus is in its place: nuclear genes and indels confirm the sister group relation of monotremes and therians. Mol. Biol. Evol. 23:587-597. PMID: 16291999.
4. Zhaoliang Li, **Boone D**, and Hann S. Nucleophosmin interacts directly with c-Myc and controls c-Myc-induced hyperproliferation and transformation. PNAS. 2008 Dec 2;105(48):18794-9. PMCID: PMC2596228.
5. **Boone DN**, Qi Y, Li Z, and Hann S. Egr1 mediates p53-independent c-Myc-induced apoptosis via a noncanonical ARF-dependent transcriptional mechanism. PNAS. 2011 Jan 11;108(2):632-7. PMCID: PMC3021028.
6. **Boone DN**, Hann SR. The Myc-ARF-Egr1 Pathway: Unleashing Myc’s Apoptotic Power. Cell Cycle. 2011 Jul 1;10(13):2043-4. PMCID: PMC3234342.
7. **Boone DN**, Lee AV. Targeting the Insulin-like Growth Factor Receptor: Developing Biomarkers from Gene Expression Profiling. Critical Reviews in Oncogenesis. 2012;17(2):161-73. PMCID: PMC3926653.
8. Zhang Q, Spears E, **Boone DN**, Li Z, Gregory M, and Hann S. Domain specific c-Myc ubiquitylation controls c-Myc transcriptional and apoptotic activitys. PNAS. 2012; 110(3):978-83. PMCID: PMC3549076.
9. Farabaugh SM, **Boone DN**, and Lee AV. Role of IGF1R in breast cancer subtypes, stemness, and lineage differentiation. Frontiers in Endocrinology. 2015 PMCID: PMC4408912.
10. Nayak S, Harrington E, **Boone DN**, Hartmaier R, Pathiraja, T, Cooper K, Fine J, Sanfilippo J, Davidson N, Lee AV, Dabbs D, and Oesterreich S. A Role for Histone H2B Variants in Endocrine Resistant Breast Cancer. Hormones and Cancer. 2015. PMCID: PMC4408912.
11. Onuchic V, Hartmaier RJ, **Boone DN**, Samuels ML, Patel RY, White WM, Garovic VD, Oesterreich S, Roth ME, Lee AV, Milosavljevic A. Epigenomic Deconvolution of Breast Tumors Reveals Metabolic Coupling between Constituent Cell Types. Cell Rep. 2016 Nov 15;17(8):2075-2086. PMCID: PMC5115176.
12. King A, Fisher A, Becich M, and **Boone DN**. Computer Science, Biology, and Biomedical Informatics Academy: outcomes from five years of immersing high school students into informatics research. J Pathol Inform. 2017 Feb 28;8:2. doi: 10.4103/2153-3539.201110. eCollection 2017. PMCID: PMC5359992.
13. Warburton AJ, **Boone DN**. Insights from Global Analyses of Long Noncoding RNAs in Breast Cancer. Curr Pathobiol Rep. 2017 Mar;5(1):23-34. doi: 10.1007/s40139-017-0122-1. Epub 2017 Jan 23. PMCID: PMC5467540.
14. Chen J, Nagle AM, Wang Y-F, **Boone DN**, Lee AV. Controlled dimerization of insulin-like growth factor-1 and insulin receptors reveals shared and distinct activities of holo and hybrid receptors. J Biol Chem. 2018;293(10):3700-9. . [Available on 2019-03-09] DOI: 10.1074/jbc.M117.789503. PMID: 29330302, PMCID: PMC5846141 PNF: 156836
15. Nagle AM, Levine KM, Tasdemir N, Scott JA, Burlbaugh K, Kehm J, Katz TA, **Boone DN**, Jacobsen BM, Atkinson JM, Oesterreich S, Lee AV. Loss of E-cadherin Enhances IGF1-IGF1R Pathway Activation and Sensitizes Breast Cancers to Anti-IGF1R/InsR Inhibitors. Clin Cancer Res. 24:20 October 2018, 5165-77 doi: 10.1158/1078-0432.CCR-18-0279. PMID: 29941485. PMC Journal in-process**.** PNF: 156843
16. Gau D, Vignaud L, Allen A, Guo Z Sahel, J, **Boone DN**, et al. Disruption of profilin 1 function suppresses developmental and pathological retinal neovascularization. JBC. RA120. 2020.
17. **Boone DN**, Warburton A, Som S, Lee AV. SNHG7 is a lncRNA oncogene controlled by Insulin-like Growth Factor signaling through a negative feedback loop to tightly regulate proliferation. Scientific Reports 10(1), 1-12. 2020.
18. Sreekumar S, Levine KM, Sikora MJ, Chen J, Tasdemir N, Carter D, **Boone DN**, et al. Differential regulation and targeting of estrogen receptor alpha turnover in invasive lobular breast carcinoma. Endocrinology 161 (9). 2020.
19. Allen, A., M. Ball, D. Bild, D.N. Boone, D. Briggs, D. Davis, L. Delale-O’Connor, R. Gonda, J. Iriti, A. Slinskey Legg, C. Long, C. Matthis, J. Zoltners Sherer, and T. Stol. 2020. Leveraging out-of-school STEM programs during COVID-19. Connected Science Learning 2 (4). <https://www.nsta.org/connected-science-learning/connected-science-learning-october-december-2020/leveraging-out-school>
20. Fung, Frey, Valmont..., Boone DN. Success of Distance Learning During 2020 COVID-19 Restrictions: Report from Five STEM Traning Programs for Underrepresented High School and Undergraduate Learners. JSO. 4(3) 2021
21. Boyce, Alikhani, Pratt, Boone DM, and De Haan. Reducing language obstacles that Deaf students face when developing scientific competencies. Pitt Momentum Fund. 2021.
22. Delale-O'Connor, L., Allen, A., Ball, M., Boone, D. N., R Gonda, J., & Slinskey Legg, A. (2021). Broadening equity through recruitment: Pre-college STEM program recruitment in literature and practice. Connected science learning. *3*(6). 2021
23. Ayoob, J. C., Boyce, R. D., Livshits, S., Bruno, T. C., Delgoffe, G. M., Galson, D. L., ... & Boone, D. N. Getting to YES: The Evolution of the University of Pittsburgh Medical Center Hillman Cancer Center Youth Enjoy Science (YES) Academy. Journal of STEM Outreach, *5*(2), 1-15. 2022.
24. Allen-Gondringer, Gau, Varghese, Boone, DN., Stolz, Larregina, and Roy. Vascular endothelial cell-specific disruption of the profilin1 gene leads to severe multiorgan pathology and inflammation causing mortality. PNAS nexus. 2(10). 2023
25. Gau, Daoud, Allen, Joy, Sagan, Lee, Lucas, Duensing, Boone DN, Osmanbeyoglu, and Roy. Vascular endothelial profilin-1 drives a protumorigenic tumor microenvironment and tumor progression in renal cancer. JBC. 299(8). 2023.
26. Eder, Yu, Chen, Gau, Joy, Lucas, Boone DN, Lee, Roy. MRTF promotes breast cancer cell motility through SRF-dependent upregulation of DIAPH3 expression. bioRxiv, 2023.
27. Chawla, Gau, Chen, Welling, Boone DN, Taboas, Lee, Galson, and Roy. MRTF activity in breast cancer cells promotes osteoclastogenesis through a paracrine action of CTGF. bioRxiv. 2023
28. Zhang, Lee, Lu, Muthakana, Lee, Boone DN, and Wang. Associations of intragenic rearrangement burden with immune cell infiltration and response to immune checkpoint blockade in cancer. Cancer Immunology Research. Provisionally accepted 2024.
29. Heim, Hankins, Belayneh, Douglas, Dinh, Kovvur, Boone DN…Moniz T…Weiss, and Watters. RNA-Sequencing predicts a role of androgen receptor and aldehyde dehydrogenase 1A1 in Osteosarcoma Lung Metastases. Oncogene. Provisionally accepted 2024.

**Other publications in last 5 years**

**Abstracts/Book Chapters/Reviews**

1. Sreekumar S, Levine K, Sikora MJ, **Boone D**, Dabbs DJ, Lee AV, Jankowitz RC, Oesterreich S. Differential turnover of estrogen receptor alpha in invasive lobular carcinoma [abstract]. In: Proceedings of the 2016 San Antonio Breast Cancer Symposium; 2016 Dec 6-10; San Antonio, TX. Philadelphia (PA): AACR; Cancer Res 2017;77(4 Suppl):Abstract nr P3-04-02.
2. Jankowitz RC, Sreekumar S, Levine KM, Meier C, Sikora MJ, Basudan A, **Boone D**, Dabbs DJ, Jacobsen B, Lee AV, Oesterreich S. Differential regulation of ER protein-turnover in invasive lobular carcinoma cells [abstract]. In: Proceedings of the 2017 San Antonio Breast Cancer Symposium; 2017 Dec 5-9; San Antonio, TX. Philadelphia (PA): AACR; Cancer Res 2018;78(4 Suppl):Abstract nr P4-05-02.
3. Nagle A, Levine KM, Tasdemir N, Scott JA, Burlbaugh K, Kehm J, et al. Loss of E-cadherin enhances IGF1-IGF1R pathway activation and sensitizes breast cancers to anti-IGF1R inhibitors. bioRxiv. 2018.
4. **Boone DN**, Warburton A, Som S, and Lee AV. A negative feedback loop between Insulin-like Growth Factor signaling and the lncRNA SNHG7 tightly regulates transcript levels and proliferation. bioRxiv. 2019. doi: <https://doi.org/10.1101/709352>
5. Gau DM, Chakraborty S, **Boone DN**, Wells A, and Roy P. Abstract LB-043: MRTF | Profilin is an important signaling aaxis for metastatic outgrowth of triple negative breast cancer cells. Cancer Research; 79 (13). 2019.
6. Atkinson JM, Sreekumar S, Levine KM, Sikora MJ, Chen J, Tasdemir N, Carter D, **Boone DN**, et al. Abstract P1-21-03: Unique estrogen receptor turnover, regulation and targeting in invasive lobular breast carcinoma. Cancer Research. 2020
7. Belayneh, Hankins, John**, Boone DN**, Sarangarajan, Alaggio, Patel, Martin, Weiss, and Watters. Identification of Novel Therapeutic Targets for Metastatic Osteosarcoma. Orthopedic Research Society Annual Meeting. Phoenix, AZ. Feb. 2020

**RESEARCH SUPPORT**

**Current Research Support**

|  |  |
| --- | --- |
| Funding Agency: | NIH/NCI |
| Title of Grant: | UPMC Hillman Cancer Center Academy |
| Years Inclusive: | 09/01/19-03/31/26 |
| Principal Investigator: | Boone/Bakkenist |
| Boone Role on Grant: | MPI – corresponding PI |
| Percent Effort: | 28% |

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| --- | --- |
| Funding Agency: | NSF |
| Title of Grant: | NSF INCLUDES Alliance: The STEM PUSH (Pathways for Underrepresented Students to HigherEd) Network |
| Years Inclusive: | 9/2/2019-9/1/2024 |
| Principal Investigator: | Boone; Legg |
| Boone Role on Grant: | Co-PI |
| Percent Effort: | 17% |
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| --- | --- |
| Funding Agency: | Doris Duke Charitable Foundation |
| Grant Number: | N/A |
| Title of Grant: | Clinical Research Continuum: High School to College for Students from Underrepresented Groups |
| Years Inclusive: | 01/01/2024 – 12/31/2025 |
| Principal Investigator: | Boone |
| Boone Role on Grant: | Principal Investigator |
| Percent Effort: | 15% |

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| --- | --- |
| Funding Agency: | NIH/NCI |
| Title of Grant: | Cancer Center Support Grant -CRCE component |
| Years Inclusive: | 01/01/2020 – 12/31/2025 |
| Principal Investigator: | Ferris |
| Boone Role on Grant: | Co-I |
| Percent Effort: | 10% |

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| --- | --- |
| Funding Agency: | NIH/NLM |
| Title of Grant: | Building Accessible and Inclusive Paths for Students in Biomedical Informatics |
| Years Inclusive: | 11/01/2022 – 10/31/2026 |
| Principal Investigator: | Boyce |
| Boone Role on Grant: | Co-I |
| Percent Effort: | 3% |

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| Funding Agency: | NIH |
| Title of Grant: | EvolvingSTEM: authentic classroom research curriculum to enhance inclusion and authentic classroom research. |
| Years Inclusive: | 2023 – 2028 |
| Principal Investigator: | Cooper |
| Boone Role on Grant: | Co-I |
| Percent Effort: | 2.75% |

**Past Research Support:**

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| --- | --- |
| Funding Agency: | Doris Duke Charitable Foundation |
| Grant Number: | N/A |
| Title of Grant: | Clinical Research Continuum: High School to College for Students from Underrepresented Groups |
| Years Inclusive: | 01/01/2017 – 12/31/2023 |
| Principal Investigator: | Boone |
| Boone Role on Grant: | Principal Investigator |
| Percent Effort: | 15% |

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| Funding Agency: | Department of Defense (DOD) |
| Title of Grant: | Profilin1 as a novel target in patients with renal cancer |
| Years Inclusive: | 09/01/19-8/31/21 |
| Principal Investigator: | Roy |
| Boone Role on Grant: | Co-I |
| Percent Effort: | 5% |
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| Funding Agency: | NSF |
| Grant Number: | 1744446 |
| Title of Grant: | NSF Includes DDLP: Diversifying Access to Urban Universities for Students in STEM Fields |
| Years Inclusive: | 09/01/2017 – 08/31/2019 |
| Principal Investigator: | Legg and Boone |
| Boone Role on Grant: | Co-PI |
| Percent Effort: | 12.5% |
| Amount Awarded: | $16,649 |
| Funding Agency: | Doris Duke Charitable Foundation |
| Grant Number: | N/A |
| Title of Grant: | Clinical Research Continuum: High School to College for Students from Underrepresented Groups – Director’s Meeting |
| Years Inclusive: | 2018-2019 |
| Principal Investigator: | Boone |
| Boone Role on Grant: | Principal Investigator |
| Percent Effort: | 2% |

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| Funding Agency: | NIH |
| Grant Number: | U54HG008540 |
| Title of Grant: | Center for Causal Modeling and Discovery of Biomedical  Knowledge from Big Data |
| Years Inclusive: | 9/15/2014-8/31/2018 |
| Principal Investigator: | Cooper |
| Boone Role on Grant: | Co-Investigator |
| Percent Effort: | 10% |

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| Funding Agency: | NIH |
| Grant Number: | U54HG008540-03S1 |
| Title of Grant: | Supplement to Center for Causal Modeling and Discovery of Biomedical Knowledge from Big Data |
| Years Inclusive: | 12/01/2016-08/31/2018 |
| Principal Investigator: | Cooper |
| Boone Role on Grant: | Co-Investigator |
| Percent Effort: | 20% |
| Amount |  |

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| --- | --- |
| Funding Agency: | NIH/NLM |
| Grant Number: | T15 LM007059-32S2 |
| Title of Grant: | Pittsburgh Biomedical Informatics Training Program |
| Years Inclusive: | 2018-2019 |
| Principal Investigator: | Hochheiser |
| Boone Role on Grant: | Co-Investigator |
| Percent Effort: | 8% |

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| Funding Agency: | PA Department of Health |
| Grant Number: |  |
| Title of Grant: | Big Data for Better Health (BD4BH) in Pennsylvania |
| Years Inclusive: | 6/1/15-5/31/19 |
| Principal Investigator: | Cooper |
| Boone Role on Grant: | Co-Investigator |
| Percent Effort: | 10% |

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| --- | --- |
| Funding Agency: | NLM |
| Grant Number: | T15 LM007059 |
| Title of Grant: | Pittsburgh Biomedical Informatics Training Program |
| Years Inclusive: | 2017-2022 |
| Principal Investigator: | Hochheiser |
| Boone Role on Grant: | Co-Investigator |
| Percent Effort: | 15% |
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| Funding Agency: | Susan Komen Foundation |
| Grant Number: | N/A |
| Title of Grant: | Postdoctoral Fellowship |
| Years Inclusive: | 2012-2015 |
| Principal Investigator: | Boone |
| Boone Role on Grant: | Postdoctoral Scholar |
| Percent Effort: | 100% |

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| Funding Agency: | NSF |
| Grant Number: |  |
| Title of Grant: | GK12 Scientist in the Classroom Teaching Fellowship |
| Years Inclusive: | 2008-2011 |
| Principal Investigator: | Shepard |
| Boone Role on Grant: | Fellow |
| Percent Effort: | 20% |

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| Funding Agency: | NIH Training Grant |
| Title of Grant: | Viruses, Nucleic Acids, and Cancer Training Program |
| Years Inclusive: | 2005-2007 |
| Principal Investigator: |  |
| Boone Role on Grant: | Fellow |
| Percent Effort: | 100% |

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| --- | --- |
| Funding Agency: | NSF |
| Title of Grant: | REU Fellowship |
| Years Inclusive: | 2002-2003 |
| Principal Investigator: |  |
| Boone Role on Grant: | Fellow |
| Percent Effort: | 100% |

#### PROFESSIONAL ACTIVITIES

**TEACHING:**

2012-present Hillman/UPCI Academy- site head, course director/instructor/mentor

2016 Integrative and Systems Biology – New players in Cancer Biology

2017, 2019 DBMI Intro to Translational Bioinformatics – module on RNAseq

2017 BIOINF 2032 Journal Club Course – Bioinformatics

2017-present DBMI Communications Course

2016-2022 iBRIC Academy- site head, course director/instructor/mentor

2015-2018 DBMI Intro to Bioinformatics – Regulation of gene expression – mol biology

2015-2022 2167\_INTBP\_2290\_SEC1030\_SCNTFC ETHCS RESPONSIBLE RES course

2018-present Evidence Based Medicine –SOM- facilitator

2018-present Investigation and Discovery-SOM-facilitator

2018-present DBMI Presentations Class – lecturer

2023-present AIBIDS consultant

2015-present Dozens of community outreach events per year in schools and with partners

**MENTORING:**

***International:***

Jingci “Linda” Chen - with Adrian Lee

Education: Tsinghua University, Beijing

Research Interests: Studying the role of IGF1R/InsR hybrid receptors in breast cancer

chenj9@umpc.edu

***Undergraduate:***

Sreeroopa Som - Stanford

Andrew Warburton – Mt. Sinai Med school

Janet Wang – Carnegie Mellon

Thomas Kim – Johns Hopkins

Edward Piechowicz – University of Pittsburgh

Ashna Patel – North Allegheny High School

Amira Johnson – Carnegie Mellon

Taylor Monitz – Columbia

Abril Mendoza – Shadyside High School

***Medical Fellow***

Sarah Taylor – with Adrian Lee

**ADVISORY COMMITTEES**

***PhD***

Kevin McDade – University of Pittsburgh

Sanghoon Lee - University of Pittsburgh

Tankya Simoneaux – Morehouse School of Medicine

Brandon Dunham – University of Pittsburgh

***Masters***

Han Zhang – Universit of Pittsburgh

Sanghoon Lee – University of Pittsburgh

Chandran Rathnam – University of Pittsburgh

Brandon Dunham – University of Pittsburgh

**PRESENTATIONS/ABSTRACTS**

1. Boone DN. Broadening Participation through in Research and Medicine through High School and Undergraduate Internship Programs. 03/04/2023. Komen Hackathon. Invited talk.
2. Vanderford, Wyss, Marsden, Lopez, Ghosh, Idoate, Dolan, and Boone DN. Perspectives and Lessons Learned from National Cancer Institute Youth Enjoy Science (YES) Programs. 05/31/2023. NIH SciED meeting. DC. Invited panel.
3. Ayoob, Jones, and Boone DN. The University of Pittsburgh Medical Center Hillman Cancer Center Youth Enjoy Science (YES) Academy. 06/01/2023. Poster
4. Featured in article by Pitt Research. Pitt’s BE STEM Proving Success of Pre-college Programs. <https://www.research.pitt.edu/pitts-be-stem-proving-success-pre-college-programs> . 11/2023
5. Booned DN. (invited talk). Preliminary analyses reveals underrepresented youth that participate in STEM PUSH precollege STEM programs are more likely to persist through STEM in higher education. Includes annual meeting. Pittsburgh. 3/2023
6. Davis and Boone DN. STEM Push Network. MESA Winter Convening. Invited talk. 12/2023. zoom
7. Boone DN and Legg AS. (invited talk) Preliminary analyses reveals underrepresented youth that participate in STEM PUSH precollege STEM programs are more likely to persist through STEM in higher education.  ITEST annual meeting. 11/01/2022. online
8. David Gau, Pooja Chawla\*, Amanda Clark\*, David Boone, Alan Wells, Partha Roy. Myocardin-related transcription factor is an important regulator of the dormancy-to-emergence transition of breast cancer cells. ASCB annual meeting. 12/3/2022. Washington DC.
9. Gau, Chawla, Eder, Joy, Boone, Lucas, Roy, and Galson. Tumor-intrinsic and -extrinsic mechanisms of MRTF-dependent regulation of bone colonization by breast cancer cells. ASBMR annual meeting. 09/09/2022. online.
10. Boone DN. (invited talk) Broadening participation in data science and genomics through high school and undergraduate internship programs. BioIT World Conference and Expo. Boston. Sept 2021.
11. Boone, Legg, and Iriti. The STEM PUSH Network: Broaden equity in STEM by reinventing the relationship between pre-college STEM programs and admissions. ITEST annual meeting. 2021
12. Boone, Legg, Iriti. The STEM PUSH Network: Reimagining relationships between out of school precollege STEM programs and higher ed admissions. AISL annual meeting. 2021
13. Boone, Chenowerth, and Vannier. (invited talk) Overcoming Barriers and Creating a sense of belonging in student research experiences. NIH SciEd meeting. 2021.
14. Boone. (invited talk) Preparing diverse high school and undergraduate students for biomedical and computational research through authentic research experiences and mentorship. SADET conference. April 2021.
15. Boone, Legg, Sherrill. Pursuing Diverse and Equitable STEM Outcomes through pre-college Programs. PACAC Conference. June 2021.
16. Boone DN, Morrison, J, Sweeney D. Now is the moment to disrupt the college admissions process. NSF INCLUDES Coordination Hub. <https://www.includesnetwork.org/blogs/nsf-includes-coordination-hub1/2020/11/16/money-race-privilege-class-inequity>. 2020
17. Boone DN. The Dos and Don’ts of Virtual Programming: Hillman Academy Case Study. NIH R25 Directors meeting. 11/2020. Invited talk.
18. Boone DN. Hillman Academy. Hundred Summit. Helsinki, Finland. 2019
19. Boone DN. Role of lncRNAs in Cancer. Invited presentation to MARC/RISE programs at the University of Puerto Rico-Rio Piedras. 2019
20. Landsittel, Hochheiser, Cooper, Day, **Boone**, Wright, Batmanghelich, and Urban. Inter- and Intra-Institutional Efforts to Build Capacity for Data Science Education.2018 Symposium on Data Science & Statistics. ASA Meetings.
21. Legg, Allen, **Boone**, Iriti, and O’Conner. Diversifying Access to Urban Universities for Students in STEM Fields. NSF Includes PI and Directors Meeting. DC. Jan. 2018.
22. Allen, **Boone**, Champagne, and Iriti. NSF INCLUDES – Diversifying Access to Urban Universities for Students in STEM Fields: A collaborative approach to rethinking college STEM admissions. NAMEPA Webinar Series. Oct. 2018.
23. O’Conner, Allen, Legg, and **Boone**. Diversifying Access to Urban Universities for Students in STEM Fields. Remake Learning Lunch and Learn. Sept. 2018.
24. **Boone DN**, Gopalikrishnan V, Becich MJ, Hochheiser H. Interactive Panel: A STEM Pipeline for Biomedical Informatics: Five-year progress report for Pittsburgh. American Medical Informatics Association Inspire 2017 meeting. June 2017.
25. Livshits, S, and **Boone DN**. University of Pittsburgh Cancer Institute (UPCI) Academy: who we are and an early assessment**.** UPCI Retreat. June 2017.
26. Sreekumar S, Levine K, Sikora M. **Boone DN**, et al. Differential turnover of Estrogen Receptor alpha in Invasive Lobular Carcinoma. San Antonio Breast Cancer Symposium Proceedings. Dec. 6, 2016. San Antonio TX.
27. Ding M, King A, Oesterreich S, Becich M, **Boone DN**. University of Pittsburgh Cancer Institute (UPCI) Academy: who we are and an early assessment.University of Pittsburgh Community Engagement Forum. Dec. 2016. Pittsburgh, PA.
28. **Boone DN**, Finnell JT, Sarkar I, Unertl K. [S65: Panel - New Pathways into Biomedical Informatics: Educational Outreach Programs for High School Student](https://amia2016.zerista.com/event/member/286467). AMIA Annual meeting. Nov. 2016. Chicago, IL.
29. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. Women’s Cancer Research Center Research Symposium. September 14, 2015. Nemacolin Woodlands, PA.
30. Som S, Lee AV, and **Boone** DN. SNHG15, an IGF1-Regulated lncRNA, is Overexpressed in Aggressive Breast Cancer Subtypes and is Necessary for Cell Proliferation. Science 2015-Unleashed! October, 8, 2015. Pittsburgh, PA. Poster.
31. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. University of Pittsburgh Cancer Institute Research Symposium. June 18, 2015. Pittsburgh, PA. Poster.
32. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. Great Lakes Breast Cancer Symposium. June 5-7, 2015. Cleveland, OH. Poster.
33. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. Center for Nucleic Acids Science & Technology. Carnegie Mellon University. April 2015. Pittsburgh, PA. Talk.
34. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. Magee Women’s Research Institute seminar series. April 2015. Pittsburgh, PA. Talk.
35. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. Center for Nucleic Acids Science & Technology seminar series. Carnegie Mellon University. April 2015. Talk.
36. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. Keystone Meeting: Long Noncoding RNAs: From Evolution to Function. March 15-20, 2015. Keystone, CO. Poster.
37. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. Endocrinology Annual Meeting. March 2015. San Diego, CA. Talk.
38. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. Women’s Cancer Research Center Research Symposium. September 5, 2014. Nemacolin Woodlands, PA. Talk.
39. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for proliferation. University of Pittsburgh Cancer Institute Research Symposium. June 17, 2014. Pittsburgh, PA. Poster.
40. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lncRNA necessary for full proliferation of breast cancer cell lines. Keystone Meeting: Long non-coding RNAs. February 26, 2014. Santa Fe, NM. Poster.
41. **Boone DN** and Lee AV. SNHG7 is an IGF1-regulated lincRNA necessary for full proliferation of breast cancer cell lines. Women’s Cancer Research Center Research Symposium. November, 14 2013. Nemacolin Woodlands, PA. Poster.
42. **Boone DN** and Lee AV. SNHG7 is an IGF1 regulated lincRNA necessary for full proliferation of MCF7 breast cancer cells. Women’s Cancer Research Center Work-in-Progress Seminar. October, 12 2013. Pittsburgh, PA. Talk.
43. **Boone DN** and Lee AV. RNA-seq analysis reveals that IGF1 signaling regulates the expression of linc-Sema-3a, which is necessary for full proliferation of MCF7 cells. University of Pittsburgh Department of Pharmacology and Chemical Biology Research Symposium. September 25, 2013. Pittsburgh, PA. Talk.
44. **Boone DN** and Lee AV. IGF1-Regulated Transcriptome. University of Pittsburgh Cancer Institute Research Symposium. June 14, 2013. Pittsburgh, PA. Poster.
45. **Boone DN** and Lee AV. IGF1-Regulated Transcriptome. Gordan Research Conference: Insulin-Like Growth Factors in Physiology & Disease. March 17-22,2013. Ventura, CA. Poster
46. **Boone DN** and Lee AV. (2012). Minimal regulation of the expression of mature miRNA at early time points in breast cancer cells by IGF1 signaling. Women’s Cancer Research Center Research Symposium. Nemacolin Woodlands, PA. Poster.
47. **Boone DN** and Lee AV. (2012). Regulation of the transcriptome by IGF1 signaling in breast cancer cells. Women’s Cancer Research Center. Nemacolin Woodlands, PA. Talk.
48. **Boone DN** and Lee AV. (2012). Regulation of the transcriptome by IGF1 signaling in breast cancer cells. University of Pittsburgh Cancer Institute Research Symposium. Greensburg, PA. Poster.
49. **Boone DN**, Qi Y, Li Z, and Hann SR. (2010). Egr1 mediates p53-independent c-Myc-induced apoptosis via a noncanonical ARF-dependent transcriptional mechanism. American Society for Cell Biology Annual Meeting. Philadelphia, PA. Poster.
50. **Boone DN** and Hann SR. (2010). Egr1 mediates p53-independent c-Myc induced apoptosis via a noncanonical ARF-dependent transcriptional mechanism. Vanderbilt University Cell Biology Research in Progress Seminar series. Nashville, TN. Talk.
51. **Boone DN**, and Hann SR. (2010). Egr1 and Egr2 are direct target genes of c-Myc that are differentially induced by the binding of ARF to c-Myc in order to perform distinct transcriptional and biological functions. Vanderbilt University Cell and Developmental Biology Research Symposium. Nashville, TN. Poster.
52. **Boone DN**, Li Z, and Hann SR. (2009). The control of p53-independent apoptosis by the c-Myc-ARF-Nucleophosmin network. Mechanisms & Models of Cancer Meeting at the Salk Institute. San Diego, CA. Poster.
53. 30 c-Myc differentially induced depending on ARF to perform distinct biological functions. Vanderbilt University Cell and Developmental Biology Research Symposium. Nashville, TN. Talk.
54. **Boone DN**, Qi Y, and Hann SR. (2008). Egr transcription factors are novel target genes of c-Myc that are differentially regulated by p19ARF to mediate distinct transcriptional and biological functions of c-Myc. Vanderbilt University Cell and Developmental Biology Research Symposium. Nashville, TN. Poster.
55. **Boone DN**, Li Z, and Hann SR. (2007). Cofactor interactions differentially control c-Myc transcriptional activities. Vanderbilt University Cell and Developmental Biology Research Symposium. Nashville, TN. Poster.
56. Hawrylak N, Sedlmeyer T, **Boone D**, Salm AK. (1998): Dehydration and Rehydration Alter the Surface Density of Glial Fibrillary Acidic Protein Immunoreactivity (GFAP-IR) of Astrocytes in the Rat Supraoptic Nucleus. On-line Proceedings of the 5th Internet World Congress on Biomedical Sciences '98 at McMaster University, Canada. Available at URL: [http://www.mcmaster.ca/inabis98/schallert/hawrylak0850/index.html](file:///C:/Users/booned/Desktop/simantov/dus0133/index.html)). Abstract.

**SERVICE**

**Reviewer:**

2017-present NIH Study Section – R25 Youth Enjoy Science – three panels

2018 CTSI – Biomedical Modeling Pilot Awards – one panel

2019-2023 Hillman Developmental Pilots Awards – 3 panels

2017-present Peer-review in various journals

2021-present Editorial Board for Journal of STEM Outreach

2022 Komen Foundation initial Hackathon consultant and reviewer

2022 NIH/NHGRI-U24-Education Hub Comp Genomics and Data Science – one panel

2022 Precision Medicine Institute Pilot Awards – one panel

2023 NHGRI SPECIAL EMPHASIS PANEL ZHG1 HGR-P – J1, Diversity Centers – one panel

2023 Komen Foundation - Komen Hackathon Challenge Grant - session chair

2023 Komen Foundation - Invited Expert Judge of first hackathon

2023 Komen Foundation - SharesForCures Analytic Vendor Proposal review

**University and Medical School:**

2019-present NSF Includes Leadership Team

2019-present NSF Includes Shared Measures Workshop

2020-present coLead and cofounder of BESTEM Center

2023-present Certified Peer Coach through Physician Peer Training Program

2020-2022 Member and coleader – VOLT R25 group

2018-2020 Member- Center for Causal Discovery Executive Committee

2016-present Vice Chair - UPCI Committee for Excellence in Cancer Education and Training

2016-present Remake Learning – Outreach board committee member

2015-present Resource Partner Allegheny Intermediate Unit – Math Science Collaborative

Representative at the Community Outreach & STEM-related Programs meeting

2015-2018 Academically-Based Community Engagement Idea Exchange

University of Pittsburgh School of Medicine Curriculum Colloquium 2015

2015-present Led/organized outreach at Bethel Park High School involving 300 students and 5 days of hands-on instruction

2015-present Judge – Pittsburgh Regional Science and Engineering fair

2016 Judge – Big Data Jam

2012, 2015, 2018 Judge – INTEL International Science Fair

2013-present UPCI/Hillman Academy instructor/mentor

2013-2015 WCRC retreat committee member

2013-2015 WCRC retreat – session chair

2013 Entering Mentoring Certification

2013-2015 Post doctoral mentor to high school students

2017-present Academic advisor to DBMI graduate students

2018-present Sanghoon Lee Doctoral Committee

2017-present Master’s Thesis Committee for DBMI graduate student

2017-present Comprehensive Exam Committee for one DMBI graduate student

**Community:**

2013-present Youth league girls’ and boys softball, basketball, soccer, and baseball coach

2012, 2015,2018 Judge - Intel International Science and Engineering Fair

2011-present YMCA father/child program

2008-2011 Science Education Outreach - Instructed students/parents at 5 local science outreach events.

2015-present Food lift –– take extra food from bakeries/stores to shelters and individuals that are food insecure. 2-4hrs/wk

2008-2012 Habitat for Humanity -– Participated in construction of 12 houses

2008-2011 Hands on Nashville -– Participated in various community development programs.

2003 Sea Turtle Conservation in Gandoca, Costa Rica –– International Student Volunteers