

[REDACTED]

January [REDACTED]

RE: Mentor Statement for Gilead Research Scholars Program

Dear Selection Committee,

I am very pleased to serve as mentor for [REDACTED], who is applying for the Gilead Research Scholars Program, and I am writing to give my complete and enthusiastic support for his proposal. Dr [REDACTED] is an exceptionally well-trained surgical oncologist with an impressive research background in studying regulation of the estrogen receptor (ER), and ER associated genes and applying these findings to investigate drivers of tumor growth, response to treatment, and novel therapies. He is seeking through this mechanism funds to expand the work currently funded by his K-08 award (no scientific overlap) to understand how reprogramming of chromatin structure underlies changes in tyrosine kinase signaling networks to promote resistance to endocrine therapy in ER+ breast cancer. I strongly believe that work will enable [REDACTED] to become a leader in breast cancer research.

[REDACTED] has already received outstanding research training in conjunction with extensive clinical training. After completion of his medical degree, as a general surgery resident, he took two years away from clinical training and was a laboratory postdoctoral fellow studying regulation of the [REDACTED] in breast cancer. During this time, he was extraordinarily productive and was first author on 7 papers, including 4 directly related to this proposal, and was an author on another 6 papers. Upon completion of residency, he was awarded a position in the highly prestigious fellowship in the clinical surgical oncology training program at [REDACTED]. During those two years Dr [REDACTED] completed his clinical training and developed a sophisticated understanding of clinical management and significant technical expertise of oncologic operations for solid organ tumors. He additionally published 5 clinical papers, including 3 as first author. The rigors of clinical training did not allow for additional time in the lab, but Dr [REDACTED] spent this time identifying and refining biologic questions based on needs in clinical oncology.

I was highly involved in recruiting [REDACTED] believe that [REDACTED] has the ideal environment for his development as a physician scientist. [REDACTED] was hired as a dual departmental recruit to the Department of Surgery in the division of surgical oncology and endocrine surgery, and [REDACTED] with explicit support as a surgeon-scientist in August 2019. He has been provided multiple laboratory benches in our state-of-the-art [REDACTED] building, and again noting his lab space is directly adjacent to my laboratory, and he also has an office down the hall from the lab space and near my office. We meet weekly and communicate frequently in person, by zoom, and by email and have developed a close working relationship. He has access to my laboratory, equipment, and resources. The physical proximity of his laboratory and office space is ideal for close collaboration with me and my lab. [REDACTED] will have input into all of the translational research into estrogen receptor positive breast cancer being performed on the 5th floor of [REDACTED]. He is a key part of the breast cancer clinical management group including weekly breast cancer multidisciplinary tumor board meetings and quarterly clinical journal clubs.

Since his arrival at [REDACTED], we have been extremely pleased with his progress and contributions to both clinical missions and to cancer center research. COVID has created challenges for new faculty members starting research laboratories, however, despite this he has built an infrastructure for the proposed studies and generated impressive preliminary data and two high impact senior author

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papers from his lab this year. First, as part of our breast cancer [REDACTED], it was extremely difficult to get fresh tissue specimens to generate organoids, and [REDACTED] now leads this effort, and we now have many organoids. Second, I brought [REDACTED] a team science project studying the cell cycle in [REDACTED] breast cancer, and this has resulted in a senior author paper for him recently accepted to *PNAS* and he contributed significantly and is a co-investigator on an R01 (PI [REDACTED] building on that work is pending funding. He has clearly demonstrated clinical and scientific value in several aspects of this work. More importantly, this has established collaborations with researchers in the Department of Genetics and a project to develop an imaging based single cell proteomics assay, which has extremely promising preliminary data. Thirdly, with the support of a prestigious Society of University Surgeons Junior Faculty Award, [REDACTED] has developed a novel assay to couple *ex vivo* [REDACTED] of primary human breast tumors, which was published this fall in *Clinical Cancer Research*. [REDACTED] has already increased the impact of our breast cancer research and will have opportunities for funding and to advance his own science.

Support from this Gilead Research Scholars program will be essential for [REDACTED] to further develop his investigation into targeting reprogrammed [REDACTED]. In particular he is bringing a novel approach to the question of how remodeling of chromatin structure underlies functional changes in intracellular signaling networks which is a key mechanistic question to understand this problem. If successful, this will assist [REDACTED] developing into an independent clinician-scientist, and lead to biologically informed clinical trials to improve outcomes for patients. My lab has led in studying treatment response and biomarkers in breast cancer and I am an ideal mentor for [REDACTED]. I have been extremely successful in mentoring junior scientists, and I am confident [REDACTED] will be successful in this transition as well. I have mentored many young scientists over the past 23 years including the training of 17 graduate students (currently have 6), mentored 21 postdocs (currently have 3), and mentored 7 assistant professors physician scientists; of these 7 physician scientists, all have achieved tenure and one is now [REDACTED]. Of these 38 past students, 11 are practicing physicians, 11 are Senior Scientists/Group Leaders in Industry, and 15 hold tenure track faculty positions at academic institutions. I have specific experience training clinician-scientists transitioning to independent research careers, all of whom received grant support to fund their independent laboratories.

In summary, I feel strongly we provide [REDACTED] an ideal research environment and mentorship team to achieve his goals. It is clear to me that [REDACTED] is an outstanding young physician-scientist and an excellent candidate for this award. I give him my highest possible recommendation, and am committed as his mentor, to his success and I know he will be/is highly successful.

Sincer

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