भारतीय प्रौद्योगिकी संस्थान कानपुर
Indian Institute of Technology Kanpur

निदेशालय
Directorate

अभय करंदीकर
निदेशक

Abhay Karandikar
Director

24th September 2021

To,

The Peer Review Committee,
Office of Sun Pharma Science Foundation,
Hansalaya Building, 15-Barakhamba Road,
Connaught Place, New Delhi

Ref: Justification for sponsoring the nomination of Dr. Bushra Ateeq for the "Sun Pharma Research Awards 2021 for Medical Sciences-Basic Research".

Dr. Ateeq's research program at IIT Kanpur is internationally recognized by the peers as evident by her outstanding impactful publications, impressive citations and international collaborations. She has several break-through discoveries to her credit, which primarily bridged the gap between bench and the bed-side in India. First comprehensive molecular subtyping of Indian prostate cancer patients spearheaded by her has a huge potential for diagnostics, prognostics and translational impact (*Prostate, 2015*). For her work published in *Clinical Cancer Research, 2019,* Dr. Anders Bjartell, a well-known Medical Oncologist from Lund University, Sweden highlights the novelty and importance of her study, and recommends further exploration in the clinical trials, which itself is a testimony about the importance of her research. Her most recent groundbreaking discovery changed the prototype about androgen derivation therapy used as first-line of treatment for prostate cancer patients. She showed that anti-androgen drugs are actually detrimental to patients' health leading to much more aggressive neuroendocrine prostate cancer (*Nature Communications, 2020*). This discovery is extremely significant to reconsider androgen derivation therapy and strategize the treatment plan for these patients accordingly. In a recent impactful study, she discovered the underlying mechanisms for a highly aggressive prostate cancer subtype with elevated levels of DLX1, prevalent in ~60% of the patients, and shown the efficacy of BET inhibitors for its clinical management (*Nature Communications, 2021; Seminar in Cancer Biology, 2021*). Conclusively, her research has a huge diagnostic and translational potential, and provides foundation for tailored therapies for advanced stage prostate cancer patients. Dr. Ateeq has illustrious reputation among her peers because of her outstanding contributions in the cancer field and the impact it carries on the wellbeing of patients.

Dr. Ateeq established herself as an outstanding leader in the cancer field, and considering her seminal contributions, she is the most deserving candidate for the prestigious Sun Pharma Research Awards 2021.

Nominator

(Abhay Karandikar)

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To,

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Hansalaya Building, 15-Barakhamba Road,
Connaught Place, New Delhi

Ref: Nomination letter in support of Dr. Bushra Ateeq's candidature for the "**Sun Pharma Research Award – 2021 for Medical Sciences-Basic Research**".

Dear Committee members,

This letter is to express my strong support and nominate Dr. Bushra Ateeq for the prestigious "Sun Pharma Research Award–2021 under "Medical Sciences-Basic Research category". In her independent career at IIT Kanpur, she has made immensely worthy contributions at the forefronts of cancer research which are appreciated within India as well as globally. In recognition of her excellence in research and scientific contributions, she received the highest Indian science award from CSIR, the Shanti Swarup Bhatnagar Prize for Science and Technology in Medical Sciences (2020), S. Ramachandran National Bioscience Award for Career Development (2020), CSIR-Central Drug Research Institute Award (2020) for the excellence in drug research, Basanti Devi Amir Chand Prize in Biomedical Sciences (2019) from the Indian Council of Medical Research, and Sayeeda Begum Woman Scientist prize (2019) from the Jamia Hamdard.

A pathbreaking discovery led by Dr. Ateeq shifted the paradigm about androgen deprivation therapy, a mainstay treatment for prostate cancer patients. She showed anti-androgen drugs commonly used for treating advanced stage patients is actually counterproductive, resulting in higher SPINK1 levels, subsequently progressing to aggressive neuroendocrine prostate cancer. Most importantly, she showed that Casein Kinase 1 inhibitor could be used as an adjuvant therapy for SPINK1-positive and neuroendocrine prostate cancer patients (*Nature Communications, 2020*). In another noteworthy study, she revealed the novel molecular mechanism involved in elevated levels of SPINK1, and demonstrated the utility of epigenetic drugs for treating patients with higher SPINK1 levels (*Clinical Cancer Research, 2019*). Dr. Ateeq's group also repurposed the World Health Organization-approved anti-malarial drug, artemisinin, for the treatment of castrate-resistant prostate cancer patients, she showed that this drug reverts back the sensitivity of castrate-resistant prostate cancer to anti-androgen drugs (*Neoplasia 2017*). Currently, she is collaborating with the medical oncologists at Tata Memorial Hospital, Mumbai to conduct clinical trial using artesunate in advanced stage prostate cancer patients.

In a recent impactful study, she discovered the underlying mechanisms for a highly aggressive prostate cancer subtype harboring elevated levels of DLX1, prevalent in ~60% of the patients, and shown the efficacy of BET inhibitors for its clinical management (*Nature Communications, 2021*). Collectively, her research has a huge diagnostic and translational potential, and provides foundation for tailored therapies for advanced stage prostate cancer patients.

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Dr. Ateeq in her prolific independent career at IIT Kanpur made immensely worthy contributions in cancer biology and cancer therapeutics field. It has had far reaching outcomes in terms of novel therapies which has met with global appreciations. Therefore, I strongly support Dr. Ateeq's candidature for the prestigious "Sun Pharma Research Awards – 2021 in Medical Sciences-Basic Research".

With Warm Regards,

Sincerely,

Abhay Karandikar