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ट्रांसलेशनल स्वास्थ्य विज्ञान
एवं प्रौद्योगिकी संस्थान
TRANSLATIONAL HEALTH SCIENCE
AND TECHNOLOGY INSTITUTE
An autonomous institute of the Deptt. of Biotechnology, Ministry of Science & Technology, Govt of India

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Dr. Pramod Garg, MD, DM, FAMS
FNA, FASc, FNASc
Executive Director

No. THS/6.13.5 **Dated: 30th October, 2021**

To,

Dr. Rajinder K. Jalali
Member Secretary
Sun Pharma Science Foundation.

Sub.: Nomination for Sun Pharma Science Foundation Research Awards

Dear Dr. Jalali,

The primary focus of Dr. Amit Awasthi's research is to understand the molecular pathways that are required for the generation and functions of inflammatory and regulatory T cells in autoimmune diseases and cancer immunotherapy for which he had secured India-Alliance intermediate fellowship, Innovative Young Biotechnologists Award (IYBA) in 2012. In last one and half year, he has tremendously contributed to Covid19 research by setting up two critical national platform, 1) SarsCov2 animal models, and 2) human immunogenicity to support Covid19 vaccine and therapeutic efforts in the Country.

Amit's research contribution on T cells biology, especially Th9 cells, and its association with cancer and inflammatory diseases is very significant. In fact, he is only researcher who is working on Th9 cells and its transcriptional regulation in India. In last three to five years, Amit has published his research work on Th9 cells and their functions in high impact journals. In addition, Amit has recently contributed to vaccine effectiveness Covid19 vaccine where his lab contributed to understand the role of cellular immune response in test-negative case control vaccine effectiveness study of ChAdOx1 nCoV-19 vaccine (**Lancet Infectious Diseases, 2021 in print**)

His recent work on the identification of table salt triggers anti-tumour immune response by promoting the abundance of *Bifidobacterium,* which activates anti-tumour functions of NK cells is published in **Science Advances 2021,** 7(37): eabg5016. This work was covered by various national and international media indicating the importance of his discovery.

Amit's lab has developed animal models for inflammatory bowel disease (IBD) to understand the pathophysiology of IBD and how dietary factors affect the outcome of disease. He has identified that potassium rich diet suppresses intestinal inflammation by promoting generation of anti-inflammatory T

cells (Foxp3$^+$ Tregs) via modulation of Smad2/3 and Smad7 pathways. Using his expertise in the field of IBD, he further identified that posttranscriptional modification, sumoylation, plays key role in the pathogenesis of IBD (**Cell Reps 2019**, 29:3522-3538.e7).

Amit's publications and productivity from the time of his PhD up till now as an independent investigator at THSTI reflect from his citation index where his papers are cited more than 11,000 times with h index of 31. He was awarded GN Ramchandran DBT-Bioscience Award 2021 for career development. He has received various other awards such as Dr. GP Talwar Mid-Career Scientist Award for the year of 2016 from Indian Immunology Society, NASI Young Scientist Platinum Jubilee Award for the year of 2012 from the National Academy of Sciences, India.

I strongly support his candidacy for Sun Pharma Science Foundation Award.

Best Regards,

Dr. Pramod Garg

डॉ. प्रमोद गर्ग / Dr. Pramod Garg
कार्यकारी निदेशक / Executive Director
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Last five years research work of Amit Awasthi:

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