

No.: RCPSR-R/Letter/2021-22/1054

Raipur (C.G.) Date: 26<sup>th</sup> August, 2021

**Nomination Letter**

Dr. Anshita Gupta Soni is a young researcher who is currently working in the field of drug design and development for cancer and autoimmune disorders. She has designed novel therapeutic nanocarriers which targets matrix metalloproteinase enzymes which have crucial role in cancer and tumour progression. She has developed highly selective MMP-7 and MMP-9 enzyme inhibitors on the basis of molecular docking and structural optimization. These highly selective MMPs inhibitors not only manipulate the tumour microenvironment but also make the sensitive towards the actions of antitumor agents. A series of synthetic as well as phytoactive leads were fused pyrimidine-based highly selective MMP-7 and MMP-9 inhibitors to evaluate the extent of action comparatively. A structure-based design of pyrimidine and fused pyrimidine having synthertic and phytoactive lead scaffolds were rationalized to enhance activity against MMP-7 in parallel with MMP-9. Docking studies were performed to provide reasonable explanation for structure-activity relationships and isoform selectivity. MMP-7 and MMP-9 inhibitors were then evaluated for their anticancer activities against three human cancers to assess their therapeutic potential at cellular level, biomarker level, enzymatic level and clinical level. Both synthertic and phytoactive lead scaffolds exhibited superior anticancer activities compared to quercetin. There insilico ligand efficiency metrics, physicochemical properties and ADME parameters were found drug-like and are under patent evaluation phase.

Other than that, she is having an overall **10 years of research experience** in her **field of specialization**, including 5 years of doctoral research experience as **UGC-SAP-II project fellow** [F. No.3-54/2011(SAP-II)] New Delhi, India at University Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur, Chhattisgarh. She is having a total of 50 publications and overall **impact factor of 50.028**, authored **3 books of International repute** and filled **3 patents** which are in progress. In due tenure of her research work, she had also received **Young scientist award-2014 and 2019** from **Chhattisgarh Council of science and technology (CCOST)** Raipur, Chhattisgarh for outstanding contribution in pharmaceutical sciences as well as in chemical engineering. She has been also awarded for her research in indigenous sources of **Chhattisgarh State by Chhattisgarh Medicinal plant board together with NMPB, India under Vanaushadhi Conclave-2018**. I strongly recommend her for **Sun Pharma Science Foundation Research Awards 2021**, and I am happy to amplify on any details if you wish.

Sincerely,

  
**Dr. Chanchal Deep Kaur**

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