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(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद / Council of Scientific & Industrial Research)
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डॉ. एस. चंद्रशेखर, निदेशक
Dr. S. Chandrasekhar, FNASc, FASc, FNA
Director

24th September, 2021

Justification for sponsoring the nomination-SUN PHARMA Research Award-2021

Dr. Raji Reddy is a versatile organic chemist adopting his skills to the needs of the hour, well justified by **140** publications, **10** patents and 2 book chpaters having **2856** citations. He has made contributions in the field of pharmaceutical chemistry towards human health care. All his research projects are with special emphasis on the development of novel processes for active pharmaceutical ingredients/intermediates and synthesis of new chemical entities towards drug discovery. Following are the highlights of his outstanding contributions.

- **A novel and efficient scalable process for the synthesis of TLR 7/8 agonist molecule (IMDG), used as an adjuvant in COVAXIN® (COVID-19 vaccine), has been developed and transferred to Bharat Biotech Int. Ltd. and being using in production of vaccine, COVAXIN® and supplying to several countries. [TECHNOLOGY COMMERCIALIZED]**

- **A novel process for Favipiravir has been developed in 20-days' time and transferred to Cipla Ltd. They launched the product in the market using this technology, as CIPLENZA for the treatment of COVID-19, having CSIR-IICT logo printed pack. [TECHNOLOGY COMMERCIALIZED]**

- Similarly processes for **2-Deoxy Ribose** (transferred to 6-companies), **Remdesivir** (transferred to 4-companies), **(*S*)-pregabalin** *(*IN202011006475-patent filed), **key fragment of Eribulin mesylate** (Patent Filed: No. 0019NF2019, transferred to Cipla Ltd. and the product is under process for commercialization), Nicergoline and EV-077-3201 (to Evolva Biotech) have also been developed.

- Developed numerous efficient methodologies from novel handy precursors and generated more than 1875 New Chemical Entities ***(unrevealed skeletons in literature)***, particularly heterocycles. *From these, three molecules have been found as lead molecules: Oxindole derivative – leukemic and breast cancer (US 2018/0127365 A1, 2018), and indole sulphonamide–Selective HDAC Inhibitor (WO 2019/102488 A1)* ***which are also found be useful for Idiopathic pulmonary fibrosis.*** *(Patent Application number as:* ***202011038497).*** *The generation of further data towards IND filing is in progress (for out-licensing).*

-Based on the performance, he was rated continuously as "outstanding" in his appraisals at CSIR-IICT. With his contributions in pharmaceutical sciences, he was recognized with the CDRI-Drug Excellence award, CRSI-Bronze Medal, CSIR-Technology Award and NASI–RELIANCE Industries Platinum Jubilee Award in Chemical Sciences.

I strongly recommend his nomination for the prestigious Sun Pharma Research Award under the category Pharmaceutical Sciences because of contributions to the field.

Dr. S. CHANDRASEKHAR