

DEPARTMENT OF CLINICAL VIROLOGY

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Citation for the nomination of Dr Deepti Parashar for being considered for

SUN PHARMA RESEARCH AWARD

Dr. Deepti Parashar, Scientist E working on different research aspects of dengue & chikungunya viruses. Dr. Parashar's major research interests include antiviral testing and drug delivery systems for dengue & chikungunya viruses.

In the area of antiviral therapeutics, Dr. Parashar identified anti-dengue and anti-chikungunya activity in bioactive compounds from traditional medicinal plants (mangostin, chebulinic acid and carpaine) and plant extracts (*P. alba, A. heyneanus, B. monnieri, C. papaya, V. negundo, O. basilicum, S. androgynous.* For the first time, she has reported the antiviral efficacy of stearylamine, a cationic lipid alone against CHIKV. She has also identified drugs i.e. lomibuvir, enalaprilat and resveratrol for potential repurposing against dengue and chikungunya.

She has done pioneering work in the country in the area of RNA interference. An RNA interference agent which was developed for the inhibition of chikungunya virus, was validated, published, and granted patents in India, US, China, Australia and Europe. She demonstrated the utility of solid lipid nanoparticles in the delivery of the anti-chikungunya siRNA in *in-vitro* and *in-vivo* model systems. In addition, a metal–organic-framework delivery system (ZIF-C) developed by her was shown to enhance the antiviral activity of siRNAs directed against chikungunya virus. Now this technology is proposed for 'Expression of Interest' for exploring licensing and/or a joint development opportunity.

Dr. Parashar has authored more than 70 national/ international publications in high impact factor peer reviewed journals and several of these are specifically in the above-mentioned areas of work.

Dr. Priva Abraham MD, FRCP, FRCPath, PhD

Senior Professor

Priya Abrahan