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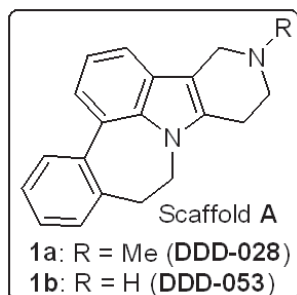


Raghavan Rajagopalan

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Disease modifying non-opioid analgesic for chemotherapy induced peripheral neuropathy (CIPN)

Chemotherapy induced peripheral neuropathy (CIPN) is a debilitating pain condition that results from the use of anticancer drugs such as taxanes, platinum compounds, vinca alkaloids, and the like. At present, CIPN is being managed, albeit poorly, with diverse drugs comprising opioids, cannabinoids, anti-epileptics, and antidepressants. Our extensive work on pentacyclic pyridoindole scaffolds resulted in identification of such an analgesic, DDD-028 (1a),



(Fig. 1)

for the potential treatment of CIPN. DDD-028 displays potent analgesic activity in paclitaxel induced neuropathy (CIPN). The in vivo study involving chronic administration of paclitaxel along with DDD-028 over an 18-day period demonstrated that DDD-028 is exerting a prophylactic effect against CIPN. Tissue analysis of

the spinal cord and the key areas of the brain demonstrates that DDD-028 is preventing the nerve damage by inhibiting

glial cell proliferation and changes in morphology. In the receptor binding and selected functional studies, DDD-028 showed no activity at any of the opioid, cannabinoid, or dopamine receptors. DDD-028 is well tolerated in all of the tests and does not induce any sedation in any of the animals.

Speaker Biography

Raghavan Rajagopalan is Founder and Chief Scientific Officer of Daya Drug Discoveries Inc., and its affiliate Daya CNS, LLC. He received his PhD in Organic Chemistry from Columbia University in New York, NY, B.S. in Chemistry from State University of New York, Stony Brook, NY, a graduate certificate in Applied Mathematics from Washington University in St. Louis, MO. He did his post-doctoral research in immunochemistry in the department of microbiology, Columbia University, New York NY. He is an innovative organic/medicinal chemist and a Registered Patent Agent with the United States Patent & Trademark Office. He has over 35 years of experience in diagnostic and therapeutic drug discovery and developmental research related to four key areas: oncology, neuroscience, nephrology, and infectious diseases. During that time, he has been engaged in small molecule drug discovery in cancer phototherapy, chronic kidney disease, pain, drug addiction, and ADHD. He is principally responsible for the chemistry section for IND and NDA application for 4 drug candidates, 1 of which is approved and commercialized with another one undergoing Phase 2 clinical trials. He has over 100 patents and 52 professional publications and presentations of which 3 are landmark publications in kidney disease and cancer phototherapy.

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