

पेटेंट कार्यालय  
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पेटेंट कार्यालय का एक प्रकाशन  
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(54) Title of the invention : DEVELOPMENT OF HERBAL TRANSDERMAL PATCHES USING NATURAL GUMS FOR CHRONIC PAIN MANAGEMENT

<p>(51) International classification</p> <p>(31) Priority Document No</p> <p>(32) Priority Date</p> <p>(33) Name of priority country</p> <p>(86) International Application No Filing Date</p> <p>(87) International Publication No</p> <p>(61) Patent of Addition to Application Number Filing Date</p> <p>(62) Divisional to Application Number Filing Date</p>	<p>:A61K 36/9066, A61K 9/70, A61P 29/00, A61K 47/10, A61K 47/36</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:</p> <p>:01/01/1900</p> <p>: NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p>	<p>(71)Name of Applicant :</p> <p><b>1)Dr. Navneet Verma</b> Address of Applicant :Professor, Pharmacy Academy, Faculty of Pharmacy, IFTM University, Moradabad, Uttar Pradesh, India – 244102 Uttar Pradesh India</p> <p><b>2)Rajya Lakshmi Nimmagadda</b></p> <p><b>3)Dr. Mahesh Kumar Gupta</b></p> <p><b>4)Xoliqova Yuldashevna Oyistaxon</b></p> <p><b>5)Shweta Gogate</b></p> <p><b>6)Deshbandhu Joshi</b></p> <p><b>7)Arshiya Sharma</b></p> <p><b>8)Ms. M. Haripriya</b></p> <p><b>9)Nayyar Parvez</b></p> <p><b>10)B. Rajgopal</b></p> <p>(72)Name of Inventor :</p> <p><b>1)Dr. Navneet Verma</b></p> <p><b>2)Rajya Lakshmi Nimmagadda</b></p> <p><b>3)Dr. Mahesh Kumar Gupta</b></p> <p><b>4)Xoliqova Yuldashevna Oyistaxon</b></p> <p><b>5)Shweta Gogate</b></p> <p><b>6)Deshbandhu Joshi</b></p> <p><b>7)Arshiya Sharma</b></p> <p><b>8)Ms. M. Haripriya</b></p> <p><b>9)Nayyar Parvez</b></p> <p><b>10)B. Rajgopal</b></p>
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## (57) Abstract :

The present invention relates to a herbal transdermal patch system using natural polysaccharide gums, including gum karaya, gum acacia, and xanthan gum, as matrix-forming excipients for controlled delivery of extracts from *Boswellia serrata*, *Zingiber officinale*, and *Curcuma longa* for chronic pain management. The patch comprises a polyethylene terephthalate backing membrane, a drug-loaded gum matrix with glycerol and propylene glycol as plasticizers, eucalyptus oil as a permeation enhancer, and a siliconized release liner. Prepared by solvent casting, the formulation provides sustained drug release over 24 hours following Higuchi kinetics. Ex vivo studies show enhanced transdermal flux, while in vivo studies demonstrate anti-inflammatory and analgesic effects comparable to diclofenac sodium. The system offers a safe, biodegradable, and cost-effective alternative to synthetic transdermal patches.

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