# पेटेंट कार्यालय
# शासकीय जर्नल

# OFFICIAL JOURNAL
# OF
# THE PATENT OFFICE


| | | |
|---|---|---|
| निर्गमन सं. 12/2026 | शुक्रवार | दिनांक: 20/03/2026 |
| ISSUE NO. 12/2026 | FRIDAY | DATE: 20/03/2026 |


पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/02/2026

(21) Application No.202611011211 A

(43) Publication Date : 20/03/2026

(54) Title of the invention : ROLE OF BETULA ALNOIDES BARK EXTRACT AS AN ANTI-NEUROINFLAMMATORY AGENT

| | | |
|---|---|---|
| (51) International classification | :A61P 25/28, A61K 36/185, A61P 25/00, A61K 36/48, A61K 31/352 | (71)**Name of Applicant :**<br>**1)Dr. Shahbaz Khan**<br>Address of Applicant :Associate Professor, Pharmacy Academy, Faculty of Pharmacy, IFTM University Moradabad, Uttar Pradesh-244102, India. Uttar Pradesh India<br>**2)Bushra Jabi**<br>**3)Dr. Suruchi Singh**<br>**4)Arshi Aquil**<br>**5)Nazreen Tabassum** |
| (31) Priority Document No | :NA | (72)**Name of Inventor :**<br>**1)Dr. Shahbaz Khan** |
| (32) Priority Date | :NA | **2)Bushra Jabi** |
| (33) Name of priority country | :NA | **3)Dr. Suruchi Singh** |
| (86) International Application No<br>Filing Date | :<br>:01/01/1900 | **4)Arshi Aquil**<br>**5)Nazreen Tabassum** |
| (87) International Publication No | : NA | |
| (61) Patent of Addition to Application Number<br>Filing Date | :NA<br>:NA | |
| (62) Divisional to Application Number<br>Filing Date | :NA<br>:NA | |

(57) Abstract :

The present invention relates to pharmaceutical compositions comprising Betula alnoides bark extract for use as an anti-neuroinflammatory agent in the prevention and treatment of neurodegenerative disorders. The extract contains bioactive flavonoids and polyphenolic compounds that suppress microglial activation and inhibit the release of pro-inflammatory cytokines including interleukin-6, tumor necrosis factor-alpha, interleukin-1-beta, and cyclooxygenase-2. The anti-inflammatory effects are mediated through inhibition of the mitogen-activated protein kinase and nuclear factor kappa-B signaling pathways. The invention provides extraction methods using hydroalcoholic solvents to obtain standardized extracts with optimal bioactivity. Pharmaceutical formulations suitable for oral, parenteral, and transdermal administration are disclosed. In vitro studies demonstrate dose-dependent suppression of inflammatory mediators in activated microglial cells. In vivo studies in animal models show significant neuroprotection and improvement in cognitive function. The compositions find application in treating Parkinson's disease, Alzheimer's disease, multiple sclerosis, and amyotrophic lateral sclerosis.

No. of Pages : 11 No. of Claims : 10