

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED INTRON RETENTION DETECTION AND IDENTIFICATION FOR NEURAL DISEASES

<p>(51) International classification :G06N 030200, G06N 030400, G06N 030800, G06N 070000, G06N 200000</p> <p>(86) International Application No :PCT// Filing Date :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant :</p> <p>1)Dr. Mohd Ashraf Address of Applicant :Associate Professor, Department of CSE, School of Technology, Maulana Azad National Urdu University, Hyderabad, Telengana State, India. -----</p> <p>2)Rakesh Bharati</p> <p>3)Dr. Ajitkumar Meshram Pundge</p> <p>4)Ms. Arnika</p> <p>5)Dr. Sumana M</p> <p>6)Dr. V. Anandi</p> <p>7)Dr. Srinivas Ambala</p> <p>8)P. Sivaprasad</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor :</p> <p>1)Dr. Mohd Ashraf Address of Applicant :Associate Professor, Department of CSE, School of Technology, Maulana Azad National Urdu University, Hyderabad, Telengana State, India. -----</p> <p>2)Rakesh Bharati Address of Applicant :Ph.D. Research Scholar, Department of Computer Science & Engineering, MANIT Bhopal, India. -----</p> <p>3)Dr. Ajitkumar Meshram Pundge Address of Applicant :Associate professor, Department of Computational Sciences, Brainware University, Ramkrishnapur Road, Barasat, Kolkata, West Bengal 700125 Kolkata, India -----</p> <p>4)Ms. Arnika Address of Applicant :Assistant Professor, Department of Computer Science and Applications, School of Engineering and Technology, Sharda University, Greater Noida, UP - 201310, India -----</p> <p>5)Dr. Sumana M Address of Applicant :Associate Professor, Department of Information science and engineering, Ramaiah Institute of Technology, Bengaluru -560054, India. -----</p> <p>6)Dr. V. Anandi Address of Applicant :Associate professor, Department of Electronics and Communications engineering, M.S.Ramaiah Institute of technology, Bangalore. India. -----</p> <p>7)Dr. Srinivas Ambala Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Pimpri Chinchwad College Of Engineering, Pune, Maharashtra, India. -----</p> <p>8)P. Sivaprasad Address of Applicant :Assistant professor, Department of Electronics and Communications engineering, RVR & JC College of engineering -----</p> <p>--</p>
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(57) Abstract :

Title: Artificial Intelligence-Based Intron Retention Detection and Identification for Neural Diseases Abstract: The present invention discloses an artificial intelligence (AI)-based method for detecting and identifying intron retention events associated with neural diseases. Intron retention, a form of alternative splicing, can lead to the production of non-functional or aberrant proteins, contributing to various diseases, including neurological disorders. The proposed method improves the accuracy and efficiency of detecting and identifying intron retention events from large-scale RNA-seq data, offering the potential for discovering new therapeutic targets and personalized medicine approaches for neural diseases. The method consists of data collection, preprocessing, intron retention quantification using AI-based algorithms, feature extraction and selection, machine learning model development, and interpretation and validation of results. This AI-based approach can lead to a better understanding of the molecular mechanisms underlying neural diseases and facilitate the development of novel therapeutics.

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