(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/06/2021

(21) Application No.202141026207 A
(43) Publication Date : 25/06/2021

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED PREDICTION OF KIDNEY INJURY DUE TO DRUG REACTION

(51) International classification	:G16H0050200000, G16H0050500000, G16H0010600000, G16H0050700000, G16H0050300000
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

(71)**Name of Applicant :**
1)Madhu Medabalimi,Annamacharya College of Pharmacy
Address of Applicant :Annamacharya College of Pharmacy, New Boyanapalli, Rajampet, Kadapa District, Andhra Pradesh India 516126 Andhra Pradesh India
2)Chappidi Suryaprakash Reddy,Annamacharya College of Pharmacy
3)Y. Pradeep Kumar,Annamacharya College of Pharmacy
4)Mopuri Deepa,Annamacharya College of Pharmacy
5)Dr.Yerikala Ramesh,Ratnam Institute of Pharmacy
6)Swagatika Das,Centurion University of Technology and Management
7)Dr Ashwani Kumar,Gurukul Kangri (Deemed to be University)
8)Mrs.Poonam Dogra,Career Point University
9)Dr. Rajesh Gupta,Sri Sai College of Pharmacy
10)Mr. Ravi Shankar Kumar,SBS College of Pharmacy
11)Mr. Neeraj Bhandari,Sri Sai College of Pharmacy
12)Ms. Madhu bala,Gautam college of Pharmacy
(72)**Name of Inventor :**
1)Madhu Medabalimi,Annamacharya College of Pharmacy
2)Chappidi Suryaprakash Reddy,Annamacharya College of Pharmacy
3)Y. Pradeep Kumar,Annamacharya College of Pharmacy
4)Mopuri Deepa,Annamacharya College of Pharmacy
5)Dr.Yerikala Ramesh,Ratnam Institute of Pharmacy
6)Swagatika Das,Centurion University of Technology and Management
7)Dr Ashwani Kumar,Gurukul Kangri (Deemed to be University)
8)Mrs.Poonam Dogra,Career Point University
9)Dr. Rajesh Gupta,Sri Sai College of Pharmacy
10)Mr. Ravi Shankar Kumar,SBS College of Pharmacy
11)Mr. Neeraj Bhandari,Sri Sai College of Pharmacy
12)Ms. Madhu bala,Gautam college of Pharmacy

(57) Abstract :
Acute Kidney Injury in patients increase long term adverse events such as morbidity finally mortality hence early detection of acute kidney injury is necessary for improved functioning of renal organ with decreased comorbidities thereby increasing rate of survival of patients. Kidney injury can be controlled by reducing the risk factors such as interaction between drug drug and disease-drug interaction. Complexities raises due to drug-drug interaction and disease-drug cannot be handled by typical statistical approaches. In this invention, novel deep learning algorithm is proposed for discovering rules from tree models of multilayer based on drug usage combinations which detects indications of disease based on drug interaction. It is found that usage of drugs for several diseases have significant impact leading to occurrence of kidney injury. The proposed Deep learning tree based model performs better with higher prediction accuracy and interpretability than conventional tree based model.

No. of Pages : 11 No. of Claims : 6