# **Copyrights:**

- 1. Prof E. Jagadeesh Kumar of Chemistry on "A System for Detecting the Concentration of Gases in Soil Using AI and ML Interfaces" (Indian Copyright Patent No. L -107689/2021)
- 2. Dr Jella Kumaraswamy of Chemistry on " A system for the treatment of crops with nano fertilizers and lighting for better production " (Indian Copyright Patent No. L-13049/2022-Awaiting for online)

### **Design Patents Grants:**

- 1. Dr.Kumaraswamy Gandla, Department of Pharmacy, "Pharmacological apparatus for determines the learning memory behavior of experimental rat" (Indian Patent No: 363026-001, Accepted & Grant certificate issued).
- 2. Prof Jagadeesh Kumar Ega of Chemistry on " A Solar Inverter Enclosure " (Indian Patent No. 350758-001, cbr no: 208376, 05/10/2021)
- 3. Dr.Kumaraswamy Gandla, Department of Pharmacy, MACHINES FOR THE DEVELOPMENT AND PRODUCTION OF SOLID PHARMACEUTICAL PRODUCTS, Application Number. 367267-001. Under process.
- 4. Dr.Kumaraswamy Gandla, Department of Pharmacy, Wearable instruments for measuring bio-signals from the body, Application Number; Under process.
- **5.** Prof Jagadeesh Kumar Ega of Chemistry on " Automatic Chemical Dispensing System with Filter for Urine Analysis " (Indian Patent No. 371106-001, 23/12/2022)

## **Institutional Patents:**

- 1. CDU, Dept. of Chemistry, on "1,2,3-Triazole Based Purine Derivatives and Preparation Thereof as DPP-4 Inhibitors" (Indian Patent No. 202141040171A, Sep 24, 2021)
- 2. CDU, Dept.of Chemistry, on "One-Pot Synthesis of 3-Aminoindolizes Using Copper Catalyst and Ionic Liquid" (Indian Patent No.202141042384A, Oct 1, 2021).
- 3. CDU, Dept.of Chemistry, on " Isoxazole derivatives of nilutamide and preparation therof as anticancer agents " (Indian Patent No. 202141046116 A, 05/11/2021).
- 4. CDU, Dept.of Chemistry, on " Quinoxaline-sulfonyl-1,2,4-triazole hybrids and preparation thereof as anticancer agents " (Indian Patent No. 202141042809 A, : 05/11/2021).
- 5. CDU, Dept.of Mathematics and Statistics, on "Method for establishing local and global stability of a three species syn eco system comprising a commensal and two hosts " (Indian Patent, 202241065885 A, 25-11-2022)

## **Patents Granted:**

- 1. Prof. M. Ravinder of Chemistry on "Metal Complexes with Anti-Cancer Activity" (USA Patent No. US 2010 0209537A1, 2010)
- 2. Dr Sreedhar Gundekari of Chemistry on "Process for the preparation of Gammavalerolactone by catalytic hydrogenation of levulinic acid using Ru-based catalysts" (USA Patent No: US 10221149 B2, March 5, 2019)
- 3. Dr Sreedhar Gundekari of Chemistry on "An improved fast and selective process for the preparation of ?-valerolactone by catalytic hydrogenation of levulinic acid using Ru-based catalysts" (Indian Patent No: IN 337459, June 5, 2020)
- 4. Dr Sreedhar Gundekari of Chemistry on "An eco-friendly process for hydrogenation of organic molecules using hydrous ruthenium oxide catalyst" (Indian Patent No. 338850, June 26, 2020)
- 5. Dr Sreedhar Gundekari of Chemistry on "Preparation of value added products by catalytic organic transformations of biomass derived levulinic acid with aromatics" (Indian Patent No: IN 350735, November 6, 2020)
- 6. Dr Ratansingh Atkar of EEE on "Artificial Intelligence Based Cooling System for Managing the Energy Efficiency" (Australian Patent No. 2021100960, May 12, 2021) valid for eight years.
- Dr Sreedhar Gundekari of Chemistry on "Eco-friendly process for hydrogenation or/and hydrodeoxygenation of organic compound using hydrous ruthenium oxidocatalyst" (USA Patent No: US 10954185 B2, March 23, 2021)
- Dr Banoth Mohan, Dr Mukuloth Srinivasnaik, B. Rajkumar, G. Sagar, A. Harish, U. Raghupathi, S. Raju of Mechanical Engineering, Dr K. Vinay Kumar (Electrical) on "Sliding Particles Solar Receiver" (Australian Patent No: 2021101791, May 26, 2021). Valid for eight years.
- Dr.Kumaraswamy Gandla, Department of Pharmacy, "A method for the treatment of immunological diseases using Nano particles" (Australian Patent No: 2021107029, 1st December 2021). Valid for eight years.
- 10. Dr.Kumaraswamy Gandla, Department of Pharmacy, " A NOVEL COMPOSITION FOR THE TREATMENT OF TUBERCULOSIS (EINE NEUE ZUSAMMENSETZUNG ZUR BEHANDLUNG VON TUBERKULOSE)" (German Patent No: 202022102137, 28/04/2022).

- 11. Dr.Kumaraswamy Gandla, Department of Pharmacy, "Machines for development and, Production of solid pharmaceutical products" (Indian Patent No: 367267-001, 04/01/2023).
- 12. Dr.Kumaraswamy Gandla, Department of Pharmacy, "Wearable instruments for Measuring bio-signals from the body " (Indian Patent No: 367352-001, 16/12/2022).
- 13. Dr.Kumaraswamy Gandla, Department of Pharmacy, "Pharmacological apparatus to determine the learning memory behavior of experimental rat " (Indian Patent No: 363026-001, 18/10/2022).
- 14. Dr.Kumaraswamy Gandla, Department of Pharmacy, "Automated device for Biological samples and analytical detection " (Indian Patent No: 368895-001, Accepted 02/10/2022).
- 15. Dr.Kumaraswamy Gandla, Department of Pharmacy, " Chemotherapy therapy care device for tumor patient " (German Patent No: 202022106523, 29/11/2022).
- 16. Dr.Kumaraswamy Gandla, Department of Pharmacy, " A system for classifying and diagnosis of breast cancer using mammographic images " (German Patent No: 202022100615, 08/03/2022).
- 17. Dr.Kumaraswamy Gandla, Department of Pharmacy, "Novel anti cancer agent that targeting cancer cells " (German Patent No: 202022104806, 08/09/2022).

### **Patent Publications:**

- 1. Dr Ch. Sathvika of Bio-technology on "Isolation and Characterization of Anticancer Compound from Sesuvium Portulacastrum (L.), (Indian Patent No. 201941007336, February 25, 2019).
- Prof A. Raju of Physics & Electronics on "Experimental Analysis of Natural Composites Materials" (Indian Patent No. 202141000427, February 26, 2021)
  Dr. Gundekari Sridhar of Chemistry on "A Process for the Preparation of Gama Y-valeorlactone by Catalytic Hydrogenation of Levulinic Acid Using Ru-based Catalysts" (USA Patent No. US10221149B2, March 5, 2019)
- 4. Dr Gundekari Sridhar of Chemistry on "An Echo-Friendly Process for Hydrogenation or/and Hydrodeoxygenation of Organic Compounds Using Hydrous Ruthenium Oxide" (USA Patent No. 0084918A1, March 21, 2019)
- 5. Dr Gundekari Sridhar of Chemistry on "Preparation of Value-Added Products by Catalytic Organic Transformations of Biomass Derived Levulinic Acid with Aromatics" (Indian Patent No. 2016 11023585, July 11, 2016)
- 6. Prof Jagadeesh Kumar Ega of Chemistry on "Design and Implementation of Smart Air Quality Detection System Based on IOT" (Indian Patent No. 202121018506A, May 7, 2021)

- Prof Jagadeesh Kumar Ega of Chemistry on "Deep Learning Based Detection of Abnormality Scenarios for Computer Vision-Based Har Systems" (Indian Patent No. 202141024137A, June 26, 2021)
- Prof. Jagadeesh Kumar Ega Professor of Chemistry, under Collaborative Interdisciplinary Research entitled "Machine Learning and IOT Based Smart Wearable System for Autonomous Management of Diabetes Mellitus" (Indian Patent No: 202141030571A, July 16, 2021)
- Mr B. Rajkumar of Mechanical Dept on "Solar Power Based Robotic Autonomous Vehicle Using Raspberry PI with Live Streaming Using IOT Control" (Indian Patent No: 2020 41028499, July 4, 2020)
- Dr T. Anvesh and Dr G. Santosh Reddy of ECE has an Indian Patent on "A Novel Automatic Sleep Staging Features Analysis Using Machine Learning" (Indian Patent No. 2021 41026196A, June 25, 2021)
- Prof V. Mallikarjun of Pharmacy on "Synthesis of N-Substituted Benzylidene-1H-Pyrazolo (3, 4-D) Pyrimidin-4-Amine" (Indian Patent No: 201841032284B, September 7, 2018)
- 12. Mr Kanjarla Narasimha of Pharmacy on "Ayurvedic Herbal Formulation for Infertility" (Indian Patent No. 2021 41025016A, June 11, 2021).
- Mrs M. Aravinda of Commerce and Business Management on "Virus Killer Liquid Herbal Disinfectant (Liquid Powder) for Pandemic Condition" (Indian Patent No. 2020 41028094, July31, 2020)
- Dr. Rajender Boini of EEE on "Scalable Multisensor Networking Protocol to Interface Upcoming Internet of Everything (IoE) Devices." (Indian Patent ID: 202141035033 App.No: 2021 41035033A, Issue No: 33/2021, August 13, 2021)
- Prof G. Shankar and Ms B. Shoba Rani on "A System and Method for Data Encryption between IOT Devices and a Network Gateway" (Indian Patent No. 2021 41030003, July 16, 2021)
- Prof G. Shankar and Dr Seetharam Khetavath on "A System and Method for Analysing Biological Effects of Molecules Using Monte Carlo Method". (Indian Patent No. 2021 41031063, July 16, 2021)

- Dr Sreedhar Gundekari (with Kannan Srinivasan) on "A process for the preparation of Gamma-valerolactone by catalytic hydrogenation of levulinic acid using Ru-based catalysts" (European Patent No: EP 3204366 A1, August 16, 2017)
- Dr Sreedhar Gundekari (with Kannan Srinivasan) on "A process for the preparation of Gamma-valerolactone by catalytic hydrogenation of levulinicacid using Ru-based catalysts" (World Patent No:WO 056030 Al, April 14, 2016)
- 19. Dr Sreedhar Gundekari (with Kannan Srinivasan) on "An eco-friendly process for hydrogenation or/and hydrodeoxygenation of organic compound using hydrous ruthenium oxide catalyst" (World Patent No: WO 060922 Al, April 13, 2017)
- 20. Ms M. Swapna of ECE on "A System and Method of Image-based Assay Using AI and Machine Learning" (Indian Patent No: 2021 41035988, August 13, 2021)
- 21. Dr Jella Kumaraswamy of Chemistry on "Tungsten oxide nano fiber sensors in agrohorticultural practices" (Indian Patent No: 202141034639, August 6, 2021)
- 22. Mr.A.Naveen of Physics and Electronics on "Early Failure Detection of Electric Vehicle Batteries Using Gas Sensors". (Indian Patent No: 2021 11033944, Sep 3, 2021)
- 23. Dr.G.Kumaraswamy Department of Pharmacy on " A method for estimation of Amlodipine in Human plasma by using LC-MS/MS " (Indian patent, 2021141104098A, 24/09/2021)
- 24. Dr.G.Kumaraswamy Department of Pharmacy "An HPLC Based Method determination of Impurities in Lansprazole"(Indian patent, 202141040233, Sep 6, 2021)
- 25. Dr. S. Suma & Dr. Siddoju Kavitha on "Novel Approach for Investigation and Synthesis of Non Linear Optical Crystal" (Indian Patent No: 202141040430A, Sep 10, 2021)
- 26. Prof. Jagadeesh Kumar Ega, Department of Chemistry, on "Artificial Intelligence Based Smart Touchless Medicine Dispensing System for Pharma Field" (Indian Patent No: 202141038793A, Sep 24, 2021)
- 27. Dr. J. Kumara Swamy of Chemistry on "Sustainable and Effective Treatment Technology for Removing Organic Pollutants in Waste Water Treatment Using Nanobubbles" (Indian Patent No: 202141040195), Sep 24, 2021.
- 28. Dr. Sunil Singarapu of ECE, CDU on "A High Frequency Oscillator Inverter with an Adjustable Reactance" (Indian Patent No. 202141035788, Aug 13, 2021.

- 29. Dr.Chada Prathyusha Reddy and Dr D. Ramakrishna Reddy of EEE Dept, CDU, on "Method of Minimizing the Harmful Radiation and Energy Consumption through Network Selection Scheme for Wireless Networks" (Australian Patent No.2021104153, Aug 25, 2021.)
- 30. Dr. V. Madhukar, Dr. E. Aravind, Mrs. V. Shobha Rani, Mrs. K. Deepthi, Mrs. K. Srilatha, Mr. V. Ramu, Mrs. K. Avanthi, Mrs. A. Sreelatha, Dr. D. Gopinath of Computer Science and Mathematics & Statistics, on "Women Security Using IOT-Based Intelligent Electronic Programmable Jewelry" (Indian Patent No. No.202141038604A, Sep 10, 2021.
- 31. Prof.Ponnala Rajender, Dr. K.Deepasri, Dr. G. Usha Sree, Narula Geeta, Aravinda Muddasani, Kinnera Venkateshwarlu, A. Vanaja, Srinivas Kathula, Avula Sunitha, Swapna Vanchanagiri of Commerce and Business Management on "Method And System For Assessing Impact Of Open Access E-Resources In Digital Education Using Artificial Intelligence" (Indian Patent No. No. 202141043323, Oct 01, 2021).
- 32. Prof Jagadeesh Kumar Ega of Chemistry on " Chemical structure based smart investigation of adverse drug reaction" (Indian Patent No. 202141053173 A, 04/12/21)
- 33. Prof. B. Hari Prasad, G. Uday, A. Rekha, G. Narmada and P. Sunitha of Mathematics and Statistics on "Method for Utilizing Mathematical models for analysis of data related to novel corona virus (Covid-19)" (Indian Patent No: 202141052476 A, December, 2021)
- 34. Prof Jagadeesh Kumar Ega of Chemistry on "Synthesis of e-waste based on machine learning & artificial intelligence autonomus management system for smart environment" (Indian Patent No. 202141044783, 15/10/21)
- 35. Dr Jella Kumaraswamy of Chemistry on "Photovoltaic Solar Thermal System with Nanofluid Cooling Medium" (Indian Patent No: 202141039082, 03/09/2021)
- 36. Dr Jella Kumaraswamy of Chemistry on " A novel medicinal energy beverage Composition and preparation method thereof" (Indian Patent No: 202141043589, 05/11/2021)
- 37. Dr Jella Kumaraswamy of Chemistry on "Nanoparticles Based Compositions having Nucleic acids and Cataionic Copolymers" (Indian Patent No: 202141052124, 26/11/2021)
- 38. Prof.Mallikarjun Vasam, Mrs.T.Hema Devi and Mr.G.Bhaskar of Pharmacy on "Prazosin chewable tablet and prepation there of" (Indian Patent No: 202141043520 A, 05/11/2021)
- 39. Dr.G.Kumaraswamy Department of Pharmacy on " A System and method for investigating adverse drug reaction " (Indian patent, 202114104121A, 01/10/2021)
- 40. Dr.G.Kumaraswamy Department of Pharmacy on " A method for quantifying doxycycline in human plasma using Minocycline as the Internal standard " (Indian patent, 202141042462A, 05/11/2021)

- 41. Dr.G.Kumaraswamy Department of Pharmacy on " A method for production of Cinnarizine Transdermal patch " (Indian patent, 20214104273A, 05/11/2021)
- 42. Dr.G.Kumaraswamy Department of Pharmacy on " A method for determination of impurities in rufinamide " (Indian patent, 202141044031A, 08/10/2021)
- 43. Dr.G.Kumaraswamy Department of Pharmacy on " A method for development and validation of dacarbazine using RP-HPLC method " (Indian patent, 202141046549A, 05/11/2021)
- 44. Dr.G.Kumaraswamy Department of Pharmacy on " A method for development and validation of anticoagulant drug using RP-HPLC method " (Indian patent, 202141046003A, 22/10/2021)
- 45. Dr.G.Kumaraswamy Department of Pharmacy on "Formulation and evaluation of sustained release microspheres of Aceclofenac " (Indian patent, 202141047228A, 05/11/2021)
- 46. Dr.G.Kumaraswamy Department of Pharmacy on " A mechanism of hydrophilic matrix based for controlling the release drug " (Indian patent, 202141047475A, 05/11/2021)
- 47. Dr.G.Kumaraswamy Department of Pharmacy on " Method for formulation and evaluation of anticonvulsant activity of Leaves extracts of albizia procera in animal model " (Indian patent, 202141048989A, 05/11/2021)
- 48. Dr.G.Kumaraswamy Department of Pharmacy on " A method for extraction of spondias pinnata fruit extract and evaluation of the antioxidant and antiulcer activity thereof " (Indian patent, 202141048988A, 05/11/2021)
- 49. Dr. Amarnath Velidandi, Department of Chemistry on "Synthesis of novel Hydrazinyl [1,3]-Thiazine derivatives" (Indian patent, 202141055004, 10-12-2021)
- 50. Dr E. Sai kiran, Department of Computer Science and Engineering on " Intelligent Plug and Play Point to Multipoint Internet of Things (IoT) Platform and Method of Managing the Same. " (Indian patent, 202241004105, 04/02/2022)
- 51. Dr T. Murali Krishna, Department of Biotechnology on " Substrate Composition Useful for Production of Alpha Amylase " (Indian patent, 202241005487 A, 11/02/2022)
- 52. Dr Mukuloth Srinivasnaik of Mechanical Engineering on "Effective Solar-Thermal Plant with Circulating SolarRadiation" Indian Patent No: 202241008727, 18/02/2022.
- 53. Dr Mukuloth Srinivasnaik of Mechanical Engineering on "Fully automatic commercial line vehicle assembly line system "Indian Patent No: 202241007000 A, 25/02/2022.

- 54. Dr Jella Kumaraswamy of Chemistry on " Metal Complexes and composition with novel Synthesis, characterization and properties of Binuclear Gold(I) phosphine Alkynyl Complexes " (Indian Patent No: 202241001883, 04/02/2022)
- 55. Dr Jella Kumaraswamy of Chemistry on " Isopropylation of Toluene By Using Fe/Al-Mcm-41 Microwave Method " (Indian Patent No: 202241005308, 11/02/2022)
- 56.Dr. Kumaraswamy Gandla, Department of Pharmacy, A method for extraction of spondias pinnata fruit extract and evaluation of the antioxidant and antiulcer activity Application No.202141048988 A PublicationDate : 04/03/2022, (Indian Patent).
- 57. Dr. Kumaraswamy Gandla, Department of Pharmacy, Preparation of formulation and evaluation of zolmitriptan immediate Release tablets Application No.202241008133A ; Publication Date : 04/03/2022, (Indian Patent)
- 58. Dr. Kumaraswamy Gandla, Department of Pharmacy, Method for estimation of lornoxicam in bulk drug and formulation using RP-HPLC; application no.202241008134A; publication date: 04/03/2022, (Indian Patent)
- 59. Dr. Kumaraswamy Gandla, Department of Pharmacy, Method for preparation and stability of different salts of sulfathiazole Using acids and ammonium compounds; Application No.202241008135A; Publication Date : 04/03/2022.(Indian Patent)
- 60. Dr Sirassu Narsimha of Chemistry on "BENZO[D]THIAZOLYL-SULFONYL-BENZO[4,5] ISOTHIAZOLO[2,3-C] [1,2,3]TRIAZOLE DERIVATIVES AND THEIR ANTIBACTERIAL ACTIVITY" (Indian Patent No: Application No.202241010173 A, Journal no: 09/2022, Dated 04/03/2022)
- 61. Dr. Bhaskar Juluru of Chemistry on " Design, Synthesis and biological evaluation of some novel 1,2,3-triazole Containing benzoxazole-pyrmidine derivatives " (Indian Patent No: 202241021403, 22/04/2022)
- 62. Dr.M.Aravinda on " Deep Reinforcement learning Method For Industry Returns And Stock market Returns ". (Indian Patent No.202241031341, 1/6/2022)
- 63. Dr Seetharam Khetavath on "HYBRID STORAGE ARCHITECTURE FOR IOT". (Indian Patent No. 202241033343A, 17/6/2022)
- 64. Prof Jagadeesh Kumar Ega of Chemistry on "MACHINE LEARNING & IOT BASED RENEWABLE ENERGY IN SMART GRIDS" (Indian Patent No. 202221032625, 7/22)

- 65. Prof. Beemagani Sreelatha, Dr. Ega Jagadish Kumar and Dr. Vennam Srilekha on " Greener Synthesis Of Ag Nanoparticles By Thermophilic Bacteria Bacillus Amyloliquefaciens And Its Application In The Degradation Of Methylene Blue " (Indian Patent No. 202241040974, 31/07/2022)
- 66. Prof Kavitha Siddoju and Dr. Jagadeesh Kumar Ega on " Two Component One Step Synthesis Of Indazoles " (Indian Patent No. 202241043133, 19/08/2022)
- 67. Prof Jagadeesh Kumar Ega of Chemistry on "Wearable Pregnancy Monitoring Apparatus to Collect Physiological Parameters" (Indian Patent No. 202241064840, 12/11/2022)
- 68. Prof Jagadeesh Kumar Ega of Chemistry on " Greener Synthesis of Ag Nanoparticles by Thermophilic bacteria Bacillus Amyloliquefaciens and its Applications " (Indian Patent No. 202241040974, 18/07/2022)
- 69. Prof Jagadeesh Kumar Ega of Chemistry on "Machine Learning & IOT based Renewable Energy in Smart Grid" (Indian Patent No. 202221032625, 07/06/2022)
- 70. Prof Jagadeesh Kumar Ega of Chemistry on " Two Component One Step Synthesis of Indazole " (Indian Patent No. 202241043133, 27/07/2022)
- Dr. Rajender Boini of EEE on "Artificial Intellegence and IOT Based electric vehicles monitoring system in smart cities using Deep Learning Algorithms " (Indian Patent ID: 202231057924A, 21/10/2022)
- 72. Dr. V. Madhukar of Computer Science, on "IMPACT OF LORAWAN ON PERFORMANCE OF CLOUD-BASED IOT PLATFORMS AND FOG COMPUTING" (Indian Patent No. No. 202241062480, 11/11/2022.
- 73. Prof V. Mallikarjun of Pharmacy on "Glyburide Tablet Formulation And Preperation Method Thereof" (Indian Patent No: 202241059553 A, 18/11/2022)

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