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Kishanpura, Hanamkonda, Warangal

MESSAGE

Over the past three decades Chaitanya Institutions have made steady and phenomenal progress in imparting quality education with several awards and accolades. Our vision is to take Chaitanya (Deemed University) (CDU) to greater heights with good digital governance and sound academic standards. Eventually, we want to make CDU a Center of Academic Excellence with creativity, productivity and accountability for knowledge society.

All our laboratories have state-of-the-art equipment and facilities. Modernizing and removing obsolete equipment are done from time to time. They meet the requirements of updated practicals designed for present-day demands. Students are trained in recent techniques keeping in view the job requirements in the industries and other sectors of today's world.

Our University is Research and Innovative driven one. The Management facilitates both the teachers and the students to present their research papers in seminars and symposia and also publication in national and international journals. The faculty members have already been granted three patents and published fourteen patents papers with eight inventions and innovations besides publishing 305 research papers during 2020-2021. Now there are 71 staff members with Ph.D. degrees. They have attended 2329 Seminars, Webinars and Virtual Conferences.

Patents of the Staff

We are glad to state that our teachers have the following 10 Patents Granted and 43 Patent Publications, making a total of 53 as under:

Patents Granted

1. Prof. M. Ravinder of Chemistry on "Metal Complexes with Anti-Cancer Activity" (USA Patent No. US20100209537A1, 2010)
2. Dr Sreedhar Gundekari of Chemistry on "Process for the preparation of Gamma-valerolactone 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 γ -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.
7. Dr Sreedhar Gundekari of Chemistry on "Eco-friendly process for hydrogenation or/and hydrodeoxygenation of organic compound using hydrous ruthenium oxide catalyst" (USA Patent No: US 10954185 B2, March 23, 2021)
8. 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 8 years.

Patent Publications

1. Dr Ch. Sathvika of Bio-technology on "Isolation and Characterization of Anticancer Compound from Sesuvium Portulacastrum (L.)L., (Indian Patent No. 201941007336, February 25, 2019).
2. Prof A. Raju of Physics & Electronics on "Experimental Analysis of Natural Composites Materials"

3. Dr Gundekari Sridhar of Chemistry on "A Process for the Preparation of Gamma-valerolactone 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 Eco-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. 201611023585, 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)
7. 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)
8. 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)
9. 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: 202041028499, July 4, 2020)
10. Dr T. Anveshand, Dr G. Santosh Reddy of ECE has an Indian Patent on "A Novel Automatic Sleep Staging Features Analysis Using Machine Learning" (Indian Patent No. 202141026196A, June 25, 2021)
11. 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. 202141025016A, June 11, 2021).
13. Mrs M. Aravinda of Commerce and Business Management on "Virus Killer Liquid Herbal Disinfectant (Liquid Powder) for Pandemic Condition" (Indian Patent No. 202041028094, July 31, 2020)
14. Dr. Rajender Boini of EEE on Scalable Multisensor Networking Protocol to Interface Upcoming Internet of Everything (IoE) Devices. (Indian Patent ID: 202141035033 App.No: 202141035033A, Issue No: 33/2021, August 13, 2021)
15. 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. 202141030003, July 16, 2021)
16. 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. 202141031063, July 16, 2021)
17. 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)
18. 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" (World Patent No: WO 056030 A1, 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 A1, 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: 202141035988, August 13, 2021)

All our 291 research scholars of the PhD program are enthusiastic to pursue their research seriously from the date of joining their research program due to our research facilities, fortnightly review meetings. All the 71 supervisors are uploading screenshots of their meetings with details in the CDU Research Group. The research scholars are submitting their monthly progress reports and finally a yearly consolidated report to the Dean, Research and Development. Within ten months of joining the PhD program, our 141 research scholars of the first batch have published 54 Research Papers in refereed journals. The faculty have attended 2329 Seminars, Webinars and Virtual Conferences. We have so far conducted 18 national and international webinars, 45 UKTI sessions and 60 standard quizzes covering all branches.

Best Paper Publication Award

Our University instituted the Best Paper Publication Award (BPPA) to encourage high impact factor papers with original ideas, and the Best Book Publication Award (BPPA) to promote serious and sustained academic work. Four CDU faculty members (Dr Ch Sathvika, Dr T Narasimha Swamy, Prof. B Hari Prasad and Dr G Vamshikrishna) were chosen to receive Chaithanyam-2020 Best Publication Award (with a cash prize and a certificate) last year on 72nd Republic Day. This year Prof M. Sunder Ram (Maths), Dr S. Narasimha (Patent in Chemistry), Dr N. Satish (Chemistry), Dr G. Kumara Swamy (Patent Granted in Pharmacy) and Prof V. Mallikarjun (Pharmacy for Publication). We hope these awards will create healthy competition promoting serious and sustained academic work on the campus.

Faculty Development Program

The Department of Pharmacy organized a five-day National Virtual Faculty Development Program on a current topic titled "*COVID-19 & GLOBAL HEALTH*". More than 400 academicians, teachers, researchers, and pharmacy students took part in the FDP during July 16-21, 2021.

Workshop

Prof G. Damodar conducted a Workshop in English to the faculty of Pharmacy and Engineering for three days to improve their communication skills in English.

International Conference

We conducted a mega international conference on Disciplinary, Interdisciplinary, and Multidisciplinary Research-2020-2021. (IVC-DIMR 20-21) during October, 14 & 15, 2021 with the thrust areas of Ecology, Culture, Language, Education, Communication, Technology, Innovation, Collaboration (ECLECTIC), fully supported by some Scopus-Index Journals in collaboration with Research India Foundation (RIF), a Government of India approved research foundation in India.

Video Lessons on YouTube

We have so far uploaded about a hundred video lessons by the faculty of CDU on all branches of learning on our YouTube Channel.

Ten MoUs

We have MoUs with

- Four Reputed State Universities of the USA;
- In India, TCS for the Introduction of Academic Interphase Programs, B.Sc. with Cognitive Systems and B.Com. with Business Process Management;
- IBM to offer its popular courses for B.Tech (CSE and ECE), MBA, MCA, BBA and BCA with internationally recognized certifications for global placements. CDU is one among nine universities selected in India.
- Indian Institute of Chemical Technology (IICT) Hyderabad, and Council of Scientific Industrial Research (CSIR) Lab, Government of India to offer nanotechnology courses;
- Hindustan BEC Tech Pvt Ltd, Punjab, Dept of Scientific and Industrial Research (DSIR) recognised R&D Laboratory;
- Board of Apprenticeship Training (SR), Chennai;
- Center of Sustainable Agriculture (CSA), Hyderabad, Tesla Diagnostics, Hyderabad, VCARE Bio Labs, Sri Laxmi Nursing Home and Ajara Health and Medicare Pvt. Ltd.

Research Plans

We have plans to start Atal Chaitanya Incubation and Innovation Centre involving Engineering, Pharmacy, and other departments on thrust areas of farming, app development, manufacturing, etc. We are planning for BIRAC under Bio-Nest in collaboration with University of Hyderabad involving the departments of Biotechnology, Micro-biology, Bio-chemistry, Chemistry, Maths, Computer Science, Engineering Pharmacy, on thrust areas of agriculture, poultry, animal husbandry, food processing and value addition, bio-medical engineering, etc. We were shortlisted for DBT Skill Vigyan Program monitored by TSCOST. We have submitted DBT Builder Program for financial assistance involving all the departments of science. We have also submitted proposals for CRG, Startup Grants and Matrix under SERB-DST. Departments of Engineering, Pharmacy, Computer Science, Commerce and Business Management have submitted Research Project Scheme (RPS) under AICTE Program. We have successfully conducted second PhD Eligibility Test and admissions are in process.

Our Inventions and Innovations

Our Mechanical Engineering faculty, Dr Srinivas Naik, Mr Harish and Mr Santhosh, have converted a petrol engine car into a battery operated eco-friendly electric car without gears. A motor of 48 volts, 700 watts and 500 rpm has been replaced with an engine of Maruti 800 car. The weight of the engine was reduced by removing the gearboxes. The motor is connected to the drive shaft by a chain. The vehicle runs at a speed of 60 kmph. The car is economical and it costs just 20 paise per km. The conversion of the car costs two lakh rupees. Coming to other innovations, a unique Chaitanya App was designed by Prof. G. Shankar Lingam and Mr. K. Praveen in 2020 for attendance, results, timetables and general information. Our mechanical branch staff has designed a solar bike and agri-cultivators. A cost-effective electronic bike has been designed by Mr G. Sagar. A digital electronic clock was designed by Dr Santhosh Reddy of ECE. The wing of ECE has also designed a Digital Display Board and devised Easy Vehicle Lifting Mechanism. The process of making transparent mementoes with a special material is in the pipeline.

Chaitanya At-Home-Library

Students have access to massive open online courses in MP3 format based on MHRD model MOOCS, Commonwealth Education Services, cec.nic.in for all lessons. As students do not have access to the physical library due to Pandemic, a Digital Library called "*Chaitanya At-Home-Library*" was launched. It is a new initiative with all prescribed e-books made available with the efforts of the Faculty on our University Website and on Chaitanya App. We have procured URKUND Anti-Plagiarism Check Software from UGC.

Way Forward

We are committed and dedicated to our vision and mission and constantly evolve ourselves to the future needs and impart education that makes the world a better place to live in. Our syllabus is skill-based and industry focussed with contemporary curriculum, choice-based credit system (CBCS) and continuous assessment and grading pattern (CAGP). We always remember our core vision of empowering our future generations to be morally, ethically and intellectually strong with LOCF and following some provisions of National Education Policy 2020.

Social outreach programs, eco-friendly environment, diversified student community, education scholarships for deserving and meritorious students, internal quality assurance, enriching projects and internships, corporate linkages, global alumni network, learning management system, highly accomplished faculty members and levitating research culture are some of our salient features.

I am glad to know that the Department of Microbiology under the scholarly guidance of Prof B. S. Anuradha, Prof. S. Jeevan Chandra, Editor, is bringing out this maiden issue of Journal of Bioscientia. I compliment him and the members of the Advisory Board for their guidance, members of the Editorial Board for their review, and the contributors for their contributions.