# Genomics & Proteomics Research Centre

"Unlocking life's Blueprint : Advancing Genomics and Proteomics for future Biotrendz"



Dr. M. Janaki Ramaiah Professor

### **INTRODUCTION**

Through state-of-the-art technologies and interdisciplinary approaches, we aim to unlock the mysteries of genetic and proteomic networks that drive biological function and disease.

### **OUR MISSION**

Our mission is to explore and understand the intricate details of genetic and protein structures, functions, and interactions.

### FACILITIES

Cancer metabolism, Epigenetics, In silico

### studies for COVID-19, TB, RNA motiffs, G Quadruplexes, Transcription, Protein Studies.



# (Deemed to be University estd, u/s. 3 of the UGC Act, 1956) (NAAC Accredited \*A" Grade University)

KONERU LAKSHMAIAH EDUCATION FOUNDATION

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## Objectives

**1.**Understanding genetic, epigenetics aspects of various cancers

**2.** In depth investigation of proteomic modifications in brain, breast and Blood cancers

**3.** Molecular aspects of cancer disease diagnosis via miR-lncRNA expression in patient

samples

**4.** Methods to investigate the microbial pathogenesis by proteomics and genomics approach.

### **Research Center**

Utilizing next-generation sequencing, mass spectrometry, and bioinformatics, we delve into the complexities of genomics and proteomics to unlock new insights in personalized medicine and disease mechanisms. Our lab is equipped with nextgeneration sequencing platforms, high-resolution mass spectrometers, and sophisticated bioinformatics tools, enabling us to delve deep into the realms of genomics and proteomics. Through comprehensive genetic and proteomic analyses, we aim to uncover the intricate mechanisms driving health and disease, paving the way for groundbreaking advancements in personalized medicine, diagnostics, and

### therapeutic development.

#### **Contact Details:**

Dr. M. Janaki Ramaiah, Professor & Head of Genomics and Proteomics Research Group, Department of Biotechnology Koneru Lakshmaiah Education Foundation(Deemed to be University), Green Fields, Vaddeswaram, Guntur, A.P., India PIN 522302

### **Research Group Head**



Dr. M. Janaki Ramaiah was born and brought up in Andhra Pradesh. He completed his Doctoral Research and Master's in Molecular Cell Biology and Fundamentals of Molecular Biology and genetic Engineering from CCMB /JNU and GBPUA&T respectively. Currently, he is working as a Professor & Head of the Genomics and Proteomics Research Group in Dept. of Biotechnology. He has a career experience of 20+ years and 95 international publications his credit. His current include research areas to understanding the link b/w genetic and epigenetic changes in brain and breast cancer. He has completed projects from SERB, DST, and DBT. Dr. Ramaiah has also been chosen as world's top 2% scientists for 3 consecutive years.

### **AWARDS AND RECOGNITIONS**

- INSO-2022 (OUTSTANDING RESEARCHER AWARD), 2022
- ICMR-DHR SENIOR SCIENTIST AWARD-2022 to 2023
- BEST RESEARCHER IN KL DEEMED TO BE UNIVERSITY-2022,2023

### **Research Interest**

Link b/w genetics and epigenetics in cancers

### **Team Members**



Dr. B. Srinivas has completed his Master's genetics Human from Andhra in University and doctoral in genetics from Osmania University. He obtained PDF from Kawsaki Medical School, Okayama, Japan. He is currently working as а professor in associate Dept. of Biotechnology at KLEF, Vaddeswaram. He has 40 publications to his credit.

**Dr. S. Ragini** has completed her Master's in Biotechnology from Devi Ahalya University and doctoral in nanobiotechnology from Ahmedabad University. She is currently working as an associate professor in Dept. of Biotechnology at KLEF, Vaddeswararm. She has 65+ publications to her credit.





**Dr. Y. V. Rajesh** has completed his Master's in Biochemistry from Andhra University and doctoral in Computational biology from Indian institute of Science. He is currently working as a assisstant professor in Dept. of Biotechnology at KLEF, Vaddeswaram. He has 35+ publications to his credit.

### **Team Members**



**Dr. S. Nadeem** has completed his Master's and doctoral from National Institute of Technology, Rourkela. He obtained PDF from NIT Warangal. He is currently working as a associate professor in Dept. of Biotechnology at KLEF, Vaddeswaram. He has 25+ publications to his credit.

**Dr. S. P. Mallick** has completed his Master's in Biotechnology from National Institute of Technology, Rourkela and doctoral from Indian institute of Technology, Varanasi (BHU). He is currently working as a assisstant professor in Dept. of Biotechnology at KLEF, Vaddeswaram. He has 22+ publications to his credit.





**Dr.B.V.L.S. Prasad** has completed his Master's and doctoral from SLS, UoHyd and PhD from MBU, IISc, Bangalore. He obtained PDF from University of California, San Diego (UCSD). He is currently working as a professor in Dept. of Biotechnology at KLEF, Vaddeswaram. He has 40+ publications to his credit.

### **Research Scholars**

The center provides an opportunity for 4 full-time scholars a PDF (Dr. Sk. Chand Basha) with college-funded monthly fellowships over 3 years. This will also enable meritorious researchers, keen to further their research in various fields. The center also provides 4 part-time scholars working in the KLEF and other colleges and gives immense support to develop everyone in Genomics and proteomics Research areas.

### **Full-Time Scholars**

Ms. Sahiti Chamarthy Ms. Chandrika Gummadi Ms. Mangal Kadam Mr. Partha Sarathi Sahoo

### **Part-Time Scholars**

Ms. Leela Talluri Ms. Abha Rashmi Z Rewaria Vinay Nayab Rasool Dudekula

### 12+ Scholars have been awarded with Ph.D. degree since the Establishment of the center and are placed in prestigious companies and colleges

### **Funded Projects**

 1.Project Title: Drug designing against Tuberculosis targeting a novel protein from M. Tuberculosis - N2G966 rRNA methyltransferase (RsMD)"
 Principal Investigator: Dr Burra V L S Prasad
 Sanction Amount: Rs 18,29,000/ Duration: 2.5 Years
 Sponsor: ICMR

2.Project Title: Insilico Drug designing against Tuberculosis targeting a novel protein from M. Tuberculosis - N2G966 rRNA methyltransferase (RsMD)
Principal Investigator: Dr Burra V L S Prasad
Sanction Amount: Rs 3,16,000/Duration: 2.5 Years
Sponsor: ICMR

3.Project Title: Sustainability Assessment of Food Packaging
Principal Investigator: Dr. Sarada Prasanna Mallick
Sanction Amount: Rs 20,000/Duration: 1 Year
Sponsor: Basil Pizzeria Pvt. Ltd.

4.Project Title: Chemical Corrosion monitoring of heavy machines made by iron
Principal Investigator: Dr. Burra Venkata Laxmi Siva Prasad
Sanction Amount: Rs 18,000/Duration: 1 Year
Sponsor: S S Traders

5.Project Title: Genomic Analysis of Drug Resistance in Infectious Diseases
Principal Investigator: Dr. Yella Venkata Rajesh
Sanction Amount: Rs 21,000/Duration: 1 Year
Sponsor: Aquara Infotech

Project Title: Analysis of Finite Elements in Computational Biomechanics
Principal Investigator: Dr. Nadeem Siddiqui
Sanction Amount: Rs 18,000/Duration: 1 Year
Sponsor: S A S Solutions

Project Title: Design and Development a statistical scoring system against a library of Multi-Epitope based Peptide (MEBP) vaccine constructs to identify best vaccine candidates
Principal Investigator: Dr. Burra V L S Prasad
Sanction Amount: Rs 20,36,000/Duration: 2 Years
Sponsor: DST/NSM

Project Title: Poultry Feed Optimization for Cost Reduction
Principal Investigator: Dr. M Janaki Ramaiah
Sanction Amount: Rs 35,000/Duration: 1.5 Year
Sponsor: Genesis Biosciences IBRC

Project Title: Assessment of Green Energy Options for Energy Efficiency
Principal Investigator: Dr. M Janaki Ramaiah
Sanction Amount: Rs 24,000/Duration: 1 Year
Sponsor: Rock Heights Infra Pvt. Ltd.

Project Title: Characterization of semiconductor organic compounds from waste computer hardware.
Principal Investigator: Dr. Burra Venkata Laxmi Siva Prasad
Sanction Amount: Rs 24,000/Duration: 1 Year
Sponsor: J P Engineering Corporation

Project Title: Development and Characterization of Chitosan Scaffold for Bone Tissue Engineering
Principal Investigator: Dr. Nadeem Siddiqui
Sanction Amount: Rs 25,000/Duration: 1 Year
Sponsor: R. V. Labs

Project Title: AI-based Community Health Education and Disease Prevention System
Principal Investigator: Dr. Yella Venkata Rajesh
Sanction Amount: Rs 24,000/Duration: 1 Year
Sponsor: Aquara Infotech

Project Title: Delineation of DNA structural features of various promoter categories in eukaryotes in an in-silico approach
Principal Investigator: Dr. Yella Venkata Rajesh
Sanction Amount: Rs 11,84,000/Duration: 3 Years
Sponsor: SERB

Project Title: Study the corrosion of iron in microbial environment Principal Investigator: Dr. Nadeem Siddiqui Sanction Amount: Rs 19,000/-Duration: 1 Year Sponsor: R G Industries

Project Title: Food Waste Reduction and Resource Optimization in Local Food Supply Chains
Principal Investigator: Dr. Sarada Prasanna Mallick
Sanction Amount: Rs 25,000/Duration: 1 Year
Sponsor: Akshay Bhaskar Incorporation

Project Title: Community-based Waste Management and Recycling Initiative
Principal Investigator: Dr. Nadeem Siddiqui
Sanction Amount: Rs 24,000/Duration: 1 Year
Sponsor: Aquara Infotech

**Project Title:** Sustainable Agriculture Solutions for Smallholder Farmers **Principal Investigator:** Dr. Bandaru Srinivas

Sanction Amount: Rs 24,000/-Duration: 1 Year Sponsor: Hari Sai Enterprises Project Title: Development of an Eco-Friendly Cleaning Agent Principal Investigator: Dr. Yella Venkata Rajesh Sanction Amount: Rs 24,000/-Duration: 1 Year Sponsor: Sri Azhagu Murugan Home Appliances

Project Title: Development of moisture monitoring system and its optimization and validation
Principal Investigator: Dr. Sarada Prasanna Mallick
Sanction Amount: Rs 24,000/Duration: 1 Year
Sponsor: Aquara Infotech

Project Title: Structure determination and analysis of native, hybrid, mutant mycobacterial RecA and c-di-AMP complexes to develop novel allosteric inhibitors against Mycobacterium tuberculosis
Principal Investigator: Dr. Burra V L S Prasad
Sanction Amount: Rs 10,00,000/Duration: 2 Years
Sponsor: SEB-CRG

Project Title: Design and evaluation of Gelatin and Boiled Starch based composite hydrogels for energy applications
Principal Investigator: Dr. Sarada Prasanna Mallick
Sanction Amount: Rs 24,000/Duration: 1 Year
Sponsor: Jayram Industries India Pvt Ltd

Project Title: Drug designing against Tuberculosis targeting a novel protein from M. Tuberculosis - N2G966 rRNA methyltransferase (RsMD)
Principal Investigator: Dr Burra V L S Prasad
Sanction Amount: Rs 3,45,000/Duration: 2.5 Years
Sponsor: ICMR

Project Title: Structure determination and analysis of native, hybrid, mutant mycobacterial RecA and c-di-AMP complexes to develop novel allosteric inhibitors against Mycobacterium tuberculosis.
Principal Investigator: Dr. Burra V L S Prasad
Sanction Amount: Rs 10,00,000/Duration: 3 Years
Sponsor: SERB-CRG

Project Title: Delineation of DNA structural features of various promoter categories in eukaryotes an in-silico approach
Principal Investigator: Dr. Venkata Rajesh Yella
Sanction Amount: Rs 4,00,000/Duration: 3 years
Sponsor: SERB

Project Title: Optimization and validation of method for computational biology
Principal Investigator: Dr. Nadeem Siddiqui
Sanction Amount: Rs 22,000/Duration: 1 Year
Sponsor: S A S Solutions

Project Title: Sustainable Textile Dyeing Processes Optimization
Principal Investigator: Dr. Sarada Prasanna Mallick
Sanction Amount: Rs 23,000/Duration: 1 Year
Sponsor: Handlooms India

Project Title: Structure determination and analysis of native, hybrid, mutant mycobacterial RecA and c-di-AMP complexes to develop novel allosteric inhibitors against Mycobacterium tuberculosis Principal Investigator: Dr. B V L S Prasad Sanction Amount: Rs 14,57,000/-Duration: 2 Years Sponsor: SERB-CRG Project Title: Delineation of DNA structural features of various promoter categories in eukaryotes an in-silico approach
Principal Investigator: Dr. Y.V. Rajesh
Sanction Amount: Rs 2,50,000/Duration: 3 Years
Sponsor: SERB

Project Title: Waste Reduction and Recycling Strategies for Residential Communities
Principal Investigator: Dr. Yella Venkata Rajesh
Sanction Amount: Rs 16,000/Duration: 1 Year
Sponsor: Akkineni Developers





### **Gel Illuminator**



A gel illuminator is a device commonly used in molecular biology and biochemistry labs to visualize DNA, RNA, or protein samples separated by gel electrophoresis. It works by illuminating the gel, often using UV light, to excite fluorescent dyes or stains bound to the samples, making them visible to the naked eye or through a camera. This visualization helps in analyzing the size and

quantity of nucleic acids or proteins in the samples. The principle of a gel illuminator, often known as a transilluminator, involves using a specific wavelength of light to excite fluorescent dyes bound to molecules within a gel matrix. A gel illuminator uses UV or blue light to excite fluorescent dyes in DNA, RNA, or protein samples within a gel, making them visible for analysis.

## <u>UV Trans Illuminator</u>



A UV transilluminator is a device used in labs to visualize DNA, RNA, or proteins in a gel stained with fluorescent dyes. It emits UV light to excite the dyes, causing them to fluoresce, which allows the bands in the gel to be seen and analyzed.

**Principle:** The device shines UV light onto the gel, exciting the fluorescent dye molecules. These molecules then emit visible light, revealing the location and intensity of the stained samples within the gel



### <u>Power Blotter</u>



A power blotter is a device used in molecular biology for transferring nucleic acids (DNA or RNA) or proteins from a gel onto a membrane, such as nitrocellulose or PVDF, in a process known as blotting. This device ensures a uniform and efficient transfer by providing a consistent electric field across the gel and membrane assembly. Power blotters are designed to be faster and more efficient than traditional methods, reducing the transfer time significantly.

Principle: The device generates an electric field that

drives the negatively charged molecules from the gel onto a positively charged membrane. This process, known as electrophoretic transfer, allows for subsequent detection and analysis of the molecules on the membrane.



Polymerase Chain Reaction (PCR) is a widely used technique in molecular biology to amplify specific DNA sequences, making millions of copies from a small initial sample. This method is crucial for various applications, including genetic research, medical diagnostics, and forensic science.

Principle: PCR involves repeated cycles of denaturation (heating the DNA to separate strands), annealing (cooling to allow primers to bind to target sequences), and extension (synthesizing new DNA strands with DNA polymerase). Each cycle doubles the amount of target DNA, leading to exponential amplification.



## **CO2 Incubator**



A CO2 incubator is a device used in cell culture laboratories to maintain an optimal environment for the growth of cell cultures. It precisely controls temperature, humidity, and CO2 levels to mimic the natural conditions of mammalian cells, promoting healthy and consistent cell growth.

Principal: The incubator regulates temperature using a heating system, maintains humidity through a water reservoir, and controls CO2 levels by injecting CO2 gas. The CO2 concentration is crucial for maintaining the pH of the culture medium, which typically contains a bicarbonate buffer system.



## **Inverted Microscope**



An inverted microscope is designed to observe cell cultures, tissues, and other samples from below. Unlike conventional microscopes, the light source and condenser are located above the stage, while the objective lenses are below, allowing for the examination of samples in larger containers, such as petri dishes and culture flasks.

**Principle:** The inverted microscope uses a light source to illuminate the sample from above. The light passes through the sample, and the objective lenses below the stage capture the image. This setup allows for the observation of live cells and organisms in their natural, undisturbed environment, facilitating studies in cell biology and microbiology.

## **Biological Safety Cabinet**



An inverted microscope is designed to observe cell cultures, tissues, and other samples from below. Unlike conventional microscopes, the light source and condenser are located above the stage, while the objective lenses are below, allowing for the examination of samples in larger containers, such as petri dishes and culture flasks. Principle: The inverted microscope uses a light source to illuminate the sample from above. The light passes through the sample, and the objective lenses below the stage capture the image. This setup allows for the observation of live cells and organisms in their natural, undisturbed environment, facilitating studies in cell biology and microbiology.

### **Events**

- An international conference sponsored by DST-SERB on Current Sustainable Agricultural, Biotechnological, Nutritional, and Pharmaceutical Interventions to Combat Global Challenges was organized from 19th to 21st December 2023.
- Symposium cum Hands-on workshop on In silico MEBP Vaccine design sponsered by DST-NSM was organised on 10th-12th, May 2023.



## **Publications**



1. MLDSPP: Bacterial Promoter Prediction Tool Using DNA Structural Properties with Machine Learning and Explainable AI

Cite this Research Publication: Paul, S., Olymon, K., Martinez, G.S., Sarkar, S., Yella, V.R., Kumar, A

Publisher: Journal of Chemical Information and Modeling

doi: 10.1021/acs.jcim.3c02017 **ISSN:** 1549-960X Impact factor: 5.6 Vol:64 Issue:7 **PP**: 2705-2719

2.Laser-Induced Graphene-Based Fabry-Pérot Cavity Label-Free Immunosensors for the Quantification of Cortisol.

Cite this Research Publication: Gomes, Hugo & Liu, Xuecheng & Fernandes, Antonio & Moreirinha, Catarina & Singh, Ragini & Kumar, Santosh & Costa, Florinda & Santos, Nuno F. & Marques, C.A.F..

**Publisher:** Sensors and Actuators Reports doi: 10.1021/acs.jcim.3c02017 **ISSN:** 0925-4005 **Impact factor:** 6.5 **Vol:**7 **PP**:100186

3. Development of WaveFlex Biosensor for Rapid Detection of Glyphosate Herbicide in Real **Agricultural Products.** 

Cite this Research Publication: Zhang, Qi & Gu, Chaofan & Singh, Ragini & Zhang, Bingyuan & Kumar, Santosh Publisher: IEEE Sensors Journal. doi: 10.1109/JSEN.2024.3380601. **ISSN:** 1558-1748 **Impact factor:** 4.3 **PP**: 1-1

4.ZnO-NWs/WS 2 -Thin Layer Functionalized TST-based WaveFlex Biosensor for Rapid **Detection of Food Spoilage Cite this Research Publication:** Wang, Ruotong & Xiao, Lucan & Fu, Qianqian & Singh, Ragini & Xie, Yiyan & Zhang, Bingyuan & Kumar, Santosh. Publisher: IEEE Sensors Journal <u>doi:</u> ·10.1109/JSEN.2024.3400410. **ISSN:** 1558-1748 Impact factor: 4.3 **PP:** 1-1

5.Gold Nanoparticle-Coated Magnetic Graphene Oxide as a Dual-Mode
Immunochromatographic Biosensor for Enrofloxacin Residue Analysis in Food Samples
Cite this Research Publication: Fei Liu, Ragini Singh, Qinghua Zeng, Guoru Li, Rui Min, Bingyuan
Zhang, and Santosh Kumar
Publisher: ACS Applied Nano Materials
doi: 10.1021/acsanm.4c00573
ISSN: 2574-0970
Impact factor:
Vol: 7 Issue: 9
PP: 10144-10154

#### 6.MWCNTs/CeO 2 -NRs-Functionalized WaveFlex Biosensor for Alkaline Phosphatase Detection in Agricultural Food Crops.

**Cite this Research Publication:** Wang, Shuai & Liu, Fei & Singh, Ragini & Zhang, Bingyuan & Kumar, Santosh

Publisher: IEEE Sensors Journal doi: 10.1109/JSEN.2024.3384304. ISSN: 1558-1748 Impact factor: 4.3 PP: 1-1

#### 7.Engineered Nanomaterials for Immunomodulation: A Review.

**Cite this Research Publication:** Singh, Ragini & Kumawat, Mamta & Gogoi, Himanshu & Madhyastha, Harishkumar & Lichtfouse, Eric & Daima, Hemant.

Publisher: ACS Applied Bio Materials doi: 10.1021/acsabm.3c00940 ISSN: 2576-6422 Impact factor: 4.81 Vol: 7 Issue: 2 PP: 727-751

#### 8.Mechanistic approaches for crosstalk between nanomaterials and plants: plant immunomodulation, defense, stress resilience, toxicity, and perspectives.

**Cite this Research Publication:** Singh, Ragini & Choudhary, Pinky & Kumar, Santosh & Daima, Hemant.

Publisher: Environmental Science: Nano

doi: 10.1039/D4EN00053F. ISSN: 2051-8153 Impact factor: 5.8 Vol: 11 PP: 2324-2351

#### 9.Epigenetic dysregulation in cancers by isocitrate dehydrogenase 2 (IDH2).

Cite this Research Publication: Nayarisseri, A., Bandaru, S., Khan, A., Sharma, K., Bhardwaj, A., Kaur, M., Ghosh, D., Chopra, I., Panicker, A., Kumar, A., Saravanan, P., Belapurkar, P., Mendonça Junior, F. J. B., & Singh, S. K. Publisher: Advances in protein chemistry and structural biology doi: https://doi.org/10.1016/bs.apcsb.2023.12.012 ISSN: 1876-1631 Impact factor: 5.4 Vol: 141 pp:223-253

#### 10.Inhibitory effect of Nifedipine on aldose reductase delays cataract progression.

Cite this Research Publication: Devi, A. M., Sankeshi, V., Ravali, A., Bandaru, S., Theendra, V. K., & Sagurthi, S. R. Publisher: Naunyn-Schmiedeberg's archives of pharmacology, doi: https://doi.org/10.1007/s00210-023-02588-1 ISSN: 1432-1912 Impact factor: 3.1 Vol: 391 Issue: 1 pp: 161–171.

11.Computational identification and experimental validation of potential inhibitors of JAK1 kinase from natural source for the effective treatment of colorectal adenocarcinoma.

Cite this Research Publication: Ramalingam, Prasanna Srinivasan & Italiya, Gopal & Elangovan, Sujatha & Awdhesh, Rudra & Mishra, Kumar & Aranganathan, Mahalakshmi & Rajangam, Eswari & Sukumar, Nandhitha & Patel, Bonny & Ramaiah, Mekala & Subramanian, Sangeetha & Kumar, Siva.

Publisher: South African Journal of Botany doi: 10.1016/j.sajb.2024.06.028. ISSN: 0254-6299 Impact factor: 3.1 Vol: 171 pp:412-424



## 2023

## 12.Computational analysis on the dissemination of non-B DNA structural motifs in promoter regions of 1180 cellular genomes.

Cite this Research Publication: Yella, V.R., Vanaja, A. Publisher: Biochimie doi: https://doi.org/10.1016/j.biochi.2023.06.002 ISSN: 0300-9084. Impact factor: 3.3 Vol: 214 pp:101-111.

## 13.Novel sights on Therapeutic, Prognostic, and Diagnostics aspects of non-coding RNAs in Glioblastoma Multiforme .

Cite this Research Publication: Mekala, J. R., Adusumilli, K., Chamarthy, S., & Angirekula, H. S. R. Publisher: Metabolic Brain Disease doi: 10.1007/s11011-023-01234-2 ISSN: 0885-7490 Impact factor: 3.2 Vol: 38 Issue: 6 pp: 1801-1829.

## 14.Functional Importance Of Glucose Transporters, Chromatin Epigenetic FactorsIn Glioblastoma Multiforme (GBM): Possible Therapeutics.

Cite this Research Publication: Chamarthy, S., & Mekala, J. R. Publisher: Metabolic Brain Disease doi: 10.1007/s11011-023-01207-5 ISSN: 0885-7490 Impact factor: 3.2 Vol: 38 Issue: 5 pp: 1441-1469.

## 15.Mechanistic insights into TLR7-mediated clinicaloutcome in COVID-19and the potential modulatory role of N-acetylcysteine.

Cite this Research Publication: Naushad, S. M., Mandadapu, G., Ramaiah, M. J., Almajhdi, F. N., & Hussain, T. Publisher: Scientific Reports. doi: 10.21203/rs.3.rs-1920034/v1 ISSN: 2045-2322 Impact factor: 3.8

### 16.Role TREM2 and Microglia: A novel pathway in pathophysiology of Alzheimer's disease (AD). J of Alzheimer's Disease.

Cite this Research Publication: SK Chand Basha,, Mekala Janaki Ramaiah, and Jagannatha Rao Kosagisharafa, Publisher: Journal of Alzheimer's Disease doi:10.3233/JAD-221070 ISSN: 1387-2877 Impact factor: 3.4 Vol: 94 Issue: s1 pp:S319-S333

### 17.Viral-induced neuronal necroptosis: Detrimental to brain function and regulation by necroptosis inhibitors.

Cite this Research Publication: Panda, S. P., Kesharwani, A., Mallick, S. P., Prasanth, D. S. N. B. K., Pasala, P. K., & Tatipamula, V. B. Publisher: Biochemical Pharmacology doi: https://doi.org/10.1016/j.bcp.2023.115591 ISSN: 0006-2952 Impact factor: 4.960 Vol: 213 pp: 115591

#### 18.Epigenetic dysregulation in cancers by isocitrate dehydrogenase 2 (IDH2). ion of Cortisol.

Cite this Research Publication: Nayarisseri, A., Bandaru, S., Khan, A., Sharma, K., Bhardwaj, A., Kaur, M., Ghosh, D., Chopra, I., Panicker, A., Kumar, A., Saravanan, P., Belapurkar, P., Mendonça Junior, F. J. B., & Singh, S. K. Publisher: Advances in protein chemistry and structural biology, doi: https://doi.org/10.1016/bs.apcsb.2023.12.012 ISSN: 1876-1623 Impact factor: 5.447 Vol: 141 pp:223-253

#### 19. The role of TLR7 agonists in modulating COVID-19 severity in subjects with loss-of-function **TLR7** variants.

Cite this Research Publication: Naushad, S. M., Mandadapu, G., Ramaiah, M. J., Almajhdi, F. N., & Hussain, T. Publisher: Scientific reports, doi: https://doi.org/10.1038/s41598-023-40114-8 ISSN: 2045-2322 Impact factor: 3.8 Vol: 13 Issue: 1 pp: 13078

#### 20.Untangling the Role of TREM2 in Conjugation with Microglia in Neuronal Dysfunction: A Hypothesis on a Novel Pathway in the Pathophysiology of Alzheimer's Disease.

Cite this Research Publication: Basha, S. C., Ramaiah, M. J., & Kosagisharaf, J. R. Publisher: Journal of Alzheimer's disease doi: . https://doi.org/10.3233/JAD-221070 ISSN: 1387-2877 Impact factor: 4.472 Vol: 94 Issue: s1 pp: S319-S333.

### 2022

## 21.A new insight on Al-maltolate-treated aged rabbit as Alzheimer's animal model: a new approaching drug discovery

Cite this Research Publication: Chand Basha, M. Janaki Ramaiah, Jagannath Rao Publisher: J of neurochemistry doi: https://doi.org/10.1016/j.brainresrev.2006.04.003 ISSN: 0022-3042 Impact factor: 5.372 Vol: 52 Issue: 2 pp: 275-292

# 22.Synthesis, in vitro and structural aspects of cap substituted Suberoylanilide hydroxamic acid analogs as potential inducers of apoptosis in Glioblastoma cancer cells via HDAC /microRNA regulation.

Cite this Research Publication: Janaki Ramaiah Mekala Prasanna Srinivasan Ramalingam Sivagami Mathavan , Rajesh B R D Yamajala , Nageswara Rao Moparthi , Rohil Kumar Kurappalli , Rajasekhar Reddy Manyam

Publisher: Chemico-Biological Interactions doi: https://doi.org/10.1016/j.cbi.2022.109876 ISSN:0009-2797. Impact factor: 5.192 Vol: 357 Issue: 25

#### 23.Delineation of the DNA Structural Features of Eukaryotic Core Promoter Classes.

Cite this Research Publication: Vanaja, A., & Yella, V. R. Publisher: ACS omega doi: https://doi.org/10.1021/acsomega.1c04603 ISSN: 2470-1343 Impact factor: 4.1 Vol: 7 Issue: 7 pp: 5657–5669

## 24.Recent developments in bacterial nanocellulose production and its biomedical applications.

Cite this Research Publication: Chandana, A., Mallick, S. P., Dikshit, P. K., Singh, B. N., & Sahi, A. K Publisher: Journal of Polymers and the Environment doi: http://dx.doi.org/10.1007/s10924-022-02507-0 ISSN: 1566-2543 Impact factor: 4.7 Vol: 30 Issue: 10 pp: 4040-4067

### 25.A bibliometric network analysis. Journal of Applied Biology and Biotechnology

Cite this Research Publication: Akkinepally, Vanaja., Venkata, Rajesh, Yella Publisher: Journal of Applied Biology and Biotechnology doi:10.7324/jabb.2022.100505 ISSN: 2347212X Impact factor: 0.391 pp:45-51

### 26.Efficient Synthesis of Densely Functionalized Pyrido[2,3-d]Pyrimidines via Threecomponent One-pot Domino Knoevenagel aza-Diels Alder Reaction and Induces Apoptosis in Human Cancer Cell Lines via Inhibiting Aurora A and B Kinases.

Cite this Research Publication: Bhosle, M. R., Palke, A., Bondle, G. M., Sarkate, A. P., Azad, R., & Burra, P. V. L. S.

Publisher: Polycyclic Aromatic Compounds doi: https://doi.org/10.1080/10406638.2022.2143538 ISSN: 1040-6638 Impact factor: 2.4 Vol: 43 Issue: 9 pp: 7912–7929

#### 28.Immune checkpoints inhibitors in cancer therapy-current status and future prospects.

Cite this Research Publication: Karasu, S. M., Acharya, K., Siddiqui, N., Khan, I., Subashini, M., & Dutta, R Publisher: International Journal of Health Sciences <u>doi:</u> https://doi.org/10.53730/ijhs.v6nS4.11963 ISSN: 2710-2564 Impact factor: 2.96 Vol: 6 Issue: s4 pp: 12320–12332

## 29.Design strategies for composite matrix and multifunctional polymeric scaffolds with enhanced bioactivity for bone tissue engineering.

Cite this Research Publication: Kumari, S., Katiyar, S., Darshna, Anand, A., Singh, D., Singh, B. N., Mallick, S. P., Mishra, A., & Srivastava, P. Publisher: Frontiers in chemistry, doi: https://doi.org/10.3389/fchem.2022.1051678 ISSN: 2296-2646 Impact factor: 3.8 Vol: 10 pp: 1051678.

## 30.Molecular docking analysis reveals differential binding affinities of multiple classes of selective inhibitors towards cancer-associated KRAS mutants.

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