Name of Faculty	Dr. Kiran Yellappa Vajanthri	
Designation	Assistant Professor	
Nature of Job/Appointment	Regular	
Date of Joining	08-10-2021	
E-mail	kiranyellappa_biotech@cbit.ac.in	
Education Qualifications	Name of the Degree	Class
Ph. D	Doctor of Philosophy (Biomedical Engineering)	Awarded
PG	M.Tech (Biotechnology & Medical Engineering)	First Class
UG	B. E. (Biotechnology)	First Class
Work Experience		
Teaching	04 years 2 months	
Research	5 years	
Industry	--	
Others	--	
Area of Specialization	Biomaterials and Tissue Engineering	
Professional Memberships	Society for Tissue Engineering Regenerative Medicine India	
Responsibilities held at Institution Level	1. Sudhee- 2025 chief Coordinator Biotechnology department 2. Sudhee and Shruthi Reception committee faculty member 2021-24 3. Anti-Ragging Squad member from 08-10-2021 to till date 4. Disciplinary committee member from 08-10-2021 to till date 5. ACIC CBIT Biotechnology coordinator 2021-till date	
Responsibilities held at Department Level	1. Mentor for students 2. Results analysis coordinator 3. NIRF Coordinator dept level 4. Equivalent subject coordinator 5. Social activities/Village development dept coordinator 6. Honors degree & Equivalent subjects admitted batch coordinator 7. Faculty coordinator poster presentation Neozion 2022 - 2024 & Sudhee 2022-2024 8. Poster presentation coordinator for Research Day 2022 9. Faculty Coordinator overall for Neozion 2025	
Research Guidance	Supervised 8, B. Tech Final students for Final Year Project during AY 2021-22, 2022-23	

Awards Received	1. Secured best poster presentation award at the conference for the poster titled “PVA Bentonite composites for wound dressing,” at Second International Conference on Medical Materials, Devices and Regenerative Medicine (MMDRM) 11-13 January 2014, Kathmandu Nepal. 2. Was among the 10 selected candidates for attending the training program in generation and maintenance of Human iPS cells (ASHD–CiRA program) organized by Accelerating the application of Stem cell technology in Human Disease” (ASHD) program, India and The Centre for iPS Cell Research and Application (CiRA) at Kyoto University, Japan 29 November - 1 December 2017. 3. Ministry of Human Resources and Development GATE fellowship for M. Tech from July 2012- July 2014. 4. Institute Doctoral Fellowship, Indian Institute of Technology (BHU) Varanasi, India from July 2014 - July 2019.
Courses Handled at Under Graduate Level.	1. Tissue Engineering Lab 2. Cell Mechanobiology Lab 3. Tissue Engineering 4. Developmental Biology 5. Introduction to Anatomy and Physiology of Humans 6. Animal Biotechnology 7. Animal Biotechnology Lab 8. Immunodiagnostics 9. Genetic Engineering Lab 10. Environmental Science
No. of Papers Published	National Journals – 0 / International Journals – 16 National Conference – 8 / International Conference – 5
Projects Carried out	--
Patents	1. Swellable Hydrogel Films Incorporated with Quaternary Ammonium Compounds Application No.202341034437 A Published on 30-06-2023. 2. Non-steroidal Anti-inflammatory Drug Loaded Hydrogel Films Application No.202441094199 A Published on 13-12-2024.
Technology Transfer	--
Invited Speaker	1. Faculty Coordinator for the session on World Intellectual Day-2025 organized by Institute`s Innovation Council of Chaitanya Bharathi Institute of Technology, 25-04-2025. 2. Conducted a “Hands on Workshop on Biomaterials: Exploring the Cutting Edge and Real-World Applications” 19-03-25, organized by Department of Biomedical Engineering, College of Engineering, Osmania University, Hyderabad. 3. Delivered a talk on Bacterial Growth curve for School students in “BRSI-CBIT Biotechnology Popularization and Skill Development Program for School Children” Jointly organized by Department of Biotechnology, CBIT and Biotechnology from 30-08-2024 to 31-08-2024 at Department of Biotechnology, CBIT, Hyderabad. 4. Delivered an invited talk titled” Biomaterials in Medicine: Engineering Solutions for Health”, Two-day hands-on workshop on “Biomaterials and Fabrication Techniques” 1-03-24 to 2-03-24, organized by Department of Biomedical Engineering, College of Engineering, Osmania University, Hyderabad.
No. of Books/Chapter Published with details	1. Lakshmayya NSV, Chandan Kumar Gautam, Kiran Yellappa Vajanthri, B Sumithra, Sanjeeb Kumar Mandal, Amilia Nongbet, Jibanjyoti Panda, and Bishwambhar Mishra. Cultivation and Conservation of Crops: Perspective for Agriculture through Nanotechnology. 2024, CRC Press, Pages 12, ISBN No.9781003389408

	2. Vanga Sri Varsha, Tanmayi Boreda, Sanjana Reddy Pailla, Kiran Yellappa Vajanthri, Bhushan Vishal, Yashasvi Kambhampati, T Gourav, and Bishwambhar Mishra, Nanoemulsions for Fat Reduction. Sustainable Green Nanotechnology. 2024, CRC Press, Pages 17, ISBN No. 9781003389408
Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops . Other Trainings (Attended and/or organized).	1. Bioexplore 3D Bioprinting Workshop at AIC-CCMB organized by Centre for Predictive Human Model System (CPHMS), Hyderabad on 3-09-2025 to 4-09-2025. 2. STTP on "ICT Tools for Smart Educators" 27-1-2025 to 31-1-2025 by NITTTR Chandigarh 3. AICTE-ATAL FDP on "3D Printing for Biomedical Applications: Shaping the Future of Healthcare in Industry 4.0" (3DPBA-2025) from 13-01-2025 to 18-01-2025 by NIT Kurukshetra 4. Workshop on "Drug Discovery and Development" from 3-08-2024 to 16-08-2024 organised by Federation of Asian Biotech Associations (FABA) Hyderabad 5. Innovation ambassador training "foundation level" conducted in online mode by MoE`s Innovation Cell and AICTE during the IIC calendar year 2024. 6. AICTE recognised Faculty development programme on "Teachers Self Esteem, motivation and Professional development conducted by Media Engineering Department from 15-07-2024 to 19-07-2024 at NITTTR Chandigarh 7. Five faculty development programs on "Intellectual Property Rights for sustainable and technological development (IPRSTD-2024) Financially & Technically sponsored by IEEE WIE held on February 06-10, 2024, organised by Galgotias University, Greater Naida, (U.P.), India. 8. One-week online FDP on "Quality Education through OBE" 22nd - 27th January 2024 organized by Chaitanya Bharathi Institute of Technology (Autonomous), Gandipet, Hyderabad-75, Telangana, India. 9. "A 5-day FDP on Advanced Characterization Techniques for Materials & Biology" 11th to 15th of December 2023, organized by Centre for Biomaterials, Cellular & Molecular Theranostics (CBCMT) at Vellore Institute of Technology (VIT), Vellore, India, 10. "2 Weeks Faculty Development program on Entrepreneurship" 3-17th August 2023, Organized by Institute`s Innovation Council (IIC), School of Biomedical Sciences and School of Business, Galgotias University, Greater Noida, Uttar Pradesh. 11. "Entrepreneurial skill development in Seaweed Cultivation" 7th July 2023, jointly organized by the Department of Biotechnology & Institution Innovation Council, PSGR Krishnammal College for Women, Coimbatore. 12. Workshop on "Design thinking, Critical thinking and Innovation Design" 28 January 2023, Organized by Institute`s Innovation Council (IIC) and School of Business, Galgotias University, Greater Noida, Uttar Pradesh. 13. AICTE recognized Short Term Course on 2D Nanomaterials: Potential & Applications through ICT conducted by Applied science department, NITTTR Chandigarh, 17-21 October 2022. 14. Online FDP on "Spectroscopic techniques and instrumentation" conducted by Applied science department, NITTTR Chandigarh, 23-27 May 2022. 15. Two-day workshop on "Nanoscale Characterization and Analysis" Organized by Department of applied science NITTTR Chandigarh, from 10-11 March 2022. 16. Two day workshop on "Solid works for Biomedical applications" at held on 18-02-2022 to 19-02-2022 at Department of Biomedical Engineering, College of Engineering, Osmania University, Hyderabad. 17. High-end workshop on "Next Generation Medical Devices:

	focusing on therapeutics and diagnostics - Series 1", held at the department of Biotechnology and Medical Engineering, National Institute of Technology, Rourkela from 7-11 February 2022 under accelerate Vigyan scheme, Sponsored by DST. 18. AICTE training and learning (ATAL) Academy online FDP on "Advanced Manufacturing of Biomedical devices for Precision Health Technologies-Part-II" organized by IIT Tirupati, 24-28 January 2022. 19. AICTE training and learning (ATAL) Academy online FDP on "Advanced Manufacturing of Biomedical devices for Precision Health Technologies-Part-I" organized by IIT Tirupati. 13-17 November 2021. 20. Bioprocessing Society-India mini symposium on "BIOMATERIALS AND TISSUE ENGINEERING" Organized by Department of Biotechnology, IIT Madras. 27th November 2021. 21. AICTE training and learning (ATAL) Academy online FDP on "3D printing and Design" organized by university college of engineering Osmania University. 25-29 October 2021. 22. Hands on Workshop on "Real Time PCR" conducted by Agilent Technologies and Molecular Biology unit, IMS Banaras Hindu University, Varanasi, 17-18 July 2018. 23. Training program in generation and maintenance of Human iPS cells (ASHD – CiRA program) organized Accelerating the application of Stem cell technology in Human Disease." (ASHD) program, India and The Centre for iPS Cell Research and Application (CiRA) at Kyoto University, Japan 29th November – 1st December 2017. 24. Workshop on "Emerging Trends in Drug Designing & Molecular Modelling" IIT (BHU) Varanasi, 19-21 July 2017. 25. Global initiative for academic networks (GIAN) course on "Mechanobiology", IIT Ropar, from 24-28 May 2017. 26. Indian Medical Device Expo Pune 2016, a joint initiative by IIT Bombay, COE Pune, and VNIT Nagpur, College of Engineering Pune, from 8-10 April 2016. 27. Short Term Course on "Research Methods and Skills" at IIT (BHU), Varanasi (U.P.), India conducted from December 4-5, 2015. 28. Two days course on "Advanced Microscopy and Imaging Techniques" jointly organized by DSS Imagetech Pvt. Ltd., Olympus Medical Systems India Pvt. Ltd. and Photometrics (USA) along with IIT, BHU from 7-8 August 2015. 29. INUP Hands-on Training Workshop on "Nanofabrication Technologies". Training on PDMS Microfluidics and Micro and Nano Characterization techniques conducted at the Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore, from 3-12 February 2015. 30. INUP Familiarization Workshop on "Nanofabrication Technologies", conducted at the Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore, from 27-29 January 2015.
Details of Journal Publications/ Conferences (National and International)	Details provided below

International Journal Articles

1. Agarwal, T., Onesto, V., Banerjee, D., Guo, S., Polini, A., Vogt, C., Viswanath, A., Esworthy, T., Cui, H., O'Donnell, A., Vajanthri, K. Y., Moroni, L., Ozbolat, I. T., Panoskaltsis-Mortari, A., Zhang, L. G., Costantini, M., & Maiti, T. K. (2025). 3D bioprinting in tissue engineering: current state-of-the-art and challenges towards system standardization and clinical translation. Biofabrication, 17(4), Article 042003. https://doi.org/10.1088/1758-5090/ade47a
2. Poddar, S., Agarwal, P.S., Sahi, A.K., Varshney, N., Vajanthri, K.Y., Mahto, S.K., (2021) Fabrication and characterization of electrospun psyllium husk-based nanofibers for tissue regeneration. *Journal of*

Applied Polymer Science, 138 (24), 50569, https://doi.org/10.1002/app.50569, IF-3.057.

3. Agarwal, T., Fortunato, G.M., Hann S.Y., Ayan B., Vajanthri, K.Y., Presutti, D., Cui, H., Chan, A.H.P., Costantini, M., Onesto, V., Di Natale C., Huang N.F., Makvandi, P., Shabani, M., Maiti, T.K., Zhang, L.G., and De Maria, C., (2021) Recent advances in bioprinting technologies for engineering cardiac tissues. Material science & Engineering C. 124 112057. https://doi.org/10.1016/j.msec.2021.112057, IF-8.457.
4. Agarwal, T., Chiesa, I., Presutti, D., Irawan V., Vajanthri, K.Y., Costantini, M., Nakagawa, Y., Tan, S., Makvandi, P., Zare E. N., Sharif. E., De Maria, C., Ikoma, T., and Maiti, T.K., (2021) Recent advances in bioprinting technologies for engineering different cartilage-based tissues. Material science & Engineering C. 123 112005. https://doi.org/10.1016/j.msec.2021.112005, IF-8.457.
5. Agarwal, P.S., Poddar, S., Varshney, N., Sahi, A.K., Vajanthri, K.Y., Yadav, K., Parmar, A.S. and Mahto, S.K., (2020). Printability assessment of psyllium husk (isabgol)/gelatin blends using rheological and mechanical properties. *Journal of Biomaterials Applications*, p.0885328220979473. https://doi.org/10.1177/0885328220979473, IF-2.712.
6. Pawde, M. D., Kasi Viswanadh, M., Mehata, A.K., Sonkar, R., Narendra, Poddar, S., Burande, A.S., Jha, A., Vajanthri, K.Y., Mahto, S. K., Dustakeer, A.V.N., Madaswamy S. M., (2020) Mannose receptor targeted bioadhesive chitosan nanoparticles of clofazimine for effective therapy of tuberculosis, Saudi Pharmaceutical Journal. https://doi.org/10.1016/j.jsps.2020.10.008, IF-4.562.
7. Vajanthri, K. Y., Sidu, R. K., & Mahto, S. K. (2020). Micropatterning and alignment of skeletal muscle myoblasts using microflowed plasma process. *IRBM*, 41, 48-57. https://doi.org/10.1016/j.irbm.2019.08.003, IF-5.5.
8. Vajanthri, K. Y., Sidu, R. K., Poddar, S., Singh, A. K., & Mahto, S. K., (2019). Combined substrate micropatterning and FFT analysis reveals myotube size control and alignment by contact guidance. *Cytoskeleton*, *76*(3), 269-285.https://doi.org/10.1002/cm.21527, IF-2.844.
9. Sahi, A. K., Anjali, Varshney, N., Poddar, S., Vajanthri, K. Y., & Mahto, S. K. (2019). Optimizing a detection method for estimating polyunsaturated fatty acid in human milk based on colorimetric sensors. *Materials Science for Energy Technologies*, *2*(3), 624–628. https://doi.org/10.1016/j.mset.2019.07.001
10. Poddar, S., Parasa, M. K., Vajanthri, K. Y., Chaudhary, A., Pancholi, U. V., Sarkar, A., Singh, A. K., & Mahto, S. K. (2019). Low density culture of mammalian primary neurons in compartmentalized microfluidic devices. *Biomedical microdevices*, *21*(3), 67, https://doi.org/10.1007/s10544-019-0400-2, IF-3.783.
11. Varshney, N., Sahi, A. K., Vajanthri, K. Y., Poddar, S., Balavigneswaran, C. K., Prabhakar, A., Rao, V., & Mahto, S. K. (2019). Culturing melanocytes and fibroblasts within three-dimensional macroporous PDMS scaffolds: towards skin dressing material. *Cytotechnology*, *71*(1), 287-303.https://doi.org/10.1007/s10616-018-0285-6, IF-2.040.
12. Poddar, S., Agarwal, P. S., Sahi, A. K., Vajanthri, K. Y., Singh, K. N., & Mahto, S. K. (2019). Fabrication and Cytocompatibility Evaluation of Psyllium Husk (Isabgol)/Gelatin Composite Scaffolds. *Applied biochemistry and biotechnology*, 1-19. https://doi.org/10.1007/s12010-019-02958-7, IF-3.092.
13. Vajanthri, K. Y., Yadav, P., Poddar, S., & Mahto, S. K. (2018). Development of optically sensitive liver cells. *Tissue and Cell*, *52*, 129–134. https://doi.org/10.1016/j.tice.2018.05.004, IF-2.856.
14. Bandyopadhyay, A., Dewangan, V. K., Vajanthri, K. Y., Poddar, S., & Mahto, S. K. (2018). Easy and affordable method for rapid prototyping of tissue models in vitro using three-dimensional bioprinting. *Biocybernetics and Biomedical Engineering*, *38*(1), 158–169. https://doi.org/10.1016/j.bbe.2017.12.001, IF-5.687.
15. Vijayakumar, M.R., Vajanthri, K.Y., Balavigneswaran, C.K., Mahto, S.K., Mishra, N., Muthu, M.S., & Singh, S. (2016). Pharmacokinetics, biodistribution, in vitro cytotoxicity and biocompatibility of Vitamin E TPGS coated trans resveratrol liposomes. *Colloids and Surfaces B: Biointerfaces*.145:479-91. doi: 10.1016/j.colsurfb.2016.05.037, IF-5.999.
16. Vijayakumar, M.R., Kumari, L., Patel, K.K., Vuddanda, P.R., Vajanthri, K.Y., Mahto, S.K., & Singh, S. (2016). Intravenous administration of trans-resveratrol-loaded TPGS-coated solid lipid nanoparticles for prolonged systemic circulation, passive brain targeting and improved in vitro cytotoxicity against C6 glioma cell lines. *RSC Advances*. 6 (55):50336-48. https://doi.org/10.1039/C6RA10777J, IF-4.036.

International Conferences

1. Mahitha Pyla, Sanjana Kankipati, Kiran Yellappa Vajanthri, Rajasri Yadavalli and Koodalingam Dharmalingam. “Development and evaluation of stimuli-responsive hydrogel films containing carboxymethyl cellulose, soy protein isolates and grapefruit seed extract for potential application in treating atopic dermatitis” 4th International Conference on “Challenges in Chemical and Biochemical Engineering for Sustainable Development” organized by Department of Chemical Engineering, Annamalai University, Annamalai Nagar, Tamil Nadu. 23rd -24th March 2022.
2. Valluru Saileela Sirisha, Kiran Yellappa Vajanthri. “Biomaterial Applications of Poly Vinyl Alcohol”. 4th

International Conference on “Challenges in Chemical and Biochemical Engineering for Sustainable Development” organized by Department of Chemical Engineering, Annamalai University, Annamalai Nagar, Tamil Nadu. 23rd -24th March 2022.

3. Rakesh Sidu, Kiran Yellappa Vajanthri, and Sanjeev Kumar Mahto. “Controlling Skeletal Muscle Cell Behaviour using Topologically Controlled Environment”, International Symposium on Emerging Areas in Biosciences and Biomedical Technologies (eBBT-2018), 5-6 January 2018, Indian Institute of Technology, Indore, India.
4. Kiran Yellappa Vajanthri, Suruchi Poddar, Ajay Sahi and Sanjeev Kumar Mahto. “Understanding the dynamics of skeletal muscle differentiation and myotube-myotube interaction in vitro”. Fifth international conference on Microfluidics and LAB-ON-CHIP, Mumbai, India 17-18 January 2018.
5. Kiran Yellappa Vajanthri and Thirugnanam Arunachalam. “PVA Bentonite composites for wound dressing,” at Second International Conference on Medical Materials, Devices and Regenerative Medicine (MMDRM) 11-13 January 2014, Kathmandu Nepal.

National Conferences

1. Suruchi Poddar, Kiran Yellappa Vajanthri, and Sanjeev Kumar Mahto. Neuromuscular Synaptogenesis on a Microfluidic Chip. Institute Day, 24-26 February 2017, Indian Institute of Technology (Banaras Hindu University), Varanasi.
2. Sanjeev Kumar Mahto, Suruchi Poddar and Kiran Yellappa Vajanthri, Development of Microfluidic Tools for Neuromuscular Synaptogenesis and Nanotoxicological Studies. INSPIRE Faculty Monitoring-cum Interaction Meet, 3-4 February 2017, IISER Pune, Maharashtra, India.
3. Suruchi Poddar, Kiran Yellappa Vajanthri, and Sanjeev Kumar Mahto. Fabrication of Microfluidic Device for Neuromuscular Junction Modeling. National Conference on Biotechnology and Environment (NCOBE), 10-11 April 2017, Jamia Millia Islamia, New Delhi.
4. Suruchi Poddar, Kiran Yellappa Vajanthri, and Sanjeev Kumar Mahto. Development of a Microfluidic Model of Neuromuscular Junction for Clinical Diagnosis. SYSCON 2016-Recent advances in Biomedical Research, 26-27 May 2016, AIIMS, New Delhi.
5. Kiran Yellappa Vajanthri, Shivani Saxena, Suruchi Poddar, Anurag Periwal, Piyush Agarwal, Ajay Sahi, and Sanjeev Kumar Mahto. Fabricating functional Skeletal Muscle tissue constructs using decellularized matrices, Indian Medical Device Expo, a joint initiative by IIT Bombay, COE Pune and VNIT Nagpur, 8th-10th April 2016, College of Engineering, Pune.
6. Kiran Yellappa Vajanthri, Shivani Saxena, Suruchi Poddar, Anurag Periwal, Piyush Aggarwal and Sanjeev Kumar Mahto. “Fabricating functional skeletal muscle tissue constructs using decellularized matrices”, Institute Day 2-3 April, 2016, Indian Institute of Technology (Banaras Hindu University), Varanasi.
7. Kiran Yellappa Vajanthri, Sanjeev Kumar Mahto. “Microfluidic Platforms for Skeletal Muscle Tissue Engineering” INUP Familiarization Workshop on Nanofabrication Technologies conducted at the Centre for Nano Science and Engineering, 27-29 January 2016, Indian Institute of Science, Bangalore, India.
8. Kiran Yellappa Vajanthri, Anurag Periwal, Piyush Sunil Agarwal, Suruchi Poddar and Sanjeev Kumar Mahto. “Fabricating functional skeletal muscle tissue using decellularized matrices”. Institute day 2-3 April 2015, Indian Institute of Technology (Banaras Hindu University), Varanasi.