

About Faculty:

Dr. Amit Kumar Jaiswal, with over 9 years of teaching and research experience at VIT, Vellore is an expert in the field of **Biomaterials & Tissue Engineering**. He pursued his Doctoral program at **Indian Institute of Technology, Bombay**, which is one of the renowned and eminent institutes in India. His current area of research includes Engineered materials as Cancer/Tumor Models, Artificial Bone Graft for Orthopedic Applications, Artificial Skin Substitute for Burn Wound Application and Biomaterial Mediated Drug Delivery.

Research Areas:

- Engineered materials as Cancer/Tumor Models
- Artificial Bone Graft for Orthopaedic Applications
- Artificial Skin Substitute for Burn Wound Application
- Biomaterial Mediated Drug Delivery

Contact Info:

Mobile: +91-9789280874

E-mail: amitj@vit.ac.in

Website: <https://amitjvit.vixsite.com/research-group>

Google scholar: <https://scholar.google.co.in/citations?user=FrA4dBcAAAAJ&hl=en>

LinkedIn profile: <https://www.linkedin.com/in/amit-jaiswal-41748314/>

Orcid ID: 0000-0002-6566-3580

- **Research Interest (elaborated)-1 page**

Bones are the most prone organs affected due to metastasis and/or microbial infections. Proper diagnosis and effective treatment have to be carried out to check and keep the bones of the human body in a healthy condition since the health of bones are instrumental to immunity and life longevity. In one of our research works, it is intended to create a necessary model to mimic human trabecular bone which can be used as a metastatic niche to test different drugs and treatment protocols, and as an implant to reconstruct bones that are treated by getting resected. It is expected that this tumour model may provide better insights to understand the mechanism of action of treatment and also in the development of new drugs and suitable treatment targets.

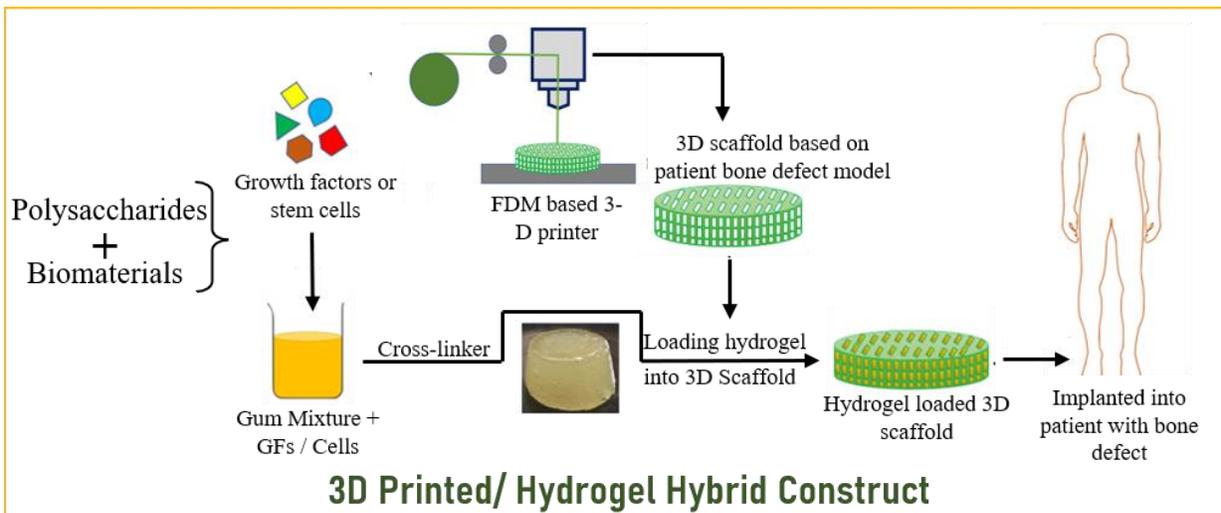
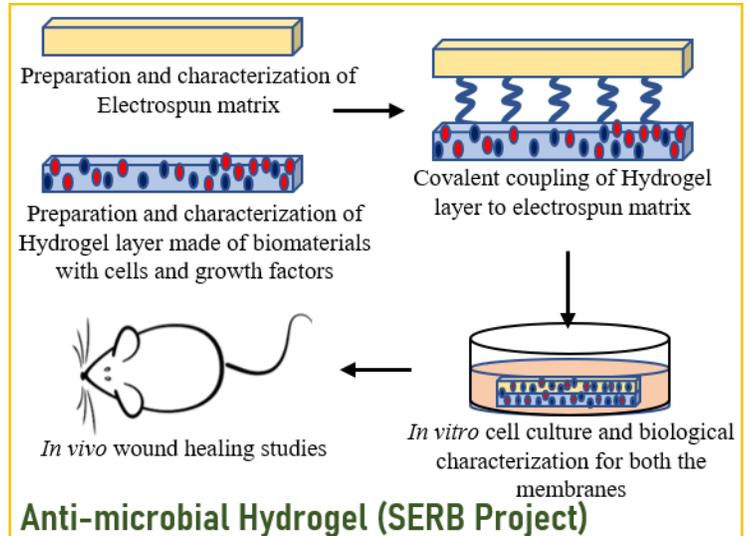
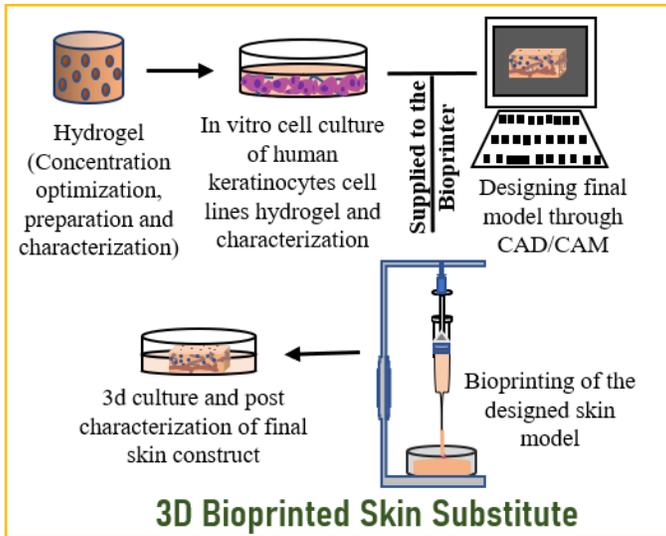
A variation with bone tissue engineering is to prepare a bioink for the fabrication of the implant with the polymer and allied biomaterials. The bioink will be used in the fabrication of the composite implant using 3D bioprinting technology. The implant thus obtained would help in eliminating the limitations given by the existing implants, thereby improving patients' and their families' wellbeing through the elimination of bulk expenses at hospital stay and surgery and physical improvement.

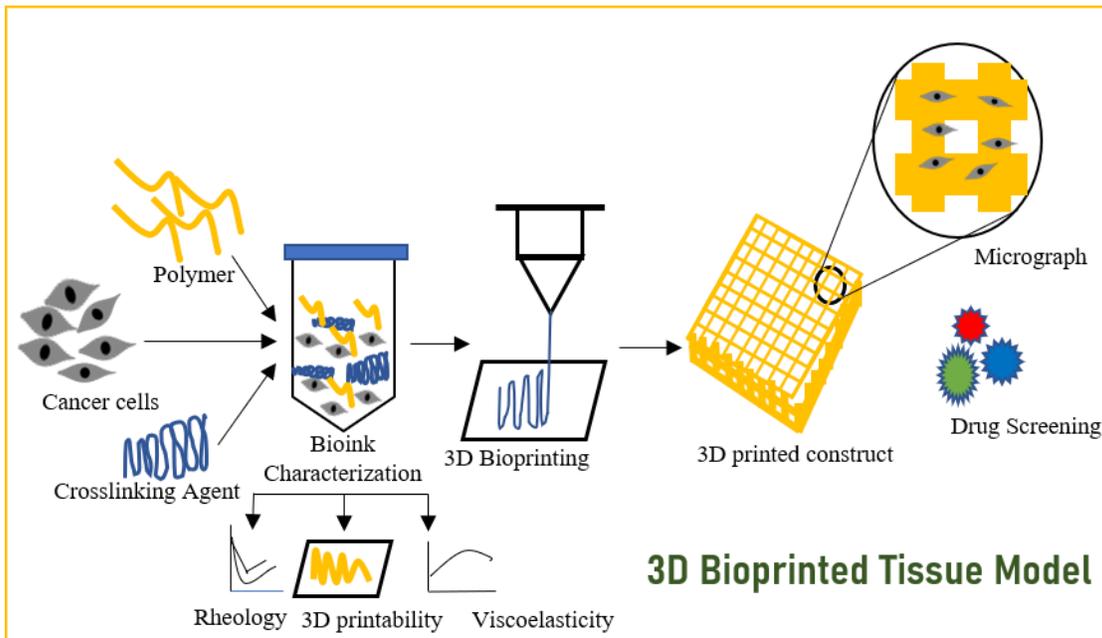
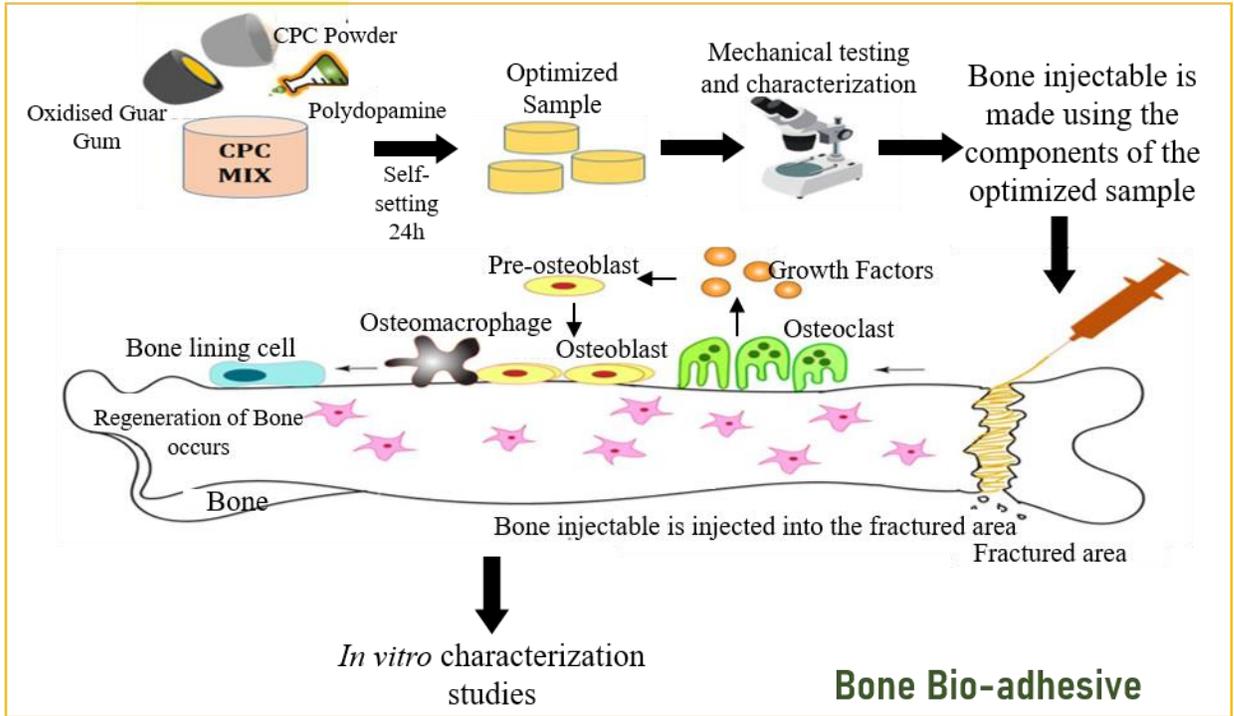
Another study is to fabricate a bioengineered skin substitute combining a polysaccharide and protein including the patients' skin cells using 3D bioprinting technology. The process will be faster, displaying a spontaneous crosslinking mechanism with uniformly distributed cells throughout the construct and with an inducement of specialized vasculature that will provide a more suitable environment for the growth and development of the cells. The bioprinted construct will mimic the native ECM of the skin and heal the injured or lost skin after burn injury. Subsequently, it will help to reduce the pain and problems associated with conventional grafting technologies, hospital stays and the financial burden.

Glioblastomas (GBM) is a highly aggressive brain tumor that presents some of the greatest challenges in the management of cancer patients worldwide, despite notable recent achievements in oncology. This necessitates the development of an alternate therapy to overcome these challenges. Nuclear factor-kappa B (NF- κ B) has increased expression in glioma cells and plays a critical role in regulating angiogenesis and hypoxia in high-grade gliomas. Further (NF)- κ B confers a negative prognosis in patients with GBM. Inhibition of NF- κ B expression in the glioma cells can be achieved by overexpressing I-Kappa-B-Alpha (mutant form) (I κ B α M) which will prevent nuclear translocation of NF- κ B and in turn aid in decreased tumor growth. AAVs are non-pathogenic and considered as ideal vectors for gene therapy applications. The hypothesis of this study is controlled and specific inhibition of Nuclear Factor (NF)- κ B by adeno associated vector (AAV) mediated over-expression of I κ B α M in the GBM tissue mass will lead to decreased tumor growth in part by down-regulating hypoxia and angiogenesis with no safety and efficacy issues.

- **Research Highlights- 1 page**

Dr Amit has expertise in various fields, the highlights of which are mentioned. He has expertise in various tissue engineering concepts out of which his work on bone bioadhesive, bioink development, and in advanced techniques of 3D printed hybrid constructs for bone tissue engineering application and as skin substitute are commendable.





- **Honors & Awards**

1. Young Scientist Research Award (YSRA) from DAE-BRNS 2021.
2. Award for Excellence in PhD Thesis (2011-2013) at Indian Institute of Technology Bombay
3. Best Poster award (2nd prize), International Conference on Advances in Electron Microscopy and Related Techniques & XXXI Annual Meeting of EMSI (EMSI-2010) Mar 8-11, 2010, at Bhabha Atomic Research Center, Mumbai, India
4. Qualified Junior Research Fellow, Council of Scientific and Industrial Research, (CSIT-NET JRF) Govt. of India, 2007–09

- **Lab groups**

Current Members:

1) Name: Dhivya Anandhan

Reg year: July 2016

Position: JRF_BRNS

Thesis title: Development Of In Vitro Tissue Engineered Model For Giant Cell Tumour Of Long Bones (GCTB)



2) Name: Ceera M.

Reg year: 2019

Position: TRA

Thesis title: Inhibition of Nuclear factor (NF)- κ B using adeno-associated vector 5 (AAV - mediated over expression of I κ B α M in Glioblastoma Multiforme (GBM)



3) Name: Anupama Devi V K

Reg year: July 2020

Position: JRF DST_SERB

Thesis title: Hydrogel Loaded 3D-Printed Hybrid Bone Graft for Reconstruction of Segmental Bone Defect



4) Name: Iyer Aakash Sambamoorthy

Reg year: July 2022

Position: TRA

Thesis title: In Vitro Modelling of Oral Squamous Cell Carcinoma



- **Grants**

Ongoing:

1. Hydrogel Loaded 3D-Printed Hybrid Bone Graft for Reconstruction of Segmental Bone Defect, DST-SERB Govt. of India, funded Project' (File No. CRG/2021/005547) at Vellore Institute of Technology, Vellore, Amount - Indian Rupee 28,34,120/-, Duration 2022-2025 (Principal Investigator)
2. Development of in vitro Tissue-Engineered Model for Giant Cell Tumor of Long Bones, Board of Research In Nuclear Sciences (BRNS) funded project (File No. 54/14/02/2021-BRNS/) at VIT Vellore, Amount- Indian Rupee 24.6 Lakhs, Duration 2021-2024 (Principal Investigator)

Completed

3. "Tumor specific inhibition of NF-kB: A potential gene therapy approach for treating Glioblastoma" No.BT/PR19625/MED/30/1703/2016, Department of Biotechnology (DBT), Govt. of India, Amount-Indian Rupee 42,87,600/- Duration (2018-2021) (Co-Principal Investigator)
4. Fibrous matrix-hydrogel double layered synthetic human skin substitute for full-thickness burn wounds 'DST-SERB Govt. of India, funded Project' (File No. EMR/2016/002447) at VIT University, Vellore, 39,91,600/- Indian Rupee, Duration 2017-2020 (Principal Investigator)
5. SEED Money under RGEMS fund from Vellore Institute of Technology Vellore, a total of 7,00,000 Indian Rupee during 2016-2019

- **Publications**

2022

- 1) Anupama Devi V. K., Sarbajit Ray, Udit Arora, Sunrito Mitra, Alina Sionkowska and Amit Kumar Jaiswal*, Dual Drug Delivery Platforms for Bone Tissue Engineering, (2022) (Just Accepted)
- 2) Nishant Kumar Kolli, Datta Darshan VM, Dhivyaa Anandan, Venketesh Sivaramakrishnan, Amit Kumar Jaiswal, Siva Kumar Belliraj, Swarup Kundu, Santanu Roy, Probing into the potential features of sodium calcium silicate ($\text{Na}_2\text{Ca}_2\text{Si}_3\text{O}_9$) synthesized by the solid-state route, (2022), *Phys. Scr.* 97 085001, <https://doi.org/10.1088/1402-4896/ac7ae6>
- 3) V Chaithanya Vinay, DS Varma, Mohammed Rehaan Chandan, Ponsubha Sivabalan, Amit Kumar Jaiswal, Sai Swetha, Beata Kaczmarek, A Sionkowska, Study of silver nanoparticle-loaded auxetic polyurethane foams for medical cushioning applications, *Polymer Bulletin* (2022), <https://doi.org/10.1007/s00289-021-03705-x>
- 4) Joshua Franklyn, Sowmya Ramesh, Bimal Patel, Dhivya A, Prabha D Nair, Amit Kumar, Geeta Chacko, Inian Samarasam, Abdominal wall reconstruction with tissue engineered mesh using muscle derived stem cells in an animal model, (2022), *Regen. Eng. Transl. Med.*, <https://doi.org/10.1007/s40883-022-00253-2>
- 5) Whenish R., Ramakrishna, S., Jaiswal, A.K., Manivasagam, G., A framework for the sustainability implications of 3D bioprinting through nature-inspired materials and structures, *Bio-des. Manuf.* (2022), <https://doi.org/10.1007/s42242-021-00168-x>

2021

- 6) Devi V. K., A.; Shyam, R.; Palaniappan, A.; Jaiswal, A.K.; Oh, T.-H.; Nathanael, A.J. Self-Healing Hydrogels: Preparation, Mechanism and Advancement in Biomedical Applications. *Polymers* 2021, 13, 3782. <https://doi.org/10.3390/polym13213782> *corresponding author (IF: 4.3)
- 7) Raheem, A.A.; Hameed, P.; Whenish, R.; Elsen, R.S.; G, A.; Jaiswal, A.K.; Prashanth, K.G.; Manivasagam, G. A Review on Development of Bio-Inspired Implants Using 3D Printing. *Biomimetics* 2021, 6, 65. <https://doi.org/10.3390/biomimetics6040065>
- 8) Simrit Safarulla, Pritisha S. Khillar, Sudarshan Kini, Amit Kumar Jaiswal, Tissue engineered scaffolds as 3D models for prostate cancer metastasis to bone, *Materials Today Communications*, Volume 28, 2021,102641.
- 9) Vinay, V.C., Varma, D.S.M., Chandan, M.R., Amit K. Jaiswal et al. Study of silver nanoparticle-loaded auxetic polyurethane foams for medical cushioning applications. *Polym. Bull.* (2021). <https://doi.org/10.1007/s00289-021-03705-x>. (IF – 2.870)

- 10) Vinay, V.C., Mohan Varma, D.S., Chandan, M.R., Sivabalan, P., Jaiswal, A.K., Swetha, S., Sionkowska, A. and Kaczmarek, B. (2021), Study of Castor oil-based Auxetic Polyurethane Foams for Cushioning Applications. *Polym Int.* Accepted Author Manuscript. <https://doi.org/10.1002/pi.6259>. (IF – 2.990)
- 11) Sayoni Maiti, Pritisha S. Khillar, Debasish Mishra, N. Arunai Nambiraj, Amit K. Jaiswal*, Physical and self-crosslinking mechanism and characterization of chitosan-gelatin-oxidized guar gum hydrogel, *Polymer Testing*, Volume 97, 2021, 10715. <https://doi.org/10.1016/j.polymertesting.2021.107155> *corresponding author (IF: 4.2)
- 12) Valarmathi N., Sasikumar K., Sumathi S., Ankita Das, Amit Kumar Jaiswal, In vitro biological activity of Zn substituted hydroxyapatite/ polyvinyl alcohol composite for orthopaedic applications, *Materials Today Communications*, Volume 26, 2021, 102025, <https://doi.org/10.1016/j.mtcomm.2021.102025>. (IF: 3.3)
- 13) Tanhai Borkar, Vidul Goenka, Amit Kumar Jaiswal*, Application of poly-ε-caprolactone in extrusion-based bioprinting, *Bioprinting*, Volume 21, 2021, e00111, ISSN 2405-8866, <https://doi.org/10.1016/j.bprint.2020.e00111>, *corresponding author
- 14) Badekila, AK, Kini, S, Jaiswal, AK. Fabrication techniques of biomimetic scaffolds in three-dimensional cell culture: A review. *J Cell Physiol.* 2021; 236: 741– 762. <https://doi.org/10.1002/jcp.29935> (IF – 5.54)

2020

- 15) Kaczmarek, B., Mazur, O., Milek, O. et al. Design, characterization and in vitro evaluation of thin films enriched by tannic acid complexed by Fe(III) ions. *Prog Biomater* (2020). <https://doi.org/10.1007/s40204-020-00146-z>
- 16) Mugdha Makrand Joglekar, Devlina Ghosh, Dhivyaa Anandan, Puja Yatham, Rahul Dev Jayant, N. Arunai Nambiraj and Amit Kumar Jaiswal*, Crosslinking of Gum Based Composite Scaffolds for Enhanced Strength and Stability – A Comparative Study between Sodium Trimetaphosphate and Glutaraldehyde, *Journal: Journal of Biomedical Materials Research Part B: Applied Biomaterials*, Just Accepted, Article ID: JBMB34640, Article DOI: 10.1002/jbm.b.34640, *corresponding author (IF – 3.368)
- 17) Stanisław Mitura, Alina Sionkowska, and Amit Jaiswal, Biopolymers for hydrogels in cosmetics: review, *Journal of Materials Science: Materials in Medicine*, 2020; 31(6): 50. (IF 3.896)
- 18) Ponsubha S and Amit Kumar Jaiswal*, Effect of interpolymer complex formation between chondroitin sulfate and chitosan-gelatin hydrogel on physico-chemical and rheological properties, *Carbohydrate Polymers* 238 (2020) 116179 *corresponding author (IF – 9.381)

2019

- 19) Dhivyaa Anandan, G.Madhumathi, N. ArunaiNambiraj, Amit K. Jaiswal* Gum based 3D composite scaffolds for bone tissue engineering applications, *Carbohydrate Polymers*, 214, 2019, 62-70 (IF – 9.381) *corresponding author

2018

- 20) Dhivyaa Anandan, S. Mary Stella, N. Arunai Nambiraj, U. Vijayalakshmi, Amit Kumar Jaiswal*, Development of Mechanically Compliant 3D Composite Scaffolds for Bone Tissue Engineering Applications, J Biomed Mater Res Part A: 106A: 3267–3274, 2018. (IF- 4.396)
*corresponding author
- 21) Dhivyaa Anandan and Amit K. Jaiswal*, Synthesis and characterization of human bone-like hydroxyapatite using Schiff's base, Ceramics International, Volume 44, Issue 8, 1 June 2018, Pages 9401-9407 (IF- 4.527) (Citation-7)

2017

- 22) Kunal Khanna, Amit Jaiswal, Rohit V Dhumal, Nilakash Selkar, Pradip Chaudhari, Vivek P Soni, Geeta R Vanage and Jayesh Bellare, Comparative bone regeneration study of hardystonite and hydroxyapatite as filler in critical sized defect of rat calvaria. RSC Adv.2017 (IF- 3.361)
- 23) Rusha Chaudhuri, Madhumitha Ramachandran, Pearl Moharil, Megha Harumalani, Amit K. Jaiswal*, Biomaterials and cells for cardiac tissue engineering: Current choices, Materials Science and Engineering: C, Volume 79, 1 October 2017, Pages 950-957 (IF 7.328)
*corresponding author
- 24) Prerana Sensharma, G. Madhumathi, Rahul D. Jayant, Amit K. Jaiswal*. Biomaterials and cells for neural tissue engineering: Current choices, Materials Science and Engineering: C, Vol 24,1, 2017 (IF 7.328) *corresponding author
- 25) Amit K. Jaiswal*, Hemlata Chhabra, Sandipan Narwane, Nirmala Rege and Jayesh R. Bellare. Hemostatic Efficacy of Nanofibrous Matrix in Rat Liver Injury Model, Surgical Innovation, Vol 24, 1, 2017 (IF 2.058) *corresponding author
- 26) Rangam Neha, Amit Jaiswal, Jayesh Bellare and N. K. Sahu Synthesis of Surface Grafted Mesoporous Magnetic Nanoparticles for Cancer Therapy, Journal of Nanoscience and Nanotechnology, Vol. 17, 1–8, 2017 (IF 1.354)
- 27) Shivaji Kashte, Amit Jaiswal and Sachin Kadam, Artificial bone via bone tissue engineering: Current scenario and Challenges, Tissue Engineering and Regenerative Medicine February 2017, Volume 14, Issue 1, pp 1–14 (IF 4.169)

2015

- 28) Chhabra H., Deshpande R., Kanitkar M. , Jaiswal A., Kale V.P. and Bellare J.R. (2015) A nano zinc oxide doped electrospun scaffold improves wound healing in a rodent model RSC Adv., 2016,6, 1428-1439 (IF- 3.361)

2013

- 29) Kanitkar, M., Jaiswal, A., Deshpande, R., Bellare, J., and Kale, V. P. (2013) Enhanced Growth of Endothelial Precursor Cells on PCG-Matrix Facilitates Accelerated, Fibrosis-Free, Wound Healing: A Diabetic Mouse Model, *PLoS ONE* 8 (IF:3.24)
- 30) Jaiswal, A. K., Kadam, S. S., Soni, V. P., and Bellare, J. R. (2013) Improved functionalization of electrospun PLLA/gelatin scaffold by alternate soaking method for bone tissue engineering, *Applied Surface Science* 268, 477-488 (IF 6.707)
- 31) Jaiswal, A. K., Dhumal, R. V., Ghosh, S., Chaudhari, P., Nemani, H., Soni, V. P., Vanage, G. R., and Bellare, J. R. (2013) Bone healing evaluation of nanofibrous composite scaffolds in rat calvarial defects: A comparative study, *Journal of Biomedical Nanotechnology* 9, 2073-2085 (IF 4.483)
- 32) Jaiswal, A. K., Dhumal, R. V., Bellare, J. R., and Vanage, G. R. (2013) In vivo biocompatibility evaluation of electrospun composite scaffolds by subcutaneous implantation in rat, *Drug Delivery and Translational Research* 3, 504-517 (IF 4.617)
- 33) Jaiswal, A. K., Chhabra, H., Kadam, S. S., Londhe, K., Soni, V. P., and Bellare, J. R. (2013) Hardystonite improves biocompatibility and strength of electrospun polycaprolactone nanofibers over hydroxyapatite: A comparative study, *Materials Science and Engineering C* 33, 2926-2936 (IF 4.95)
- 34) Jaiswal, A. K., Chhabra, H., Soni, V. P., and Bellare, J. R. (2013) Enhanced mechanical strength and biocompatibility of electrospun polycaprolactone-gelatin scaffold with surface deposited nano-hydroxyapatite, *Materials Science and Engineering C* 33, 2376-2385 (IF 7.328)

2012

- 35) Jaiswal, A. K., Chandra, V., Bhonde, R. R., Soni, V. P., and Bellare, J. R. (2012) Mineralization of nanohydroxyapatite on electrospun poly(L-lactic acid)/gelatin by an alternate soaking process: A biomimetic scaffold for bone regeneration, *Journal of Bioactive and Compatible Polymers* 27, 356-374 (IF 1.756)

2011

- 36) Chandra, V., G, S., Muthyala, S., Jaiswal, A. K., Bellare, J. R., Nair, P. D., and Bhonde, R. R. (2011) Islet-like cell aggregates generated from human adipose tissue derived stem cells ameliorate experimental diabetes in mice, *PLoS ONE* 6 (IF:3.361)

Book Chapters:

- 37) PSK, Jaiswal Amit, Gums for Tissue Engineering Applications, Polysaccharides of Microbial Origin, Springer, Cham. 2022, https://doi.org/10.1007/978-3-030-35734-4_53-1
- 38) Chhibber, Tanya & Shinde, Ravikumar & Lahooti, Behnaz & Bagchi, Sounak & Varahachalam, Sree & Gaddam, Anusha & Jaiswal, Amit & Gracia, Evelyn & Chand, Hitendra & Kaushik, Ajeet & Jayant, Rahul. (2020). Hydrogels in Tissue Engineering. 10.1201/9781003036050-8

- **Patents**

- 1) Name: ELECTROSPUN NANO-COMPOSITE BONE REGENERATIVE MATERIAL
Date of Filing: 24/12/2012
Date of Grant: 24/5/2018
Patent No: 297061
- 2) Name: NANO-COMPOSITE BONE REGENERATIVE MATERIAL COMPRISING METAL SILICATE
Date of Filing: 27/11/2012
Date of Grant: 12/07/2020
Patent No: 341209
- 3) Name: ELECTROSPUN NANO-COMPOSITE SCAFFOLD BASED ON POLY-L-LACTIDE-CO-EPSILON-CAPROLACTONE, GELATIN AND NANOHYDROXYAPATITE
Date of Filing: 20/12/2013
Date of Patent: 03/09/2019
Patent No: 319772
- 4) Name: ELECTROSPUN NANO-FIBER SCAFFOLD FOR REPAIR OF SKIN LESIONS
Date of Filing: 22/11/2013
Date of Grant: 15/04/2021
Patent No: 364716
- 5) Name: NOVEL CELL SECRETOMES FOR WOUND HEALING
Date of Filing: 2014
Date of Grant:
Patent No: 1951/MUM/2014
- 6) Name: A COMPOSITION OF A BONE BIO-CEMENT AND A PROCESS OF PREPARATION THEREOF
Date of Filing: 2021
Application No: 202141031345

- **Invited talks & outreach programs:**

1. Invited talk at AICTE-QIP STC on “Emerging Techniques and applications in Biosciences and Bioengineering Research”, from 21st to 26th March 2022 organized by IIT, Indore
2. Invited Talk at National Conference on ‘Convergence of Stem Cells & Medical Nanotechnology’ on 2nd and 3rd September 2015 at D. Y. Patil University, Kolhapur.
3. Oral presentation at 9th World Biomaterials Congress (WBC) at Chengdu, China held during 1-5 June 2012
4. Poster presentation at BioStar 2010: 4th Congress on Regenerative Biology and Medicine from 13-15 October 2010 in Stuttgart, Germany
5. Poster presentation in 22nd European Society of Biomaterial conference held at Lausanne, Switzerland from 7-11 September 2009

Additional Details required (images with good pixel)

No of PhD scholars currently working: 4

1) Name: Dhivya Anandhan

Reg year: 2016

Guide name: Dr. Amit Kumar Jaiswal

Thesis title: Development Of In Vitro Tissue Engineered Model For Giant Cell Tumour Of Long Bones (GCTB)



2) Name: Ceera M.

Reg year: 2019

Guide name: Dr. Amit Kumar Jaiswal

Thesis title: Inhibition of Nuclear factor (NF)- κ B using adeno-associated vector 5 (AAV - mediated over expression of IKB α M in Glioblastoma Multiforme (GBM)



3) Name: Anupama Devi V K

Reg year: 2020

Guide name: Dr. Amit Kumar Jaiswal

Thesis title: Hydrogel Loaded 3D-Printed Hybrid Bone Graft for Reconstruction of Segmental Bone Defect



4) Name: Iyer Aakash Sambamoorthy

Reg year: 2022

Guide name: Dr. Amit Kumar Jaiswal

Thesis title: In Vitro Modelling of Oral Squamous Cell Carcinoma



No of PhD scholars graduated: Nil

SRF ongoing: Nil

SRF completed: Nil

No of part time student ongoing: Nil

No of part time student graduated: Nil

No of postdoc ongoing: Nil

No of postdoc graduated: Nil

JRF ongoing: 2

1) Name: Dhivya Anandhan

Reg year: 2016

PI: Dr. Amit Kumar Jaiswal

Thesis title: Development Of In Vitro Tissue Engineered Model For Giant Cell Tumour Of Long Bones (GCTB)



2) Name: Anupama Devi V K

Reg year: 2020

PI: Dr. Amit Kumar Jaiswal

Thesis title: Hydrogel Loaded 3D-Printed Hybrid Bone Graft for Reconstruction of Segmental Bone Defect



JRF completed: 1

1) Name: Ponsubha S.

Current Position: PhD, Clarkson University, USA

PI: Dr. Amit Kumar Jaiswal

Previous Work exp. In VIT: JRF



No. of Undergraduate project ongoing: 1



Name: Mr. Prithvijit Basu

Course: B.Tech Biotechnology

Academic year: 2021-2025

Thesis Title: Development of freedried CMC based hydrogels

PI: Dr. Amit Kumar Jaiswal

No. of Undergraduate project completed: 18



Name: Ms. Nidhi Nair

Current Position: Masters in Innovative Medicine student at Heidelberg University

PI: Dr. Amit Kumar Jaiswal



Name: Ms. Sradha Bhalotia

Current Position: M.Tech at IIT Kanpur

PI: Dr. Amit Kumar Jaiswal



Name: Ms. Sayoni Maiti

Current Position: Ph.D. at Indian Institute of
Science (IISc) Bangalore
PI: Dr. Amit Kumar Jaiswal



Name: Mr. Pawan Kumar C

PI: Dr. Amit Kumar Jaiswal



Name: Ms. Simrit Safarulla

Current Position: Masters at North Carolina
Agricultural and Technical University
PI: Dr. Amit Kumar Jaiswal



Name: Mr. Vidul Goenka

Current Position: Master's at Imperial College
London
PI: Dr. Amit Kumar Jaiswal



Name: Ms. Ruchira Chakraborty

Current Position: M.Tech at Manipal Institute of
Technology
PI: Dr. Amit Kumar Jaiswal



Name: Ms. Aastha Goel

PI: Dr. Amit Kumar Jaiswal



Name: Ms. Ankita Das

Current Position: Masters in Biomedical Sciences at
Leiden University

PI: Dr. Amit Kumar Jaiswal



Name: Ms. Anwesha Barua

Current Position: PhD student at University of
Groningen

PI: Dr. Amit Kumar Jaiswal



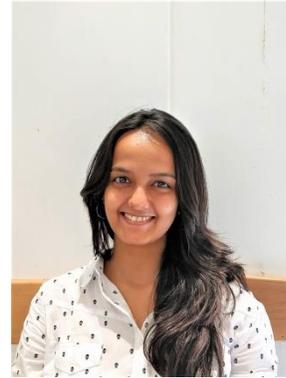
Name: Ms. Mugdha Joglekar

Current Position: PhD Candidate at University
Medical Center Groningen, The Netherlands

PI: Dr. Amit Kumar Jaiswal



Name: Ms. Shreyasee Das
Current Position: PhD ADx Neurosciences, Ghent,
Belgium
PI: Dr. Amit Kumar Jaiswal



Name: Ms. Manisha Srinivas Raghavan Current
Position: Masters at North Carolina Agricultural and
Technical University
PI: Dr. Amit Kumar Jaiswal



Name: Ms. Prerana Sensharma
Current Position: Research Assistant II at
Hematology/Oncology Dept., Boston Children's
Hospital
PI: Dr. Amit Kumar Jaiswal



Name: Ms. Madhumathi Gnanaprakash
Current Position: Research Technician at Columbia
university
PI: Dr. Amit Kumar Jaiswal



Name: Ms. Anwasha Barua
Current Position: Ph.D. student, Indian Institute of
Science, Bangalore
PI: Dr. Amit Kumar Jaiswal



Name: Ms. Chitrika Biswas
Current Position: Graduate Trainee R&D at Puratos
PI: Dr. Amit Kumar Jaiswal

No of Masters ongoing: 0

No of Masters completed: 3



Name: Ms. Sushmita Dhir

Current Position: Masters at Vellore Institute of
technology

PI: Dr. Amit Kumar Jaiswal



Name: Ms. Elakiya C

Current Position: Masters at Vellore Institute of
technology

PI: Dr. Amit Kumar Jaiswal



Name: Ms. Aarohi Ranadive

Course: M. Sc Applied Microbiology

Academic year: 2020-2022

Thesis Title: Development of biomaterial for
tissue engineering applications

PI: Dr. Amit Kumar Jaiswal



Name: Ms. Santoshi Shetye

Current Position: Quality control officer at molbio
diagnostics Pvt ltd

PI: Dr. Amit Kumar Jaiswal

Capstone Project ongoing:

- a) No of project ongoing: 1
- b) Duration: 6 Months
- c) PI: Dr. Amit Kumar Jaiswal
- d) Title of the project:
 - 1) Development of biomaterial for tissue engineering applications, 2022

Capstone Project completed:

- a) No of project completed: 16
- b) Duration: 6 Months
- c) PI: Dr. Amit Kumar Jaiswal
- d) Title of the projects:
 - 1) Development of guar gum reinforced calcium magnesium phosphate-based bone biocement, 2016-2020
 - 2) “Development of calcium phosphate-oxidised guar gum based bone injectable”, 2016-2020
 - 3) “Gum based Carboxymethyl Chitin scaffolds for bone tissue engineering applications”, 2016-2020
 - 4) “Physical and self-crosslinking mechanism and characterization of chitosan - gelatin - oxidized guar gum hydrogel ”, 2016-2020
 - 5) “Development of PVA-PEG-HAp scaffold as an in vitro model for prostate cancer metastasis ”, 2016-2020
 - 6) “Comparison of composite Bone scaffolds based on guar and xanthan gum”, 2016-2020
 - 7) “Development of gel loaded 3-D printed bone graft for bone tissue engineering”, 2016-2020
 - 8) “Acemannan containing Composite Scaffolds for Bone Tissue Engineering” 2015-2019
 - 9) “Preparation of hydroxyapatite based bone composite for biomedical and surgical applications”, 2015-2019
 - 10) “Gum composite scaffolds for bone tissue engineering applications”, 2014-2018
 - 11) “Engineering of Electrospun scaffolds incubated with curcumin nanoparticles for wound healing”, 2014-2018

- 12) "Preparation of acemanin and collagen based scaffold for periodontal pocket therapy", 2014-2018
- 13) "Engineering a curcumin nanoparticle incorporated electrospun matrix for wound healing application", 2014-2018
- 14) "Gum based composite scaffolds for tissue engineering applications", 2014-2018
- 15) "Thermosensitive Hydrogel for Drug Delivery Applications", 2014-2018
- 16) "Gum based 3D composite scaffolds for tissue engineering applications", 2013-2017