



Robin Augustine

Basic Life Research Scientist, Rad/Pediatric Radiology

Bio

BIO

Robin Augustine is a bioengineer with a keen focus on designing and developing various biomaterials and devices that can support, replace, or repair damaged tissues or organs. I completed my Ph.D. in Nanoscience & Nanotechnology from Mahatma Gandhi University in Kottayam, India.

His specific areas of interest include but are not limited to skin substitutes, wound dressings, tissue engineering scaffolds, bioprinted artificial tissues/organs, and other biomaterials. He is passionate about utilizing his knowledge and expertise in the field to contribute to the development of new and innovative solutions that can improve the quality of life for people.

Currently, he is a part of the Interventional Radiology Innovation at Stanford (IRIS) at the Radiology Department of Stanford Medicine headed by Dr. Avnesh Thakor, where he is working on developing novel tissue engineering approaches specifically for pancreatic regeneration applications.

CURRENT ROLE AT STANFORD

Dr. Robin Augustine's current research interests revolve around three fascinating areas: graphene-based bioscaffolds, islet transplantation, and synchronized cellular response.

In the field of graphene-based bioscaffolds, Dr. Augustine actively explores the potential of graphene as a biomaterial for tissue engineering. With its unique properties, graphene offers exceptional opportunities for developing innovative bioscaffolds. Dr. Augustine aims to design and engineer graphene-based materials that can provide structural support, promote cellular adhesion and growth, and enhance tissue regeneration. Leveraging the exceptional properties of graphene, such as its mechanical strength, electrical conductivity, and biocompatibility, Dr. Augustine's goal is to contribute to the development of advanced bioscaffolds for various applications in regenerative medicine.

Another area of Dr. Augustine's research focuses on islet transplantation, particularly in the context of treating diabetes. Islet transplantation holds promise as a potential cure for type 1 diabetes, involving the transfer of insulin-producing islet cells into the recipient's pancreas. Dr. Augustine investigates strategies to optimize islet transplantation techniques, improve the long-term viability of transplanted islets, and enhance their functionality. The ultimate objective is to contribute to the development of more effective and sustainable approaches for islet transplantation, with the aim of improving the quality of life for individuals living with diabetes.

Dr. Augustine also explores the field of synchronized cellular response, recognizing its crucial role in tissue development, regeneration, and repair. The focus is on understanding and manipulating the synchronized cellular response in complex tissue systems. By studying the intricate signaling pathways and cellular interactions,

Dr. Augustine aims to identify key factors and mechanisms that regulate coordinated cellular behavior. This knowledge can inform the development of strategies to enhance tissue regeneration and repair processes, potentially leading to improved outcomes in various biomedical applications.

Through research in graphene-based bioscaffolds, islet transplantation, and synchronized cellular response, Dr. Augustine strives to contribute to the advancement of tissue engineering, regenerative medicine, and the development of innovative therapies for complex medical challenges.

HONORS AND AWARDS

- Outstanding Researcher Award, Qatar University, Doha, Qatar (2021 and 2022)
- Listed in the World's Top 2% of Scientists, Stanford University Team in collaboration with Elsevier-Scopus (2020, 2021)

EDUCATION AND CERTIFICATIONS

- PhD, Mahatma Gandhi University, Kottayam, Kerala, India , Nanotechnology (Nanomedicine) (2015)
- MSc, Madurai Kamaraj University, Madurai, Tamilnadu, India VHNSN College, Virudhunagar , BioEngineering (2010)

Professional

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Basic Life Research Scientist, Stanford University (2023 - present)
- PostDoc Research Associate, University of Massachusetts Lowell, MA, USA (2022 - 2023)
- Postdoctoral fellow/RA, Qatar University, Doha, Qatar (2017 - 2021)
- National Postdoctoral Fellow, National Institute of Technology, Calicut, India (2016 - 2017)
- Postdoctoral Fellow, Technion Israel Institute of Technology, Haifa, Israel (2015 - 2016)

Publications

PUBLICATIONS

- **Scaffolds with high oxygen content support osteogenic cell survival under hypoxia.** *Biomaterials science*
Augustine, R., Camci-Unal, G.
2023
- **Harnessing the potential of oxygen-generating materials and their utilization in organ-specific delivery of oxygen** *BIOMATERIALS SCIENCE*
Nikolopoulos, V. K., Augustine, R., Camci-Unal, G.
2023; 11 (5): 1567-1588
- **Hydrogel-Impregnated Self-Oxygenating Electrospun Scaffolds for Bone Tissue Engineering** *Bioengineering*
Augustine, R., Nikolopoulos, V. K., Camci-Unal, G.
2023; 10 (7)
- **Air-jet spun PHBV/PCL blend tissue engineering scaffolds exhibit improved mechanical properties and cell proliferation** *Results in Materials*
Kalva, S. N., Dalvi, Y. B., P. N., Varghese, R., Ahammed, I., Augustine, R., Hasan, A.
2023
- **Air-jet spun tissue engineering scaffolds incorporated with diamond nanosheets with improved mechanical strength and biocompatibility** *COLLOIDS AND SURFACES B-BIOINTERFACES*
Augustine, R., Kalva, S., Dalvi, Y. B., Varghese, R., Chandran, M., Hasan, A.
2023; 221: 112958
- **Oxygen-generating scaffolds: One step closer to the clinical translation of tissue engineered products** *CHEMICAL ENGINEERING JOURNAL*
Augustine, R., Gezek, M., Bostanci, N., Nguyen, A., Camci-Unal, G.
2023; 455

- **Characterization and In vitro biocompatibility analysis of nanocellulose scaffold for tissue engineering application** *JOURNAL OF POLYMER RESEARCH*
Unni, R., Varghese, R., Bharat Dalvi, Y., Augustine, R., Latha, M. S., Reshmy, R., Kumar Bhaskaran Nair, H., Hasan, A., Abraham, A., Mathew, T.
2022; 29 (8)
- **Halloysite nanotube and chitosan polymer composites: Physicochemical and drug delivery properties** *JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY*
Paul, A., Augustine, R., Hasan, A., Zahid, A., Thomas, S., Agatemor, C., Ghosal, K.
2022; 72
- **Nitric oxide-releasing biomaterials for promoting wound healing in impaired diabetic wounds: State of the art and recent trends** *BIOMEDICINE & PHARMACOTHERAPY*
Ahmed, R., Augustine, R., Chaudhry, M., Akhtar, U. A., Zahid, A., Tariq, M., Falahati, M., Ahmad, I. S., Hasan, A.
2022; 149: 112707
- **Cisplatin encapsulated nanoparticles from polymer blends for anti-cancer drug delivery** *NEW JOURNAL OF CHEMISTRY*
Joshy, K. S., Augustine, R., Hasan, A., Zahid, A., Alex, S. M., Dalvi, Y. B., Mraiche, F., Thomas, S., Kalarikkal, N., Chi, H.
2022; 46 (12): 5819-5829
- **Spatial mapping of cancer tissues by OMICS technologies** *BIOCHIMICA ET BIOPHYSICA ACTA-REVIEWS ON CANCER*
Ahmed, R., Augustine, R., Valera, E., Ganguli, A., Mesaeli, N., Ahmad, I. S., Bashir, R., Hasan, A.
2022; 1877 (1): 188663
- **Increased complications of COVID-19 in people with cardiovascular disease: Role of the renin-angiotensin-aldosterone system (RAAS) dysregulation** *CHEMICO-BIOLOGICAL INTERACTIONS*
Augustine, R., Abhilash, Nayeem, A., Salam, S., Augustine, P., Dan, P., Maureira, P., Mraiche, F., Gentile, C., Hansbro, P. M., McClements, L., Hasan, A.
2022; 351: 109738
- **Stem cells based in vitro models: trends and prospects in biomaterials cytotoxicity studies** *BIOMEDICAL MATERIALS*
Ahmed, U., Ahmed, R., Masoud, M., Tariq, M., Ashfaq, U., Augustine, R., Hasan, A.
2021; 16 (4): 042003
- **Imaging cancer cells with nanostructures: Prospects of nanotechnology driven non-invasive cancer diagnosis.** *Advances in colloid and interface science*
Augustine, R., Mamun, A. A., Hasan, A., Salam, S. A., Chandrasekaran, R., Ahmed, R., Thakor, A. S.
2021; 294: 102457
- **Development of nitric oxide releasing visible light crosslinked gelatin methacrylate hydrogel for rapid closure of diabetic wounds** *BIOMEDICINE & PHARMACOTHERAPY*
Zahid, A., Augustine, R., Dalvi, Y. B., Reshma, K., Ahmed, R., Rehman, S., Marei, H. E., Alfkey, R., Hasan, A.
2021; 140: 111747
- **Active agents loaded extracellular matrix mimetic electrospun membranes for wound healing applications** *JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY*
Kalva, S., Augustine, R., Al Mamun, A., Dalvi, Y., Vijay, N., Hasan, A.
2021; 63
- **Bioengineered microfluidic blood-brain barrier models in oncology research** *TRANSLATIONAL ONCOLOGY*
Augustine, R., Aqel, A. H., Kalva, S., Joshy, K. S., Nayeem, A., Hasan, A.
2021; 14 (7): 101087
- **Novel drug delivery systems based on triaxial electrospinning based nanofibers** *REACTIVE & FUNCTIONAL POLYMERS*
Ghosal, K., Augustine, R., Zaszczynska, A., Barman, M., Jain, A., Hasan, A., Kalarikkal, N., Sajkiewicz, P., Thomas, S.
2021; 163
- **Stem cell-based approaches in cardiac tissue engineering: controlling the microenvironment for autologous cells** *BIOMEDICINE & PHARMACOTHERAPY*
Augustine, R., Dan, P., Hasan, A., Khalaf, I., Prasad, P., Ghosal, K., Gentile, C., McClements, L., Maureira, P.
2021; 138: 111425
- **3D Bioprinted cancer models: Revolutionizing personalized cancer therapy** *TRANSLATIONAL ONCOLOGY*
Augustine, R., Kalva, S., Ahmad, R., Zahid, A., Hasan, S., Nayeem, A., McClements, L., Hasan, A.
2021; 14 (4): 101015

- **Gelatin-methacryloyl hydrogel based in vitro blood-brain barrier model for studying breast cancer-associated brain metastasis** *PHARMACEUTICAL DEVELOPMENT AND TECHNOLOGY*
 Augustine, R., Zahid, A., Mraiche, F., Alam, K., Al Moustafa, A., Hasan, A.
 2021; 26 (4): 490-500
- **Stromal cell-derived factor loaded co-electrospun hydrophilic/hydrophobic bicomponent membranes for wound protection and healing** *RSC ADVANCES*
 Augustine, R., Ur Rehman, S., Joshy, K. S., Hasan, A.
 2021; 11 (1): 572-583
- **Cerium Oxide Nanoparticle-Loaded Gelatin Methacryloyl Hydrogel Wound-Healing Patch with Free Radical Scavenging Activity** *ACS BIOMATERIALS SCIENCE & ENGINEERING*
 Augustine, R., Zahid, A., Hasan, A., Dalvi, Y., Jacob, J.
 2021; 7 (1): 279-290
- **Growth factor loaded in situ photocrosslinkable poly(3-hydroxybutyrate-co-3-hydroxyvalerate)/gelatin methacryloyl hybrid patch for diabetic wound healing** *MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS*
 Augustine, R., Hasan, A., Dalvi, Y. B., Rehman, S., Varghese, R., Unni, R., Yalcin, H. C., Alfkey, R., Thomas, S., Al Moustafa, A.
 2021; 118: 111519
- **Cellular uptake and retention of nanoparticles: Insights on particle properties and interaction with cellular components** *MATERIALS TODAY COMMUNICATIONS*
 Augustine, R., Hasan, A., Primavera, R., Wilson, R., Thakor, A. S., Kevadiya, B. D.
 2020; 25
- **Natural halloysite nanotubes/chitosan based bio-nanocomposite for delivering norfloxacin, an anti-microbial agent in sustained release manner** *INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES*
 Barman, M., Mahmood, S., Augustine, R., Hasan, A., Thomas, S., Ghosal, K.
 2020; 162: 1849-1861
- **Carboxymethylcellulose hybrid nanodispersions for edible coatings with potential anti-cancer properties** *INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES*
 Joshy, K. S., Augustine, R., Li, T., Snigdha, S., Hasan, A., Komalan, C., Kalarikkal, N., Thomas, S.
 2020; 157: 350-358
- **Electrospun chitosan membranes containing bioactive and therapeutic agents for enhanced wound healing** *INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES*
 Augustine, R., Rehman, S., Ahmed, R., Zahid, A., Sharifi, M., Falahati, M., Hasan, A.
 2020; 156: 153-170
- **Loop-Mediated Isothermal Amplification (LAMP): A Rapid, Sensitive, Specific, and Cost-Effective Point-of-Care Test for Coronaviruses in the Context of COVID-19 Pandemic.** *Biology*
 Augustine, R., Hasan, A., Das, S., Ahmed, R., Mori, Y., Notomi, T., Kevadiya, B. D., S Thakor, A.
 2020; 9 (8)
- **Emerging applications of biocompatible phytosynthesized metal/metal oxide nanoparticles in healthcare** *JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY*
 Augustine, R., Hasan, A.
 2020; 56
- **MXene Nanosheets May Induce Toxic Effect on the Early Stage of Embryogenesis** *JOURNAL OF BIOMEDICAL NANOTECHNOLOGY*
 Alhussain, H., Augustine, R., Hussein, E. A., Gupta, I., Hasan, A., Al Moustafa, A., Elzatahry, A.
 2020; 16 (3): 364-372
- **Rapid Antibody-Based COVID-19 Mass Surveillance: Relevance, Challenges, and Prospects in a Pandemic and Post-Pandemic World.** *Journal of clinical medicine*
 Augustine, R. n., Das, S. n., Hasan, A. n., S, A. n., Abdul Salam, S. n., Augustine, P. n., Dalvi, Y. B., Varghese, R. n., Primavera, R. n., Yassine, H. M., Thakor, A. S., Kevadiya, B. D.
 2020; 9 (10)
- **Cerium Oxide Nanoparticle Incorporated Electrospun Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) Membranes for Diabetic Wound Healing Applications** *ACS BIOMATERIALS SCIENCE & ENGINEERING*

- Augustine, R., Hasan, A., Patan, N., Dalvi, Y. B., Varghese, R., Antony, A., Unni, R., Sandhyarani, N., Al Moustafa, A.
2020; 6 (1): 58-70
- **A novel in ovo model to study cancer metastasis using chicken embryos and GFP expressing cancer cells** *BOSNIAN JOURNAL OF BASIC MEDICAL SCIENCES*
Augustine, R., Alhussain, H., Hasan, A., Ahmed, M., Yalcin, H. C., Al Moustafa, A.
2020; 20 (1): 140-148
 - **Yttrium oxide nanoparticle loaded scaffolds with enhanced cell adhesion and vascularization for tissue engineering applications** *MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS*
Augustine, R., Dalvi, Y. B., Nath, Y. K., Varghese, R., Raghuvveeran, V., Hasan, A., Thomas, S., Sandhyarani, N.
2019; 103: 109801
 - **Nitric oxide releasing chitosan-poly (vinyl alcohol) hydrogel promotes angiogenesis in chick embryo model** *INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES*
Zahid, A., Ahmed, R., Rehman, S., Augustine, R., Tariq, M., Hasan, A.
2019; 136: 901-910
 - **Development of titanium dioxide nanowire incorporated poly(vinylidene fluoride-trifluoroethylene) scaffolds for bone tissue engineering applications** *JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE*
Augustine, A., Augustine, R., Hasan, A., Raghuvveeran, V., Rouxel, D., Kalarikkal, N., Thomas, S.
2019; 30 (8): 96
 - **Titanium Nanorods Loaded PCL Meshes with Enhanced Blood Vessel Formation and Cell Migration for Wound Dressing Applications** *MACROMOLECULAR BIOSCIENCE*
Augustine, R., Hasan, A., Patan, N., Augustine, A., Dalvi, Y. B., Varghese, R., Unni, R., Kalarikkal, N., Al Moustafa, A., Thomas, S.
2019; 19 (7): e1900058
 - **Electrospun polylactic acid/date palm polyphenol extract nanofibres for tissue engineering applications** *EMERGENT MATERIALS*
Zadeh, K. M., Luyt, A. S., Zarif, L., Augustine, R., Hasan, A., Messori, M., Hassan, M. K., Yalcin, H. C.
2019; 2 (2): 141-151
 - **Recent advances in electrospun polycaprolactone based scaffolds for wound healing and skin bioengineering applications** *MATERIALS TODAY COMMUNICATIONS*
Joseph, B., Augustine, R., Kalarikkal, N., Thomas, S., Seantier, B., Grohens, Y.
2019; 19: 319-335
 - **Therapeutic angiogenesis: From conventional approaches to recent nanotechnology-based interventions** *MATERIALS SCIENCE AND ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS*
Augustine, R., Prasad, P., Khalaf, I.
2019; 97: 994-1008
 - **Chitosan ascorbate hydrogel improves water uptake capacity and cell adhesion of electrospun poly(epsilon-caprolactone) membranes** *INTERNATIONAL JOURNAL OF PHARMACEUTICS*
Augustine, R., Dan, P., Schlachet, I., Rouxel, D., Menu, P., Sosnik, A.
2019; 559: 420-426
 - **CTGF Loaded Electrospun Dual Porous Core-Shell Membrane For Diabetic Wound Healing** *INTERNATIONAL JOURNAL OF NANOMEDICINE*
Augustine, R., Zahid, A., Hasan, A., Wang, M., Webster, T. J.
2019; 14: 8573-8588
 - **Graphene Oxide Loaded Hydrogel for Enhanced Wound Healing in Diabetic Patients**
Rehman, S., Augustine, R., Zahid, A., Ahmed, R., Hasan, A., IEEE
IEEE.2019: 3943-3946
 - **Reactive Nitrogen Species Releasing Hydrogel for Enhanced Wound Healing**
Zahid, A., Ahmed, R., Rehman, S., Augustine, R., Hasan, A., IEEE
IEEE.2019: 3939-3942
 - **Novel electrospun chitosan/polyvinyl alcohol/zinc oxide nanofibrous mats with antibacterial and antioxidant properties for diabetic wound healing** *INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES*

- Ahmed, R., Tariq, M., Ali, I., Asghar, R., Khanam, P., Augustine, R., Hasan, A.
2018; 120: 385-393
- **Nanoceria Can Act as the Cues for Angiogenesis in Tissue Engineering Scaffolds: Toward Next-Generation in Situ Tissue Engineering** *ACS BIOMATERIALS SCIENCE & ENGINEERING*
Augustine, R., Dalvi, Y. B., Dan, P., George, N., Helle, D., Varghese, R., Thomas, S., Menu, P., Sandhyarani, N.
2018; 4 (12): 4338-4353
 - **Electrospun polyvinyl alcohol membranes incorporated with green synthesized silver nanoparticles for wound dressing applications** *JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE*
Augustine, R., Hasan, A., Nath, V., Thomas, J., Augustine, A., Kalarikkal, N., Al Moustafa, A., Thomas, S.
2018; 29 (11): 163
 - **Nanoparticle-in-microparticle oral drug delivery system of a clinically relevant darunavir/ritonavir antiretroviral combination** *ACTA BIOMATERIALIA*
Augustine, R., Ashkenazi, D., Arzi, R., Zlobin, V., Shofti, R., Sosnik, A.
2018; 74: 344-359
 - **Skin bioprinting: a novel approach for creating artificial skin from synthetic and natural building blocks** *PROGRESS IN BIOMATERIALS*
Augustine, R.
2018; 7 (2): 77-92
 - **Electrospun poly(vinylidene fluoride-trifluoroethylene)/zinc oxide nanocomposite tissue engineering scaffolds with enhanced cell adhesion and blood vessel formation** *NANO RESEARCH*
Augustine, R., Dan, P., Sosnik, A., Kalarikkal, N., Tran, N., Vincent, B., Thomas, S., Menu, P., Rouxel, D.
2017; 10 (10): 3358-3376
 - **Electrospun polycaprolactone (PCL) scaffolds embedded with europium hydroxide nanorods (EHNs) with enhanced vascularization and cell proliferation for tissue engineering applications** *JOURNAL OF MATERIALS CHEMISTRY B*
Augustine, R., Nethi, S., Kalarikkal, N., Thomas, S., Patra, C.
2017; 5 (24): 4660-4672
 - **Metal Oxide Nanoparticles as Versatile Therapeutic Agents Modulating Cell Signaling Pathways: Linking Nanotechnology with Molecular Medicine** *APPLIED MATERIALS TODAY*
Augustine, R., Mathew, A. P., Sosnik, A.
2017; 7: 91-103
 - **Fabrication and characterization of biosilver nanoparticles loaded calcium pectinate nano-micro dual-porous antibacterial wound dressings** *PROGRESS IN BIOMATERIALS*
Augustine, R., Augustine, A., Kalarikkal, N., Thomas, S.
2016; 5 (3-4): 223-235
 - **Challenges in oral drug delivery of antiretrovirals and the innovative strategies to overcome them** *ADVANCED DRUG DELIVERY REVIEWS*
Sosnik, A., Augustine, R.
2016; 103: 105-120
 - **Surface Acoustic Wave Device with Reduced Insertion Loss by Electrospinning P(VDF-TrFE)/ZnO Nanocomposites** *NANO-MICRO LETTERS*
Augustine, R., Sarry, F., Kalarikkal, N., Thomas, S., Badie, L., Rouxel, D.
2016; 8 (3): 282-290
 - **Clogging-Free Electrospinning of Polycaprolactone Using Acetic Acid/Acetone Mixture** *POLYMER-PLASTICS TECHNOLOGY AND ENGINEERING*
Augustine, R., Kalarikkal, N., Thomas, S.
2016; 55 (5): 518-529
 - **Electrospun PCL membranes incorporated with biosynthesized silver nanoparticles as antibacterial wound dressings** *APPLIED NANOSCIENCE*
Augustine, R., Kalarikkal, N., Thomas, S.
2016; 6 (3): 337-344
 - **Cell Adhesion on Polycaprolactone Modified by Plasma Treatment** *INTERNATIONAL JOURNAL OF POLYMER SCIENCE*
Recek, N., Resnik, M., Motaln, H., Lah-Turnsek, T., Augustine, R., Kalarikkal, N., Thomas, S., Mozetic, M.
2016; 2016

- **Effect of zinc oxide nanoparticles on the in vitro degradation of electrospun polycaprolactone membranes in simulated body fluid** *INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS*
Augustine, R., Kalarikkal, N., Thomas, S.
2016; 65 (1): 28-37
- **POLYURONATES AND THEIR APPLICATION IN DRUG DELIVERY AND COSMETICS** *GREEN POLYMERS AND ENVIRONMENTAL POLLUTION CONTROL*
Augustine, R., Venugopal, B., Snigdha, S., Kalarikkal, N., Thomas, S., Khalaf, M. N.
2016: 239-269
- **MONITORING AND SEPARATION OF FOOD-BORNE PATHOGENS USING MAGNETIC NANOPARTICLES** *NOVEL APPROACHES OF NANOTECHNOLOGY IN FOOD*
Augustine, R., Abraham, A., Kalarikkal, N., Thomas, S., Grumezescu, A. M.
2016; 1: 271-312
- **Nanomedicine and Tissue Engineering: State of the Art and Recent Trends** *NANOMEDICINE AND TISSUE ENGINEERING: STATE OF THE ART AND RECENT TRENDS*
Kalarikkal, N., Augustine, R., Oluwafemi, O. S., Joshy, K. S., Thomas, S.
2016: 1-520
- **ELECTROSPUN MATRICES FOR BIOMEDICAL APPLICATIONS: RECENT ADVANCES** *NANOMEDICINE AND TISSUE ENGINEERING: STATE OF THE ART AND RECENT TRENDS*
Mohan, D. P., Augustine, R., Kalarikkal, N., Radhakrishnan, E. K., Thomas, S., Kalarikkal, N., Augustine, R., Oluwafemi, O. S., Joshy, K. S., Thomas, S.
2016: 365-390
- **NANOMEDICINE: FROM CONCEPT TO REALITY** *NANOMEDICINE AND TISSUE ENGINEERING: STATE OF THE ART AND RECENT TRENDS*
Rakhimol, K. R., Augustine, R., Thomas, S., Kalarikkal, N., Kalarikkal, N., Augustine, R., Oluwafemi, O. S., Joshy, K. S., Thomas, S.
2016: 1-30
- **TISSUE ENGINEERING: PRINCIPLES, RECENT TRENDS AND THE FUTURE** *NANOMEDICINE AND TISSUE ENGINEERING: STATE OF THE ART AND RECENT TRENDS*
Mathew, A. P., Augustine, R., Kalarikkal, N., Thomas, S., Kalarikkal, N., Augustine, R., Oluwafemi, O. S., Joshy, K. S., Thomas, S.
2016: 31-82
- **CUTANEOUS WOUND CARE: GRAFTS TO TISSUE-ENGINEERED SKIN SUBSTITUTES** *NANOMEDICINE AND TISSUE ENGINEERING: STATE OF THE ART AND RECENT TRENDS*
Augustine, R., Venugopal, B., Kalarikkal, N., Thomas, S., Kalarikkal, N., Augustine, R., Oluwafemi, O. S., Joshy, K. S., Thomas, S.
2016: 493-520
- **Gentamicin Loaded Electrospun Poly(epsilon-Caprolactone)/TiO₂ Nanocomposite Membranes with Antibacterial Property against Methicillin Resistant Staphylococcus aureus** *POLYMER-PLASTICS TECHNOLOGY AND ENGINEERING*
Nandagopal, S., Augustine, R., George, S. C., Jayachandran, V. P., Kalarikkal, N., Thomas, S.
2016; 55 (17): 1785-1796
- **Electrospun poly(epsilon-caprolactone)-based skin substitutes: In vivo evaluation of wound healing and the mechanism of cell proliferation** *JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART B-APPLIED BIOMATERIALS*
Augustine, R., Dominic, E., Reju, I., Kaimal, B., Kalarikkal, N., Thomas, S.
2015; 103 (7): 1445-1454
- **An In vitro Method for the Determination of Microbial Barrier Property (MBP) of Porous Polymeric Membranes for Skin Substitute and Wound Dressing Applications** *TISSUE ENGINEERING AND REGENERATIVE MEDICINE*
Augustine, R., Kalarikkal, N., Thomas, S.
2015; 12 (1): 12-19
- **Dose-Dependent Effects of Gamma Irradiation on the Materials Properties and Cell Proliferation of Electrospun Polycaprolactone Tissue Engineering Scaffolds** *INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS*
Augustine, R., Saha, A., Jayachandran, V. P., Thomas, S., Kalarikkal, N.
2015; 64 (10): 526-533
- **Advancement of wound care from grafts to bioengineered smart skin substitutes** *PROGRESS IN BIOMATERIALS*
Augustine, R., Kalarikkal, N., Thomas, S.

2014; 3 (2-4): 103-113

- **A facile and rapid method for the black pepper leaf mediated green synthesis of silver nanoparticles and the antimicrobial study** *APPLIED NANOSCIENCE*

Augustine, R., Kalarikkal, N., Thomas, S.

2014; 4 (7): 809-818

- **Electrospun polycaprolactone/ZnO nanocomposite membranes as biomaterials with antibacterial and cell adhesion properties** *JOURNAL OF POLYMER RESEARCH*

Augustine, R., Malik, H., Singhal, D., Mukherjee, A., Malakar, D., Kalarikkal, N., Thomas, S.

2014; 21 (3)

- **Investigation of angiogenesis and its mechanism using zinc oxide nanoparticle-loaded electrospun tissue engineering scaffolds** *RSC ADVANCES*

Augustine, R., Dominic, E., Reju, I., Kaimal, B., Kalarikkal, N., Thomas, S.

2014; 4 (93): 51528-51536

- **Electrospun polycaprolactone membranes incorporated with ZnO nanoparticles as skin substitutes with enhanced fibroblast proliferation and wound healing** *RSC ADVANCES*

Augustine, R., Dominic, E., Reju, I., Kaimal, B., Kalarikkal, N., Thomas, S.

2014; 4 (47): 24777-24785

- **Synthesis and characterization of silver nanoparticles and its immobilization on alginate coated sutures for the prevention of surgical wound infections and the in vitro release studies** *INTERNATIONAL JOURNAL OF NANO DIMENSION*

Augustine, R., Rajarathinam, K.

2012; 2 (3): 205-212

- **Extracellular biosynthesis of iron oxide nanoparticles by Bacillus subtilis strains isolated from rhizosphere soil** *BIOTECHNOLOGY AND BIOPROCESS ENGINEERING*

Sundaram, P., Augustine, R., Kannan, M.

2012; 17 (4): 835-840