

References

- Allen, Christine, Jeannie Han, Yisong Yu, Dusica Maysinger, and Adi Eisenberg. "Polycaprolactone/poly (ethylene oxide) copolymer micelles as a delivery vehicle for dihydrotestosterone." *Journal of Controlled Release* 63, no. 3 (2000): 275-286.
- Behraves, E., A. W. Yasko, P. S. Engel, and A. G. Mikos. "Synthetic biodegradable polymers for orthopaedic applications." *Clinical orthopaedics and related research* 367 (1999): S118-S129.
- Bordenave, L., Ph Fernandez, M. Remy-Zolghadri, S. Villars, R. Daculsi, and D. Midy. "In vitro endothelialized ePTFE prostheses: clinical update 20 years after the first realization." *Clinical hemorheology and microcirculation* 33, no. 3 (2005): 227-234.
- Choi, Eui-Jun, Chang-Hyeon Kim, and Jung-Ki Park. "Synthesis and characterization of starch-g-polycaprolactone copolymer." *Macromolecules* 32, no. 22 (1999): 7402-7408.
- Falk, E. R. L. I. N. G. "Unstable angina with fatal outcome: dynamic coronary thrombosis leading to infarction and/or sudden death. Autopsy evidence of recurrent mural thrombosis with peripheral embolization culminating in total vascular occlusion." *Circulation* 71, no. 4 (1985): 699-708.
- Halim, Ahmad Sukari, Teng Lye Khoo, and Shah Jumaat Mohd Yussof. "Biologic and synthetic skin substitutes: An overview." *Indian journal of plastic surgery: official publication of the Association of Plastic Surgeons of India* 43, no. Suppl (2010): S23.
- Hutmacher, Dietmar W., Thorsten Schantz, Iwan Zein, Kee Woei Ng, Swee Hin Teoh, and Kim Cheng Tan. "Mechanical properties and cell cultural response of polycaprolactone scaffolds designed and fabricated via fused deposition modeling." *Journal of biomedical materials research* 55, no. 2 (2001): 203-216.
- In vitro endothelialized ePTFE prostheses: clinical update 20 years after the first realization
- Kohane, Daniel S., and Robert Langer. "Polymeric biomaterials in tissue engineering." *Pediatric research* 63, no. 5 (2008): 487-491.
- Lang S.B. and Das-Gupta D.K.. *Handbook of Advanced Electronic and Photonic Materials and Devices*, volume 4. Academic Press, San Diego, CA, 2001.
- Li, X. H., Y. G. Xing, W. L. Li, Y. H. Jiang, and Y. L. Ding. "Antibacterial and physical properties of poly (vinyl chloride)-based film coated with ZnO nanoparticles." *Food Science and Technology International* (2010), 16, 225-232
- Middleton, John C., and Arthur J. Tipton. "Synthetic biodegradable polymers as orthopedic devices." *Biomaterials* 21, no. 23 (2000): 2335-2346.

- Seifalian, Alexander M., Alok Tiwari, George Hamilton, and Henryk J. Salacinski. "Improving the clinical patency of prosthetic vascular and coronary bypass grafts: the role of seeding and tissue engineering." *Artificial organs* 26, no. 4 (2002): 307-320.
- Shores, Jaimie T., Allen Gabriel, and Subhas Gupta. "Skin substitutes and alternatives: a review." *Advances in skin & wound care* 20, no. 9 (2007): 493-508.
- Smith, L. A., and P. X. Ma. "Nano-fibrous scaffolds for tissue engineering." *Colloids and surfaces B: biointerfaces* 39, no. 3 (2004): 125-131.
- Weber, N., Y-S. Lee, S. Shanmugasundaram, M. Jaffe, and T. Livingston Arinzeh. "Characterization and in vitro cytocompatibility of piezoelectric electrospun scaffolds." *Acta biomaterialia* 6, no. 9 (2010): 3550-3556.
- Woei NK, Dietmar W. Hutmacher, Jan-Thorsten Schantz, Chin Seng Ng, Heng-Phon Too, Thiam Chye Lim, Toan Thang Phan, and Swee Hin Teoh. "Evaluation of ultra-thin poly (ϵ -caprolactone) films for tissue-engineered skin." *Tissue engineering* 7, no. 4 (2001): 441-455.
- Xiao Wu, Wu, David N. Herndon, Marcus Spies, Arthur P. Sanford, and Steven E. Wolf. "Effects of delayed wound excision and grafting in severely burned children." *Archives of Surgery* 137, no. 9 (2002): 1049.
- Zahedi, Payam, Iraj Rezaeian, Seyed-Omid Ranaei-Siadat, Seyed-Hassan Jafari, and Pitt Supaphol. "A review on wound dressings with an emphasis on electrospun nanofibrous polymeric bandages." *Polymers for Advanced Technologies* 21, no. 2 (2010): 77-95
- Zhong, Zhikai, and Xiuzhi S. Sun. "Properties of soy protein isolate/polycaprolactone blends compatibilized by methylene diphenyl diisocyanate." *Polymer* 42, no. 16 (2001): 6961-6969.

List of Publications

1. **Robin Augustine**, Edwin Anto Dominic, Indu Reju, Balarama Kaimal, Nandakumar Kalarikkal, and Sabu Thomas. Electrospun polycaprolactone membranes incorporated with ZnO nanoparticles as skin substitutes with enhanced fibroblast proliferation and wound healing. *RSC Advances* 4(48), 2014: 24777–24785.
2. **Robin Augustine**, Edwin Anto Dominic, Indu Reju, Balarama Kaimal, Nandakumar Kalarikkal, and Sabu Thomas. Investigation on angiogenesis and its mechanism using zinc oxide nanoparticles-loaded electrospun tissue engineering scaffolds. *RSC Advances* 4(93), 2014: 51528 – 51536.

3. **Robin Augustine**, Hruda Nanda Malik, Dinesh Kumar Singhal, Ayan Mukherjee, Dhruva Malakar, Nandakumar Kalarikkal, Sabu Thomas, Electrospun polycaprolactone/ZnO nanocomposite membranes with enhanced fibroblast proliferation and antimicrobial properties, *Journal of Polymer Research*, ***J Polym Res*** 21(347), 2014; DOI: 10.1007/s10965-013-0347-6.
4. **Robin Augustine**, Nandakumar Kalarikkal, Sabu Thomas, A facile and rapid method for the black pepper leaf mediated green synthesis of silver nanoparticles and the antimicrobial study, *Applied Nanoscience*, 4 (7), 2014, 809-818.
5. **Robin Augustine**, Sabu Thomas, Nandakumar Kalarikkal, In vitro degradation of electrospun polycaprolactone membranes in simulated body fluid, **International Journal of the Institute of Materials Malaysia (IJIMM)**, In press.
6. **Robin Augustine**, Sabu Thomas, Nandakumar Kalarikkal, 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**, 2014, DOI:10.1007/s13770-014-0032-9.
7. **Robin Augustine**, Abhijit Saha, V.P. Jayachandran, Sabu Thomas, Nandakumar Kalarikkal, Dose dependent effects of gamma irradiation on the materials properties and cell proliferation of electrospun polycaprolactone tissue engineering scaffolds, **International Journal of Polymeric Materials**, In press.
8. **Robin Augustine**, Edwin Anto Dominic, Indu Reju, Balarama Kaimal, Nandakumar Kalarikkal, and Sabu Thomas. Electrospun polycaprolactone based skin substitutes: In vivo evaluation of wound healing and the mechanism of fibroblast proliferation, **Journal of Biomedical Materials Research, Part B: Applied Biomaterials**, DOI: 10.1002/jbm.b.33325.
9. **Robin Augustine**, Nandakumar Kalarikkal, Sabu Thomas, Clogging free electrospinning of polycaprolactone using acetic acid/acetone mixture as the solvent system, **Applied Polymer Science**, Communicated.
10. **Robin Augustine**, Nandakumar Kalarikkal, Sabu Thomas, Advancement of wound care from grafts to bioengineered smart skin substitutes, **Progress in Biomaterials**, 3(2-4) 2014, 103-11.

Other publications

1. **Robin Augustine**, K Rajarathinam, 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. *Int J Nano Dim.* 2(3), 2012: 205-212.

2. Alagu Sundaram P, **Robin Augustine**, Kannan M, Extracellular biosynthesis of iron oxide nanoparticle by *Bacillus subtilis* strains isolated from rhizosphere soil, *Biotechnol Bioprocess Eng*, 17, 2012: 835-840.

Papers presented

- Presented a paper (oral) in International Symposium on Advanced Polymeric Materials 2014 (ISAPM 2012), organized by Institute of Materials, Malaysia (IMM), held at **Putra World Trade Centre, Kuala Lumpur**, Malaysia, 14 and 15 May 2014.
- Presented an oral presentation and obtained **best (first) oral presentation award** in International Conference on Tissue Engineering and Regenerative Medicine (ICAPM-2013) organized by Centre for Excellence in Tissue Engineering, **National Institute of Technology, Rourkela, Odisha**, India during November 15, 16 and 17, 2013.
- Presented a poster and obtained **best (first) poster award** in Bioradiance 2014 (National level seminar), organized by the Pushpagiri Research Centre, Tiruvalla, Kerala, India on 3rd May 2014.
- Presented a poster and obtained **best poster award** in International Conference on Membranes (ICM-2013) organized by the Centre for Environment Education and Technology (CEET), Mahatma Gandhi University, Kottayam, Kerala, India and Advanced Centre of Environmental Studies and Sustainable Development (ACESSD), Mahatma Gandhi University, Kottayam, Kerala, India during October 3- 6, 2013.
- Presented a poster in International Conference on Advanced Polymeric Materials (ICAPM-2013) organized by the International Unit of Macromolecular Research, Mahatma Gandhi University, Kottayam, Kerala, India during October 11, 12 and 13, 2013.
- Presented and bagged **second prize** for the poster entitled “Effect of Zinc oxide nanoparticles on the fiber diameter and fiber morphology of electrospun polycaprolactone” in second international conference on Nanomaterials: Synthesis, characterization and application organized by Centre for Nanoscience

& Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India during 12-15, January 2012.

- Presented a paper and a poster in first International Conference on advanced Nanocomposite for Construction materials (ICNC-2013) organized by International and Inter University Centre for Nanoscience & Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India 12th -14th March 2013 and bagged **third prize**.
- Presented a paper and a poster in Third Euro-India International Conference on Nanomedicine and Tissue Engineering organized by Centre for Nanoscience & Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India during August 9, 10 and 11, 2013.
- Presented a poster in India- Israel Meeting on Materials science and Nanoscience (IIMMN-2013) organized by International and Inter University Centre for Nanoscience & Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India and Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru, India during 31st January-1st February 2013.
- Presented a poster entitled Development of PCL/ZnO nanofibrous membranes for tissue engineering applications in International Conference on Design of Biomaterials (BIND 12), held at IISc, Bangalore, Karnataka, India, 9-11 December 2012.
- Presented a poster in Third International Multicomponent polymer Conference (IMPC-2012) organized by International and Inter University Centre for Nanoscience & Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India 23-25 March 2012.
- Presented a paper entitled “Alginate/silver nanoparticles coated sutures for enhanced wound healing” in an international conference (International Multicomponent Polymer Conference-2012) organized by International and Inter University Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam on 23-25 March 2012 at Kottayam, Kerala, India.
- Presented a paper in UGC (Govt of India) sponsored seminar on Nanotechnology: Applications of Nanomaterials in Agriculture, Food and Medicine organized by Department of Botany, B.K college for Women, Amalagiri, Kottayam, Kerala, India during 25th – 26th July 2012.

- Presented a paper in UGC sponsored National Seminar on Modern Streams of Biochemistry- 2011 organized by Department of Chemistry, St. Alberts college, Ernakulum in association with Spices Board, Kottayam on 20th and 22nd of September 2011.

Books edited

1. Advances in Nanomedicine and Tissue Engineering: State of the Art and Recent Trends, Editors: **Robin Augustine**, Joshi K. S, Sabu Thomas, Nandakumar Kalarikkal, Oluwatobi Oluwafemi, Apple Academic Press, Inc. 9 Spinnaker Way Waretown, New Jersey, USA.
2. Diabetes Mellitus and Human Health Care: A Holistic Approach to Diagnosis and Treatment, Editors: Anne George, **Robin Augustine** and Mathew Sebastian, Apple Academic Press, Inc. 9 Spinnaker Way Waretown, New Jersey, USA.

Book chapters

1. **Role of Wound Dressings in the Management of Chronic and Acute Diabetic Wounds**

Robin Augustine, Kalarikkal, N., Thomas, S. Role of wound dressings in the management of chronic and acute diabetic wounds. In Diabetes Mellitus and Human Health Care: A Holistic Approach to Diagnosis and Treatment; George, A., Augustine, R., Sebastian, M. Eds.; Apple Academic Press, Inc. 9 Spinnaker Way Waretown, New Jersey, USA.; pp273-314.

2. **Biopolymers for Health, Food and Cosmetic applications**

Robin Augustine, R. Rajakumari, Uroš Cvelbar, Miran Mozetič, Anne George. In: Handbook of Biopolymer-Based Materials: From Blends and Composites to Gels and Complex Networks, Sabu Thomas (Editor), Dominique Durand (Editor), Christophe Chassenieux (Editor), P. Jyotishkumar (Editor), ISBN: 978-3-527-32884-0

3. **Diabetes and healthcare: An Overview**

Abhilash M, **Robin Augustine**: In Diabetes Mellitus and Human Health Care: A Holistic Approach to Diagnosis and Treatment; George, A., Augustine, R., Sebastian, M. Eds.; Apple Academic Press, Inc. 9 Spinnaker Way Waretown, New Jersey, USA., 2014; pp1-129.

4. **Tissue Engineering: Principles, Recent Trends and the Future**

Ansuja P Mathew, **Robin Augustine**, Nandakumar Kalarikal, Sabu Thomas: In Nanomedicine and Tissue Engineering- State of the Art and Recent Trends, Apple Academic Press, Inc. 9 Spinnaker Way Waretown, New Jersey, USA

5. Nanomedicine: From Concept to Reality

Rakhimol K.R, **Robin Augustine**, Sabu Thomas, Nandakumar Kalarikkal: In Nanomedicine and Tissue Engineering- State of the Art and Recent Trends, Apple Academic Press, Inc. 9 Spinnaker Way Waretown, New Jersey, USA.

6. Electrospun Matrices for Biomedical Applications – Recent Advances

Deepa P. Mohanan, **Robin Augustine**, Nandakumar Kalarikkal, Radhakrishnan E.K, Sabu Thomas: In Nanomedicine and Tissue Engineering- State of the Art and Recent Trends, Apple Academic Press, Inc. 9 Spinnaker Way Waretown, New Jersey, USA.

7. Cutaneous Wound Care: Grafts to Tissue Engineered Skin Substitutes

Robin Augustine, Bhavana Venugopal, Nandakumar Kalarikkal, Sabu Thomas: In Nanomedicine and Tissue Engineering- State of the Art and Recent Trends, Apple Academic Press, Inc. 9 Spinnaker Way Waretown, New Jersey, USA.

8. Polyuronates and their Application in Drug Delivery and Cosmetics

Robin Augustine, Snigdha S, Nandakumar Kalarikkal, Sabu Thomas: In Green Polymer and The Environment Pollution Control, Apple Academic Press, Inc. 9 Spinnaker Way Waretown, New Jersey, USA.