Banani Kundu

Assistant Professor

Feature in Stanford University's List of Top 2% Scientists in 2021, 2023 and 2024

Profile Research focuses on engineering biopolymers and bio-interfaces for the development of multifunctional platforms, tools, and technologies to regenerate tissues, model diseases, or develop bioactive materials.

Details
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Employment

Assistant Professor - Adamas University, Kolkata, India Feb 2022 – Till date

Assistant Researcher (equivalent to Assistant Professor), University of Minho, Portugal, 2017 – 2021

Research Professor (Post-Doc), Dankook University, South Korea, 2014-2016

Publications (h-index: 25, Scopus Total citation: 3648)

	Total	First author / Corresponding author
Research Papers in Indexed Journals	41	18
Book Chapters	6	5
Invited Talk	3	3
Conference Publications	38	23

1. Chen J, Wang Y, Tang T, Li B, Kundu B, Kundu SC, Reis RL, Lin X, Li H. Enhanced effects of slowly co-released TGF-β3 and BMP-2 from biomimetic calcium phosphate-coated silk fibroin scaffolds in the repair of osteochondral defects. Journal of Nanobiotechnology 2024; 22:453.
2. Silva CS, **Kundu B,** Gomes JM, Fernandes EM, Reis RL, Kundu SC, Martins A, Neves NM. Development of bilayered porous silk scaffolds for thymus bioengineering. Biomaterials Advances 2023; 147:213320.
3. **Kundu B**, Reis RL, Kundu SC. Biomimetic Antibacterial Pro-Osteogenic Cu-Sericin MOFs for Osteomyelitis Treatment. Biomimetics 2022; 7:64. *(IF: 3.74, Citation: 3)*
4. Antunes N, **Kundu B**, Kundu SC, Reis RL, Correlo VM. *In vitro* cancer models: a closer look at limitations on translation. Bioengineering 2022; 9(4):166. *(IF: 5.05, Citation: 1)*
5. Caballero D, **Kundu B**, Abreu CM, Amorim S, Fernandes DC, Pires RA, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Forecast cancer: the importance of biomimetic 3D in vitro models in cancer drug testing/discovery and therapy. In vitro models 2022; 1:119–123.
6. **Kundu B**, Brancato V, Oliveira JM, Correlo VM, Reis RL, Kundu SC. adipoSIGHT in therapeutic response: consequences in osteo-sarcoma treatment. Bioengineering 2021; 8:83. *(IF: 5.05, Citation: 2)*

7. Brancato V, **Kundu B**, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Tumor-stroma interactions alter the sensitivity of drug in breast cancer. Frontiers in Materials 2020; 7:116. *(IF: 3.9, Citation: 5)*
8. **Kundu B**, Brancato V, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Silk fibroin promotes mineralization of gellan gum hydrogels. International Journal of Biological Macromolecules 2020; 153:1328-1334. *(IF: 8.03, Citation: 16)*
9. Kar S, **Kundu B**, Reis RL, Sarkar R, Nandy P, Basu R, Das S. Curcumin ameliorates the targeted delivery of methotrexate intercalated montmorillonite clay to cancer cells. European Journal of Pharmaceutical Sciences 2019;135:91-102. *(IF: 5.11, Citation: 24)*
10. **Kundu B**, Bastos ARF, Brancato V, Cerqueira MT, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Mechanical property of hydrogels and the presence of adipose stem cells in tumor stroma affect spheroid formation in the 3D osteosarcoma model. ACS Applied Materials & Interfaces 2019;11:14548-14559. *(IF: 10.38, Citation: 31)*
11. Silva SS, **Kundu B**, Lu S, Reis RL, Kundu SC. Chinese oak tasar silkworm *Antheraea pernyi* silk proteins: current strategies and future perspectives for biomedical applications. Macromolecular Bioscience 2019;19:1800252. *(IF: 5.85, Citation: 22)*
12. Eltohamy M, **Kundu B**, Moon J, Lee HY, Kim HW. Anti-bacterial zinc-doped calcium silicate cements: Bone filler. Ceramics International 2018; 44:13031-13038. *(IF: 5.53, Citation: 27)*
13. **Kundu B**, Eltohamy MR, Yadavalli VK, Reis RL, Kim HW. Template mediated protein self-assembly as a valuable tool in regenerative therapy. Biomedical Materials 2018; 13(4):044101. *(IF: 4.1, Citation: 4)*
14. Buitrago JO, Patel KD, El-Fiqi A, Lee JH, **Kundu B**, Lee HH, Kim HW. Silk fibroin/collagen protein hybrid cell-encapsulating hydrogels with tunable gelation and improved physical and biological properties. Acta Biomaterialia 2018; 69:218-233. *(IF: 10.63, Citation: 77)*
15. Rodrigues T, **Kundu B**, Silva-Correia J, Kundu SC, Oliveira JM, Reis RL, Correlo VM. Emerging tumor spheroids technologies for 3D in vitro cancer modeling. Pharmacology and Therapeutics 2018;184:201-211. *(IF: 13.4, Citation: 127)*
16. Bhattacharjee P, **Kundu** B, Naskar D, Kim HW, Maiti TK, Bhattacharya D, Kundu SC. Silk scaffolds in bone tissue engineering: An overview. Acta Biomaterialia 2017; 63:1-17. *(IF: 10.63, Citation: 191)*
17. Eltohamy M, Hamzawy E, **Kundu B**, Azooz M. Akermanite Reinforced Wollastonteas Bioactive Ceramic Biomaterial. Austin Journal of Biotechnology & Bioengineering 2017; 4:1083. *(IF: 2.8, Citation: 0)*
18. Shin US, Seo J-W, **Kundu B**, Kim H-W, Eltohamy M. Super-magnetic smart hybrid doxorubicin loaded nanoparticles effectively target breast adenocarcinoma cells. Microporous and Mesoporous Materials 2017; 243:206–213. *(IF: 5.87, Citation: 6)*
19. **Kundu B**, Eltohamy M, Yadavalli VK, Kundu SC, Kim HW. Biomimetic designing of functional silk nano-topography using self-assembly. ACS Applied Materials & Interfaces 2016; 8:28458–28467. *(IF: 10.38, Citation: 14)*
20. Konar S, Guha R, **Kundu B**, Nandi S, Ghosh TK, Kundu SC, Konar A, Hazra S. Silk fibroin hydrogel as physical barrier for prevention of post hernia adhesion. Hernia 2017;21:125-137. *(IF: 2.92, Citation: 12)*
21. Dey T, **Kundu B**, Deb D, Pathak T, Kundu SC. Cytotoxicity and sustained release of modified divinylsulfone from silk-based 3D construct. Journal of Materials Science: Materials in Medicine 2015; 26:263. *(IF: 4.72, Citation: 2)*

22. Jin Y, **Kundu B**, Cai Y, Kundu SC, Yao J. Bio-inspired mineralization of hydroxyapatite in 3D silk fibroin hydrogel for bone tissue engineering. Colloids and Surfaces B: Biointerfaces 2015;134:339–345. *(IF: 5.99, Citation: 62)*
23. Bhattacharjee P, **Kundu B**, Naskar D, Kim HW, Bhattacharya D, Maiti TK, Kundu SC. Potential of inherent RGD containing silk fibroin-poly (Є-caprolactone) nanofibrous matrix for bone tissue engineering. Cell and Tissue Research 2016;363:525-40. *(IF: 4.05, Citation: 39)*
24. Bhattacharjee P, **Kundu B**, Naskar D, Maiti TK, Bhattacharya D, Kundu SC**.** Nanofibrous nonmulberry silk/PVA scaffold for osteoinduction and osseointegration. Biopolymers 2015;103:271-284. *(IF: 2.5, Citation: 41)*
25. Sahu N, Baligar P, Midha S, **Kundu B**, Bhattacharjee M, Mukherjee S, Mukherjee S, Maushart F, Das S, Loparic M, Kundu SC, Ghosh S, Mukhopadhyay A. Nonmulberry silk fibroin scaffold shows superior osteoconductivity than mulberry silk fibroin in calvarial bone regeneration. Advanced Healthcare Materials 2015; 4:1709-21. *(IF: 11.09, Citation: 42)*
26. Wang J, Zhang S, Xing T, **Kundu B**, Li M, Kundu SC, Lu S. Ion-induced fabrication of silk fibroin nanoparticles from Chinese oak tasar *Antheraea pernyi*. International Journal of Biological Macromolecules 2015;79:316–325. *(IF: 8.03, Citation: 31)*
27. **Kundu B**, Kurland N, Yadavalli V, Kundu SC. Isolation and processing of silk proteins for biomedical applications. International Journal of Biological Macromolecules 2014;70:70–77. *(IF: 8.03, Citation: 72)*
28. **Kundu B**, Schlimp CJ, Nürnberger S, Redl H, Kundu SC. Thromboelastometric and platelet responses to silk biomaterials. Scientific Reports 2014;4:4945. *(IF: 4.99, Citation: 22)*
29. Pait M, **Kundu B**, Kundu SC, Debashis Ray D. Copper(II) complexes of biologically relevant piperazine based ligand: Synthesis, crystal structure, protein binding and evaluation of anti-cancerous therapeutic potential. Inorganica Chimica Acta 2014;418:30–41. *(IF: 3.11, Citation: 15)*
30. Kar S, Bagchi B, **Kundu B**, Bhandary S, Basu R, Nandy P, Das S. Synthesis and characterization of Cu/Ag nanoparticle loaded mullite nanocomposite system: a potential candidate for antimicrobial and therapeutic application. Biochimica et Biophysica Acta 2014;1840:3264-76. *(IF: 4.11, Citation: 42)*
31. **Kundu B**, Saha P, Datta K, Kundu SC. A silk fibroin based hepatocarcinoma model and the assessment of the drug response in hyaluronan-binding protein 1 overexpressed HepG2 cells. Biomaterials 2013;34:9462-74. *(IF: 15.3, Citation: 51)*
32. **Kundu B**, Kundu SC. Bio-inspired fabrication of fibroin cryogels from the muga silkworm *Antheraea assamensis* for liver tissue engineering. Biomedical Materials 2013;8(5):055003. *(IF: 4.1, Citation: 40)*
33. Saha S, **Kundu B**, Kirkham J, Wood D, Kundu SC, Yang XB. Osteochondral tissue engineering *in vivo*: a comparative study using layered silk fibroin scaffolds from mulberry and nonmulberry silkworms. PLoS ONE 2013;8:e80004. *(IF: 3.75, Citation: 60)*
34. **Kundu B**, Kurland NE, Bano S, Patra C, Engel FB, Yadavalli VK, Kundu SC. Silk proteins for biomedical applications: Bioengineering perspectives. Progress in Polymer Science 2014;39:251–67. *(IF: 31.28, Citation: 366)*
35. **Kundu B**, Rajkhowa R, Kundu SC, Wang X. Silk fibroin biomaterials for tissue regenerations. Advanced Drug Delivery Reviews 2013;65:457-70. *(IF: 17.87, Citation: 1062)*
36. **Kundu B**, Kundu SC. Silk sericin/polyacrylamide *in situ* forming hydrogels for dermal reconstruction. Biomaterials 2012;33:7456-67. *(IF: 15.3, Citation: 161)*
37. Hota MK, Bera MK, **Kundu B**, Kundu SC, Maiti CK. A natural silk fibroin protein-based transparent bio-memristor. Advanced Functional Materials 2012;22:4493-99. *(IF: 19.92, Citation: 197)*

38. Kundu SC, **Kundu B**, Talukdar S, Bano S, Nayak S, Kundu J, Mandal BB, Bhardwaj N, Botlagunta M, Dash BC, Acharya C, Ghosh AK. Invited review: Nonmulberry silk biopolymers. Biopolymers 2012;97:455-67. *(IF: 2.5, Citation: 176)*
39. Patra C, Talukdar S, Novoyatleva T, Velagala SR, Mühlfeld C, **Kundu B**, Kundu SC, Engel FB. Silk protein fibroin from *Antheraea mylitta* for cardiac tissue engineering. Biomaterials 2012;33:2673-80. *(IF: 15.3, Citation: 215)*
40. **Kundu B**, Kundu SC. Osteogenesis of human stem cells in silk biomaterial for regenerative therapy. Progress in Polymer Science 2010;35:1116-27. *(IF: 31.28, Citation: 50)*

Book Chapter(s)

1. Biotechnology of the silk proteins: challenges, approaches and applications. Nayak S, Bhardwaj N, Talukdar S, **Kundu B**, Bano S, Kundu SC. In: Biotechnology in Biopolymers. Ed. Tiwari A, Shrivastava RB. iSmithers, Shrewsburry, UK: 2012.
   ISBN: 978-1-84735-544-7 (ebook)
   ISBN: 978-1-84735-542-3 (Hardback)

2. Metastasis in 3D biomaterials. **Kundu B**, Reis RL, Kundu SC. In: Biomaterials for 3D Tumor Modelling. Ed. Kundu SC, Reis RL. 2020, pp 191 – 210, Elsevier Publications, UK
   ISBN: 978-0-12-818128-7

3. Polysaccharides in cancer therapy. **Kundu B**, Reis RL, Kundu SC. In: Polysaccharides of Microbial Origin: Biomedical Applications, Ed. Oliveira JM, Radhouani H, Reis RL. 2021, 1-21, Springer Nature, Switzerland. https://doi.org/10.1007/978-3-030-35734-4_42-1

4. The Tumor Microenvironment — An Introduction for the Development of Microfluidic Devices. **Kundu B**, Caballero D, Abreu CM, Reis RL, Kundu SC. In: Microfluidics and Biosensors in Cancer Research, Ed. Caballero D, Kundu SC, Reis RL. 2022, pp 115–138 Springer Nature 6330 Cham, Switzerland

5. **Kundu B.** Public Perceive of Artificial Intelligence: A Questionnaire Study. In: Emergence of social media: Shaping the Digital Discourse of the Next Generation Ed(s). Agarwal S, Kayal S, Pal S. SRP Pvt Ltd., Adamas University, 2024 (in press) ISBN 978-81-963402-6-1

6. **Kundu B.** Exosomes in bone homeostasis, repair and regeneration. In: Bone and Cartilage Engineering: From Modern Technology to Future Perspective. Ed(s). Yang X, Gao Z. World Scientific Publishing Co Pte Ltd (in press)

Invited Talk(s)

1. **Kundu B**. Natural Biomaterials in Regenerative Medicine. National Research Centre. August 20, 2017; Cairo, Egypt.
2. **Kundu B**. Natural Biomaterials: applications and prospects. Candiolo Cancer Institute - IRCCS, Torino, Italy November 25, 2019.

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Conference Presentations

1. **Kundu B**. Transformative Advances in Biomineralization-Inspired Silk-biomaterial Engineering. International Conference on Advances and Challenges in Medical Technology Translation (TransMedTech-2024), December 2024, Thiruvananthapuram, Kerala (Oral)
2. **Kundu B**. Mimicking the dynamic mechanical ECM using engineered biomaterials to investigate cellular crosstalk. The 1st International Online Conference on Biomimetics. May 15–17, 2024 by MDPI. Proceedings 2024;107(1):11 (Oral) https://doi.org/10.3390/proceedings2024107011
3. **Kundu B.** Will AI be a mediator or misleader in transforming science communication from bench to bedside: perception of commoner. International Science Communication Conclave (ISCC-2023), December 20-21, 2023, New Delhi, India (Oral)
4. **Kundu B.** Mimicking the dynamic mechanical ECM using engineered biomaterials to investigate cellular crosstalk. The 1st International Online Conference on Biomimetics. May 15–17, 2024 by MDPI. Proceedings 2024;107(1):11 (Oral)
5. **Kundu B.** Will AI be a mediator or misleader in transforming science communication from bench to bedside: perception of commoner. International Science Communication Conclave (ISCC-2023), December 20-21, 2023, New Delhi, India (Oral)
6. **Kundu B**, Brancato V, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Matrix Stiffness – The Manipulator of Cell Behaviour. FoReCaST Final Workshop 2021, October 27-29, Porto, Portugal (Oral)
7. **Kundu B**, Brancato V, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Silk biomaterials for 3D tissue engineered tumor models for drug delivery. TERMIS EU, May 2020, Manchester, UK *(Oral)*
8. **Kundu B**, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Copper-silk sericin hybrid as pro-angiogenic therapeutic for ischemic treatment. TERMIS EU, May 2020, Manchester, UK *(Poster)*
9. **Kundu B**, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Facile one-pot synthesis of self-assembled copper – silk sericin hybrid as prospective anticancer agents. 11th World Biomaterials Congress, May 2020, Glasgow, Scotland *(Poster)*
10. Kundu SC, **Kundu B**, Brancato V, Caballero D, Oliveira JM, Correlo VM, Reis RL. 3D silk biomaterial-based cancer modelling. Silk Technology Conference, June 12-15, 2019, Trento, Italy *(Oral)*
11. Brancato V, **Kundu B**, Oliveira JM, Correlo VM, Reis RL, Kundu SC. 3D heterotypic breast cancer model based on silk fibroin matrices. TERMIS EU, May 27-31, 2019, Rhodes, Greece *(Oral)*
12. Brancato V, **Kundu B**, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Heterotypic 3D breast cancer model based on silk protein fibroin. TERMIS-EU Workshop: 3D Bioprinting in Cancer Research, August 26-27, 2019, Nantes, France *(Oral)*
13. Caballero D, Brancato V, **Kundu B**, Amorim S, Pires RA, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Biomimetic biomaterials for in vitro cancer microenvironment modeling. TERMIS AP and 7th Asian Biomaterials Congress, October 14-17, 2019 Brisbane, Australia *(Oral)*
14. **Kundu B**, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Feasibility of development of functional epithelial organoids within defined hydrophilic network: piolt study. TERM STEM November 06-08, 2019, Porto, Portugal *(Poster)*
15. Antunes N, **Kundu B**, Silva LP, Kundu SC, Correlo VM, Reis RL. An in vitro gellan gum-based 3D osteosarcoma model for therapeutic screening. TERM STEM November 06-08, 2019, Braga, Portugal *(Poster)*

16. **Kundu B**, Brancato V, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Silk fibroin gellan-gum spongy-like hydrogels regulate biomineralization of hydroxyapatite. 1st Discoveries Center Forum September 25-27, 2019 Porto, Portugal *(Poster)*
17. Brancato V, **Kundu B**, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Silk fibroin freeze-dried scaffolds coupled with stroma and cancer cells provide a realistic drug screening platform for breast cancer. 1st Discoveries Center Forum September 25-27, 2019 Porto, Portugal *(Poster)*
18. Antunes N, **Kundu B**, Silva LP, Kundu SC, Correlo VM, Reis RL. Gellan gum-based 3D *in vitro* osteosarcoma model for anti-cancer therapeutic screening. 1st Discoveries Center Forum September 25-27, 2019 Porto, Portugal *(Poster)*
19. **Kundu B**, Brancato V, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Mechanical and cellular properties of tumor niche affect disease spheroid formation. FoReCaST Second Workshop 2019, July 11-12, Porto, Portugal *(Oral)*
20. Antunes N, **Kundu B**, Silva LP, Kundu SC, Correlo VM, Reis RL. Gellan gum-based 3D *in vitro* osteosarcoma model as drug testing platform. FoReCaST Second Workshop 2019, July 11-12, Porto, Portugal *(Poster)*
21. **Kundu B**, Brancato V, Oliveira JM, Correlo VM, Reis RL, Kundu SC. The physiochemical property and cell types of cancer stroma affect therapeutic response of anticancer drugs. Tissue Engineering and Regenerative Medicine International Society – EU Chapter, May 27-31, 2019, Rhodes, Greece *(Oral)*
22. **Kundu B**, Brancato V, Caballero D, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Engineering 3D approaches to model cancer metastasis. International conference on BioMaterials, BioEngineering, and BioTheranostics, July 24-28, 2018, Vellore, India *(Oral)*
23. **Kundu B**, Brancato V, Oliveira JM, Correlo VM, Rei RL, Kundu SC. The response of osteosarcoma cells to chemotherapeutic in presence of adipose stem cells: Pilot study in 3D. Chem2Nature Final Conference, October 25-26, 2018, CCVF, Guimarães, Portugal *(Poster)*
24. **Kundu B**, Bastos AR, Brancato V, Oliveira JM, Correlo VM, Rei RL, Kundu SC. Tuning biochemical and mechanical properties of 3D hydrogel tweak stem and cancer cells cross-talk. 5th World Congress of TERMIS, September 4-7, 2018, Kyoto, Japan *(Poster)*
25. Brancato V, **Kundu B**, Oliveira JM, Correlo VM, Rei RL, Kundu SC. Interactions between cancer and stromal cells in silk biomaterial-based 3D breast cancer model. 5th World Congress of TERMIS, September 4-7, 2018, Kyoto, Japan *(Poster)*
26. **Kundu B**, Bastos AR, Brancato V, Oliveira JM, Correlo VM, Rei RL, Kundu SC. Tuning biochemical and mechanical properties of 3D hydrogel tweak stem and cancer cells cross-talk. Summer School Chem2Nature, June 3-6, 2018, Porto, Portugal *(Poster)*
27. Sapru S, Naskar D, **Kundu B**, Ghosh AK, Mandal M, Reis RL, Kundu SC. Engineering silk biomaterials for cancer therapy. Tissue Engineering and Regenerative Medicine International Society (TERMIS), December 3-6, 2017, Charlotte, North Carolina, USA *(Oral)*
28. **Kundu B**, Bastos ARF, Brancato V, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Interaction of human stem cells with cancer cells in 3D: therapeutic prospects. TERM-STEM / FORECAST, November 15-17, 2017, Porto, Portugal *(Poster)*
29. Brancato V, **Kundu B**, Oliveira JM, Correlo VM, Reis RL, Kundu SC. 3D Breast cancer model based on silk fibroin scaffolds. TERM STEM / FORECAST 2017, November 15-17, Porto, Portugal *(Poster)*
30. Brancato V, **Kundu B**, Oliveira JM, Correlo VM, Reis RL, Kundu SC. Silk hydrogels give third dimension to tumor model. Chem2Nature Second School, June 5-9, 2017, Vincci Porto Rua Alameda Basilio Teles, Porto, Portugal *(Poster)*

31. **Kundu B**, Correlo VM, Oliveira JM, Reis RL, Kundu SC. Mechanotransducing ECM: Cross-talk between pre-metasratic niche and cancer cells. Chem2Nature Second School, June 5-9, 2017, Vincci Porto Rua Alameda Basilio Teles, Porto, Portugal *(Poster)*
32. **Kundu B**, Eltohamy M, Kundu SC, Kim HW. Copper (II)-silk fibroin hybrid flowers with Antibacterial activity and selective cytotoxicity. Tissue Engineering and Regenerative Medicine International Society – EU Chapter (TERMIS-EU), June 26-30, 2017, Davos, Switzerland *(Poster)*. eCM Meeting Abstracts 2017, 2: P426
33. **Kundu B**, Eltohamy M, Yadavalli VK, Kundu SC, Kim HW. Biomimetic Stimulation of Cells Using Self-assembled Silk Topographies. Tissue Engineering and Regenerative Medicine International Society – Asia Pacific Chapter (TERMIS-AP)-AP, September 3-6, 2016, Taipei, Taiwan *(Oral)*
34. **Kundu B**, Kim JH, Kundu SC, Kim HW. Immune tolerance of silk proteins. Tissue Engineering and Regenerative Medicine International Society – World Congress, September 8-11, 2015, Boston, Massachusetts, USA *(Oral)*
35. Bhattacharjee P, **Kundu B**, Naskar D, Bhattacharya D, Maiti TK, Kundu SC. A Comparative Study between Nonmulberry Silk Fibroin Blended PVA and PCL Nanofibrous Matrices: Potential ECM for Bone Tissue Engineering. Tissue Engineering and Regenerative Medicine International Society – World Congress, September 8-11, 2015, Boston, Massachusetts, USA *(Poster)*
36. **Kundu B**, Schlimp CJ, Sylvia N, Heinz Redl H, Kundu SC. Thromboelastometric response of silk biomaterial treated human blood. Tissue Engineering and Regenerative Medicine International Society-Asia Pacific (TERMIS-AP), October 23-26, 2013, Shanghai, China *(Oral)*
37. Kundu SC, **Kundu B**, Dey T, Nayak S, Subia B, Pal S, Naskar D. Indian origin natural smart silk biopolymers for regenerative medicine. Intel Conf. of Rubber and Rubber like Materials (ICRRM), March 6-9, 2013, IIT Kharagpur, India *(Oral)*
38. **Kundu B**, Kundu SC. Controlling the micro-architecture of 3D silk sericin hydrophilic network for therapeutic purpose. 3rd World Congress of TERMIS, September 5-8, 2012, Vienna, Austria Journal of Tissue Engineering and Regenerative Medicine 2012;6; 180-180. *(Poster)*
39. **Kundu B**, Kundu SC. Response of human embryonic neural crest stem cells within 3D non-mulberry silk microenvironment. TERMIS-AP, August 3-5, 2011, Singapore *(Poster)*
40. **Kundu B**, Kundu SC. Isolation and characterization of silk fibroin and sericin proteins from different non-mulberry silkworms. International conference on Biomaterials and Tissue Engineering for Biotechnological Applications (BTEB), November 22-24, 2008, IIT Kharagpur, India *(Poster)*

Editorial Board member

- Editor, Special Issue "Bioinspiration in Silk Biomaterial Designing", Biomimetics, 2022
- Associate Editor, Frontiers in Bioengineering and Biotechnology (section Biomaterials), 2022-till date
- Associate Editor, Journal of Functional Materials and Chemical Engineering, 2020-till date
- **Peer-Reviewer:** Acta Biomaterialia, ACS Biomaterials Science & Engineering, Theranostics, Biofabrication, Frontiers in Bioengineering and Biotechnology - section Biomaterials, Frontiers in Materials, Ceramic International, Materials Letters, Chemistry Journals, Advances in Stem Cell Research

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International Visiting Scholar

1. *Visiting Scholar* - Sanford/Burnham Medical Research Institute, San Diego, USA; 2010 (Funded by The Indo-US Science and Technology Forum-IUSSTF, New Delhi)
2. *Visiting Scholar* - University of California San Diego, San Diego, USA; 2010 (Funded by The Indo-US Science and Technology Forum-IUSSTF, New Delhi)
3. *Visiting Scholar*, Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Vienna, Austria - 2012
4. *Visiting Scientist*, laboratory of Professor Hans Clever, Hubrecht Institute, Utrecht, The Netherlands – 2019
5. *Visiting Scientist*, the laboratory of Professor Luca Primo, Cell Migration Laboratory, Candiolo Cancer Institute -IRCCS, Strada Provinciale 142, 10060 Candiolo, Torino, Italy – 2019

Press Release

1. A Discussion with Banani Kundu and Subhas C Kundu - Biomedical Materials - IOPscience (https://iopscience.iop.org/journal/1748-605X/page/Interview-with-Banani-Kundu-and-Subhas-C-Kundu)
2. Silk passion to heart hope – Telegraph (https://www.telegraphindia.com/india/silk-passion-to-heart-hope-bengal-scientist-s-forest-walks-spring-lab-dream/cid/460810#.X7U2elgpkEY.mailto)
3. Silk protein to boost computer memory – nature INDIA (https://www.natureasia.com/en/nindia/article/10.1038/nindia.2012.129)
4. Remarkable Researchers in Global India Series, Portugal Edition – FINANCIAL EXPRESS (Mumbai edition) (http://epaper.financialexpress.com/2265358/portugal/July-31,-2019#dual/4/1)
5. Tumour modelling steps up battle against cancer 3D (https://ec.europa.eu/research-and-innovation/en/projects/success-stories/all/3d-tumour-modelling-steps-battle-against-cancer)

Patent

Flower-shaped organic-inorganic hybrid antibacterial nanocomposite composed of copper-fibroin and its one-pot fabrication

Inventers: Hae-Won Kim, Banani Kundu, Mohamed Eltohamy, Jung-Hwan Lee
Patentee: Institute of Tissue Regeneration Engineering (ITREN), Dankook University, South Korea
Patent number: 102292691
Registration date: August 17, 2021

Awards, Training & Activities

1. **Awards**

Awarding Agency or organization	Purpose	Nature of the award
Department of Science and Technology (DST), Delhi, India – Indian Science Communication Society (ISCOS), Lucknow, India	Best Business Plan Presentation Award - Women Entrepreneurship Development Programme 2021	Certificate
Department of Biotechnology, Government of India, New Delhi	Participating Conference	International Travel Grant (2013)

Department of Science and Technology, Govt. of India, New Delhi	Participating Conference and carrying out short research project at Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Vienna, Austria	International Travel Grant (2012)
Council of Scientific and Industrial Research, Government of India, New Delhi	Participating Conference	International Travel Grant (2011)

2. **Organizing committee**

Title	**Place**	**Year**
FoReCaST Second Workshop	Porto, Portugal	July 11-12, 2019
FoReCaST First Workshop	Porto, Portugal	November 15-17, 2017

3. **Session Co-Chair**; **Symposium**

Title	**Place**	**Year**
FoReCaST Second Workshop	Porto, Portugal	July 11-12, 2019
Tissue Engineering and Regenerative Medicine International Society - EU Chapter	Rhodes, Greece	May 27-31, 2019
Tissue Engineering and Regenerative Medicine International Society – Asia Pacific Chapter	Taipei, Taiwan	September 3-6, 2016

4. **Industrial Trainings**

(i) Detection of Bacterial Endotoxin and Viral Proteins - Albert David Limited, Kolkata, India (July 10 – July 22, 2006)
(ii) Rainbow Medinova Diagnostic Services, Nagpur, India (2004 & 2005, 7 days)
(iii) Plant Molecular Biology and Tissue Culture Techniques, CICR, Nagpur, India (October 26 – November 4, 2004)
(iv) "The Peptide Mapping of Recombinant Hepatitis B Surface Antigen Proteins from Hansenula polymorpha", Serum Institute of India Pvt. Ltd., Pune, India (January to May, 2007)

5. **Extracurricular activities**

(i) Participated in the Workshop on "Writing about Science for Non-Scientific Audiences", December 7-11, 2020
(ii) Participated in REMIX Seminar Series 2021 on Tissue Engineering and Regenerative Medicine – Organizer: BIOtech - Center for Biomedical Technologies, Department of Industrial Engineering, University of Trento – Italy, January 11-20, 2021
(iii) Awarded the Second Prize in KNOW Covid-19 for "NO" Covid-19 Comic Strip Making - 2021, Organized by Indian Science Communication Society (ISCOS), Lucknow, India – National Council for Science & Technology Communication, Department of Science & Technology, Govt. of India