Dr. R. Selvakumar
Professor and Head
Nanobiotechnology and Biotechnolog
Email: rsk@psgias.ac.in

Phone: 9944920032; Intercom:4328
Address: Room No.210, Mezzanine floor, I-Block,
PSG Institute of Advanced Studies,
Peelamedu, Coimbatore-641004

BIOSKETCH

Prof. R. Selvakumar is currently heading the Department of Biotechnology and Nanobiotechnology at PSG Institute of Advanced Studies, Coimbatore, India since 2022. He earned his Ph.D in Biotechnology from Bharathiar University, Coimbatore and post-doctoral fellowships from University of Nebraska, USA and University of Newcastle, Australia. He is a recipient of various prestigious awards like Water Advanced Research and Innovation (WARI) Fellowship 2016-2017 from Indo-US Science and Technology forum (IUSSTF), Endeavour research fellowship award 2015 awarded by Department of Education, Government of Australia, Blaustein postdoctoral fellowship award at Zuckerberg Institute for water research, by Govt of Israel 2013, Invention award on fabrication of three dimensional scaffolds for tissue engineering from Intellectual Ventures, USA (2012), CSIR-SRF, DRDO-JRF, SRF, DST-International Travel Grant, etc. He represented India as a guest speaker during the India-Brazil-South Africa (IBSA) dialogue forum on 'Water treatment and sensors for water pollution detection' held on April 2014 at Birchwood hotel and OR Tambo conference center, Johannesburg, South Africa. He has received research projects for a total value of 4.8 crore from various funding agencies like IGCAR, DST, DRDO, BRNS, ONGC, TNSCST, ICMR and VILGROW etc. He has authored 95+ international and national research paper and 9 book chapters with a H index of 35 and I index of 72. His research articles have been cited more than 3100+ times by various researches around the world. He has supervised 2NPDFs, 8 Ph.D. and 4 M.Phil. students so far. Currently he is guiding 3 Ph.D. students. He has 2 Indian patents granted and 4 technology transfers to his credit. He is currently an editorial board member of Environmental Pollution, Risk, and Remediation Insights and Executive committee member and convener of Association of Hydrologist of India, Coimbatore Chapter.

Educational Profile

Post-Doctoral Fellow- University of Nebraska, Lincoln, USA (as Indo-USSTF-WARI fellow), 2017-2018
Post-Doctoral Fellow- University of Newcastle, Australia (as Endeavour Research fellow), 2015
Doctor of Philosophy- Biotechnology (Spl. Microbial Biotechnology), Bharathiar University, Coimbatore, India, 2009.
Master of Science- Applied Microbiology, PSG College of Arts and Science, Bharathiar University, Coimbatore, India. 2003.
Bachelor of Science- Microbiology (Spl. Immunology), The American College, Madurai Kamaraj University, India. 2001.*Awarded Academic Award for Class Topper*

Positions Held

Oct 2022 – Present	**Professor & Head**, Department of Biotechnology and Nanobiotechnology, PSG Institute of Advanced Studies, Coimbatore

Oct 2021 – Sept 2022	**Associate Professor & Head**, Department of Biotechnology and Nanobiotechnology, PSG Institute of Advanced Studies, Coimbatore
Oct 2015-Sept 2021	**Associate professor** in Nanobiotechnology in PSG Institute of Advanced Studies, Coimbatore
Sept 2010-Sept 2015	**Assistant Professor** In Nanobiotechnology In PSG Institute Of Advanced Studies, Coimbatore
June 2009-August 2010	**Lecturer,** In Nanobiotechnology In PSG Institute Of Advanced Studies, Coimbatore

Research Areas:

- Groundwater/waste water/effluent treatment
- Development of integrated microbial and nanomaterial based solutions for water treatment, purification and for clean environment
- Extraction of rare earth metals from ores, enhancing the metal extractability using combined nanomaterial and extremophilic metal resistant microbes based approach.
- Biomolecule-cell interaction in 3D scaffolds for meniscal tissue engineering field

Awards & Achievements

April 2024	*Visiting Scientist*-Environmental Plastic and Innovation Cluster (EPIC)-GICAN, University of Newcastle, Australia
Nov 2016	*Water Advanced Research and Innovation (WARI) Fellowship (2016-2017)* from Indo-US Science and Technology forum (IUSSTF), DST, India
Sept 2016	*Emerging Water Professional* for EWPP program in at International river symposium organized by Department of Foreign Affairs and Trade, Govt. of Australia held at New Delhi
Dec 2015	*PK Das Best Faculty* award in Nanotechnology for the year 2015 awarded by Nehru group of Institutions, Coimbatore
Nov 2014	*Endeavour Research Fellowship* from Department of Education, Govt. of Australia
Apr 2014	Invited as a *guest speaker by India-Brazil-South Africa (IBSA) dialogue forum* on 'Water treatment and sensors for water pollution detection' held on 4th and 5th April 2014 at Birchwood hotel and OR Tambo conference centre, Johannesburg, South Africa
Apr 2013	*Blaustein Postdoctoral fellowship* award at Zuckerberg Institute for Water Research, Israel (2013)
Jan 2012	*Invention award* on fabrication of three dimensional scaffolds for tissue engineering from Intellectual Ventures, USA
Dec 2008	*Certificate of Recognition* from Vice Chancellor and Syndicate of Bharathiar university for presenting paper at Asia Nano2008 conference at Singapore
Nov 2008	*DST-International Travel Grant* for attending Asia Nano2008 conference at Singapore
Apr 2008	*CSIR- Senior Research Fellow* awarded by Council for Scientific and Industrial Research, Government of India

May 2007 *Senior Research Fellow* awarded by Defence Research and Developmental Organization, Government of India(2007)

May 2004 *Junior Research Fellow* awarded by Defence Research and Developmental Organization, Government of India

Apr 2001 *Academic Award* for Distinction in B.Sc., Microbiology

Research Group

Research Scholars (Ongoing)

Name: Samiya Fathima S
Research Topic: Development of Biosensor for Bacterial Toxin detection in Water and Food
E-mail: sfs@psgias.ac.in

Name: Unnamali S
Research Topic: Ulvan derived 3D bioprinted adsorbents for Environmental remediation
E-mail: sum@psgias.ac.in

Name: Punniyadharshini S
Research Topic: Integrated Nano-bio approach for critical metal extraction from secondary ore samples
E-mail: spu@psgias.ac.in

Name: Janani S
Research Topic: Development of Gold Nanoparticle Based Electrochemical Immunosensor For The Detection Of Indian Big Four Venom Using Avian IgY Antibodies
E-mail: sjan@psgias.ac.in

Alumni

SERB- National post doctoral fellows (N-PDF scheme):

Name: Dr. G.Ramadoss
Thesis Title: Development of nano-bio solution for the treatment of textile industry effluent: A novel hybrid approach

Year: 2016-2018

Name: Dr. C. Revathi
Thesis Title: Functionalized MWCNTs and polymer modified Manganese di oxide (MnO_2) nanostructures (rods, sheets and porous) based printed electrodes for trace level detection of nitrite (NO^{2-}) in ground water

Year: 2017-2019

Ph.D Alumni

Name: Dr. S.P.Suriyaraj
Thesis Title: Microbially synthesized TiO2 nanoparticle based bio-nanocomposite impregnated nanofiber membrane for fluoride and nitrate removal from drinking water
Year of Ph.D. Award: 2016
Degree Awarded by: Bharathiar University

Name: Dr. Mamatha M Pillai
Thesis Title: Biomolecules Supplemented Scaffold-Free and Scaffold Systems For Human Knee Meniscus Tissue Engineering: An In Vitro Study
Year of Ph.D. Award: 2017
Degree Awarded by: Bharathiar University

Name: Dr. N. Seethalakshmi
Thesis Title: Microbial and chemical synthesis of magnesium doped hydroxyapatite nanomaterial for strontium removal from drinking water
Year of Ph.D. Award: 2018
Degree Awarded by: Bharathiar University

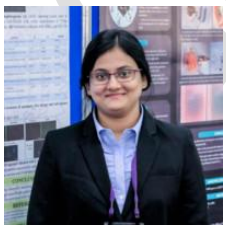
Name: Dr. V. Elakkiya
Thesis Title: In Vitro Evaluation of Wattakaka Volubilis Active Components Incorporated Nanocarriers for Cartilage and Bone Tissue Engineering
Year of Ph.D. Award: 2018
Degree Awarded by: Bharathiar University

Name: Dr. P. B. Sathish
Thesis Title: 3D Bioprinted Electroactive Scaffolds from Tricomposite Electroconductive Bioink for Human Knee Meniscus Application
Year of Ph.D. Award: 2025
Degree Awarded by: Bharathiar University

Name: Dr. R. Narmadha
Thesis Title: In-Vitro Evaluation of Biomolecules Incorporated Nanocarrier Systems For Endometrium Regeneration
Year of Ph.D. Award: 2025
Degree Awarded by: Bharathiar University

Name: Dr. P. Nithya
Thesis Title: Development of bacteriophage impregnated nanocarrier systems for the mitigation of vancomycin resistant bacteria in hospital effluent and groundwater
Year of Ph.D. Award: 2025
Degree Awarded by: Bharathiar University

M.Phil Alumni



Name: Mrs. Priya Gopinathan
Thesis Title: Impact of silver nanoparticle decorated flagellar bionanocomposites on electrode performance in microbial fuel cells used for dye degradation Solution
Year of M.Phil Award: 2012
Degree Awarded by: Bharathiar University

Name: Dr.S.P.Suriyaraj
Thesis Title: Microbial synthesis of titanium dioxide nanoparticles and its application for removal of fluoride from aqueous solution
Year of M.Phil Award: 2014
Degree Awarded by: Bharathiar University

Name: Mrs. R.Poorvisha
Thesis Title: Templated (Bacterial/Nanofiber) and Cation Doped Biocompatible Hydroxyapatite Nanoparticles for Fluoride and Strontium Removal
Year of M.Phil Award: 2015
Degree Awarded by: Bharathiar University

Name: Ms. H.Lakshmipriya
Thesis Title: Porous three dimensional Silk-PVA hybrid scaffolds for human osteoblast MG63 cell attachment and proliferation in vitro
Year of M.Phil Award: 2017
Degree Awarded by: Bharathiar University

Funded Projects

Ongoing

S. No	Title	Grant Period	Cost (Rs. in lakhs)	Funding Agency	Status
1	Rapid Detection of Botulinum Toxin using Chicken Egg Yolk (IgY) Antibodies and by Phage Display Derived Monoclonal Antibodies (as PI-2)	2 years (2024-2026)	58.38	DRDO-LSRB	Ongoing

Completed

S. No	Title	Grant Period	Cost (Rs. in lakhs)	Funding Agency	Status
1	Development of Nanoporous S-layer Based Ceramic Membranes (Biocer) for Lanthanide and Simulated Actinide Separation (PI)	Two years (2010-2012)	17.38	Indira Gandhi Centre for Atomic Research(IGCAR), DAE, India	Completed Successfully

2	Microbial and chemical synthesis of TiO_2nanoparticles and its application in the development of impregnated nanofibrous membrane for nitrate and fluoride removal from drinking water" (PI)	Three years (2011-2014)	12.41	DRDO-LSRB, New Delhi	Completed Successfully
3	Hydroxyapetite based ceramic adsorbent for strontium removal from drinking water (PI)	Two years (2014-2016)	19.28	Department of Science and Technology (DST) New Delhi	Completed Successfully
4	Development of hybrid nanozyme-bacterial hydrogels for augmentation of uranium leaching from subsurface soil (PI)	6 months (Dec 2016 to May 2017)	14.95	ONGC, New Delhi	Completed Successfully
5	Design and development of lab scale prototype water purification system using modified hydroxyapatite based nanocomposites for removal of strontium in ground water (PI)	2017-2020	21.38	Water Technology Initiatives, Department Of Science and Technology (DST) New Delhi	Completed Successfully
6	Development of gold nanoparticle based electrochemical immunosensor for snake venom detection using chicken egg yolk antisnake venom antibodies (IgY) (PI)	2019-2022	19.97	Indian Council of Medical research (ICMR), Govt. of India	Completed Successfully
7	Bio-electrochemical reclamation of titanium and other rare earth metals from red mud waste using a microbial fuel cell approach	2022-2023	9.999	Ministry of Mines, Govt of India	Completed Successfully
8	Recovery of yttrium from spent process water after uranium extraction using surface modified magnetic core shell zirconium oxide nanoparticles	2020-2023	70.67	Water Technology Initiatives-DST New Delhi	Completed Successfully
9	Pilot scale demonstration of nanobubble technology for chromium removal from electroplating industry effluent	2020-2023	65.87	Technology Mission Division-DST, New Delhi	Completed Successfully

10	Evaluation of vancomycin resistant bacteria neutralization kinetics and possible transduction of resistant determinants by bacteriophage encapsulated coreshell nanofiber membranes in hospital effluent treatment	2021-2024	57.83	Core research grant-SERB, New Delhi	Completed Successfully
Grants- National- As Co-Principal Investigator. Co-Investigator					
11	Development of textile based nano hybrids as smart singlet oxygen generators	3 years (2014-2017)	16.52	Board of Research in Nuclear Sciences (BRNS) 29.04.2014	Completed Successfully
12	Surface activated nanofibrous scaffold for meniscal tissue engineering	2 years (2014-2016	4.9	Tamilnadu state council for science and technology (TNSCST)	Completed Successfully
13	Development Of Portable, Microfluidic NH4+ Ion Selective Electrochemical Sensor Platform Based On Functional Nano-Tin Films For Re-Circulating Aquaculture Reactors For Sustainable Environment	3 years (2020-2023)	65.92	Technology Mission Division-DST and Aquamarine industries	Completed Successfully
Funded International Fellowships (as fellow)					
14	Endeavour Research Fellowship @ University of Newcastle. Australia	June 2015 to November 2015	AUD 24500/- (11.76 lakhs)	Department of Education, Govt. of Australia	Completed Successfully
15	Water Advanced Research and Innovation Fellowship@ University of Nebraska USA	June 2017-April 2018	22.00	Indo Indo US Science and Technology Forum, (IUSSTF), New Delhi	Completed Successfully

Patents

Feb 2020 Production of cellulose membrane from cotton microdust" (**Granted**-408222 dated 30/09.2022)

Mar 2024 Improved method of bacterial mediated biosynthesis of zirconium oxide nanoparticles" (**Granted-526996 dated 15.03.2024**)

Laboratories In-charge

1. Centre for Translational Research in Reproductive Health
2. Nanobiotechnology Laboratory
3. Tissue Engineering Laboratory

Invited Talks

Invited lectures delivered at National and International levels: 75+.

Journal Publications

https://scholar.google.co.in/citations?user=FUPRy1YAAAAJ&hl=en

Total Number of Research/review articles (May 2025)	: 96
Total Number of book and book chapters	: 9
Citations	: 3176
h-index	: 35
i10-index	: 72
Average impact factor/Journal article	: ~5

Sl. No	Authors in Sequence	Paper Title	Journal/ Year/Vol./Issue/ Page.	Journal ISSN No.	Impact Factor, (2025)
1	Gayathri V., Aleena, U, V.P.Dinesh, R.Selvakumar, Park Sungsu, P.Biji	Profound convention and enhanced biocompatibility analysis of ZnO/Ag heterojunction nanorods based advanced root canal sealers	Bioengineering (Just accepted)	**2306-5354**	3.7
2	Aswin K, Shiv Basant Kumar, Jey Kumar P, Sudharsanavasan C, Raja S, Selvakumar R, Gowthamarajan K,, Thava Palanisami	Molecular interactions and dynamics of microplastics in indoor dust with lung-inflammatory receptors: a study in academic settings	Journal of Environmental Sciences In press	1878-7320	6.3
3	Ravichandran, S. K., Silvaster, B., Rajendran, S., Wong, J. W. C., Ganesan, B., & Johnravindar, D.	Hydrochar-enhanced hydrogen production from cassava industrial waste residue using Enterobacter Aerogenes MTCC 2822,	Environmental Technology, 2025, 1-17,	*0959-3330*	2.0
4	Sankar Veintramuthu, Rajendran Selvakumar, R Narmadha, V. G Jaishree	Enhanced therapeutic approach for vaginal candidiasis: chitosan nanoparticulate thermoreversible in situ gels for sustained clotrimazole delivery	3Biotech, 2025. 15,71,	*2190-5738*	2.9

5	Selvakumar Rajendran, Karthik Loganathan, Ketul C Popat	Microbial prospecting and biomaterials	Frontiers in Microbiology, 2025, 15, 1540191	1664-302X.	4.5
6	S Janani, Chorariab Ankit, K V Ashok Raj, S Rajeswari, R Sivasubramanian, A Michael, R and Selvakumar	Gold nanoparticle-based electrochemical immunosensor for the detection of Russell's viper venom using IgY antibodies,	Microchemical, 2025, 212, 113247	*1095-9149*	5.1
7	R Narmadha, P.B Sathish, R Nagarajan, W Prateek, R Vijaygopal, R Selvakumar	Biomolecule functionalized PVA-chitosan composite nanofibrous scaffold for human endometrium stromal cells attachment and proliferation: An in-vitro study	Materials Letters , 363, 15 May 2024, 136326	0167-577X	2.7
8	P B Sathish, S Janani, P Nithiya, S Suriyaprakash, Rajendran Selvakumar	Insitu synthesis of gold nanospheres immobilised carboxymethyl cellulose-based conductive hydrogel bioink for 3D bioprinting technology	Materials Letters 359, 15 March 2024, 135936	0167-577X	2.7
9	A Dhakshana, R Selvakumar, K Vivekanand, M Alagappan, K Chandraraj, S. P Suriyaraj	Development of superhydrophobic/superoleophilic cotton micro dust waste functionalized SiO2 nanocomposite as an efficient adsorbent for oil/water separation	Nanotechnology for Environmental Engineering , 2024, https://doi.org/10.1007/s41204-023-00356-3	2365-6387	-
10	P Nithiya, G Alagarsamy, P. B Sathish, D Rajarathnam, Li Xu, Jeyaraj Sankarganesh, Satheesh Manjima, R Selvakumar	Impact of effluent parameters and vancomycin concentration on vancomycin resistant *Escherichia coli* and its host specific bacteriophage lytic activity in hospital effluent	Environmental Research 15 2024, 118334	0013-9351	7.7
9	G Alagarsamy, K Sruthi, R Selvakumar, R Sivasubramanian	Electrochemical deposition of hydrothermally pretreated TiO2 on aluminium substrate through the formation of peroxotitanium complex and their application towards visible light assisted photocurrent generation	Materials Chemistry and Physics 316, 1 April 2024, 129064	1879-3312	4.7
10.	Haripriya S, R Narmadha, C. Ravikumar, K. Ariyaperumal, R Selvakumar, Jayakanthan M	Anti-proliferative effect of leaf phytochemicals of soursop (Annona muricata L.) against human osteosarcoma in vitro,	Chemical Papers (2024) 78:3787–3797	2585-7290	2.5

11	R.Mahendran, S. P. Selvaraj, A. R. Dhanapal, S.B.Sarasa, B. M. Mathias, B.Thankappan, D.RajaFemilSelta, P. Naveen, R. Poorani, N. Sundhar, M.M.Pillai, R. Selvakumar, C.Y. Huang, R.Eswaran, J. Angayarkanni	Tetrahydrobiopterin from cyanide-degrading bacterium *Bacillus pumilus* strain SVD06 induces apoptosis in human lung adenocarcinoma cell (A549)	Biotechnology and Applied Biochemistry, 70,6, 2023, 2052-2068	1470-8744	2.7
12	R Selvakumar, A Guhananthan, Thavamani Palanisami	Recent advances in micropollutant removal and mitigation from water using three dimensional adsorbent materials	Current Opinion in Environmental Science, 34, 100475, 2023	2468-5844	6.6
13	S Sivaselvam, A Mohankumar, R Narmadha, R Selvakumar, P Sundararaj, C Viswanathan, N and Ponpandian	Effect of gamma-ray irradiated reduced graphene oxide (rGO) on environmental health: An in-vitro and in-vivo studies	Environmental Pollution, 318, 120933, 2023	0269-7491	7.3
14	M Shalini, M Balaji, P Nithya, R Selvakumar, Gopal Shankar Krishnakumar	Functionalization of biologically inspired scaffold through selenium and gallium ion doping to promote bone regeneration,	Journal of Drug Delivery Science and Technology, 79,104011, 2023	2588-8943	4.9
15	G Alagarsamy, P Nithiya, R Sivasubramanian, R Selvakumar	Multi-ionic interaction with magnesium doped hydroxyapatite-zeolite nanocomposite porous polyacrylonitrile polymer bead in aqueous solution and spiked groundwater,	Environmental Pollution, 309, 119728, 2022	0269-7491	7.3
16	Balaji Mahendiran, Shalini Muthusamy, G Janani, Biman Mandal, Selvakumar Rajendran, Gopal Shankar Krishnakumar	Surface modification of decellularized natural cellulose scaffolds with organosilanes for bone tissue regeneration,	ACS Biomaterials Science & Engineering, 5,8, 2000-2015, 2022	2373-9878	5.5
17	N. A. Mware, M. C. Hall, R. Selvakumar, J. E. Gilley, A. M. Schmidt, S. L. Bartelt-Hunt, Y. Zhang, X. Li	Resistome and mobilome in surface runoff from manured soil as affected by setback distance,	Journal of Hazardous Materials, 429, pp128278, 2022	0304-3894	11.3

18	PB Sathish, S Gayathri, J Priyanka, M Shalini, R Narmadha, Gopal Shankar K, R Selvakumar	Tricomposite gelatin-carboxymethylcellulose- alginate bioink for direct and indirect 3D printing of human knee meniscal scaffold	International Journal of Biological Macromolecules 195, 179-189, 2022	0141-8130	8.5
19	Ankit C, Rajeswari S, S. Janani, Selvakumar R, Naoual O & A. Michael	Chicken egg yolk antibodies (IgY)-based antivenom for neutralization of snake venoms: a review,	Toxin Reviews, 41 1018-1029, 2022	1556-9543	2.4
20	Balaji M, Shalini M, R. Selvakumar, Narmadha R, Sowndarya S, S.N. Jaisankar, Gopal Shankar Krishna kumar,	Decellularized natural 3D cellulose scaffold derived from Borassus flabellifer (Linn.) as extracellular matrix for tissue engineering applications,	Carbohydrate Polymers, 272, 2021, 118494.	0144-8617	12.5
21	Bency T, J Sivakumar, S Asokan, Mahendran R, Mamatha M. Pillai, R. Selvakumar, J.Angayarkanni,	Dual antimicrobial and anticancer activity of a novel synthetic α-helical antimicrobial peptide,	European J. Pharmaceutical Sciences, 161, 2021, 105784,	0928-0987,	4.7
22	S. Sivaselvam, R. Selvakumar, C. Viswanathan, N. Ponpandian,	Rapid one-pot synthesis of PAM-GO-Ag nanocomposite hydrogel by gamma-ray irradiation for remediation of environment pollutants and pathogen inactivation,	Chemosphere, 275, 2021, 130061,	0045-6535,	
23	Karunakaran G, Eun-Bum Cho, K. Thirumurugan, G. Suresh Kumar, E.Kolesnikov, Selvakumar B, Gopinathan J, Mamatha M Pillai, Selvakumar R	Mesoporous Mn-doped hydroxyapatite nanorods obtained via pyridinium chloride enabled microwave-assisted synthesis by utilizing Donax variabilis seashells for implant applications,	Materials Science and Engineering: C, 126, 2021, 112170,	0928-4931,	6
24	Balaji M, Shalini M, Sowndarya S, S.N. Jaisankar, K.C. Popat, R. Selvakumar, Gopal Shankar K,	Recent trends in natural polysaccharide based bioinks for multiscale 3D printing in tissue regeneration: A review,	International J. Biological Macromolecules183, 2021, 564-588,,	0141-8130,	8.5
25	Vignesh, N., Suriyaraj, S.P., Selvakumar, R. K.Chandraraj	Facile Fabrication and Characterization of Zn Loaded Cellulose Membrane from Cotton Microdust Waste and its Antibacterial Properties—A Waste to Value Approach.	Journal of Polymers and the Environment 29,1651 –1662 (2021),	1566-2543	5.0

26	Ramadoss G, S.P. Suriyaraj, S. Ramachandran, P. Arivalagan, Selvakumar R	Mesoporous ferromagnetic manganese ferrite nanoparticles for enhanced visible light mineralisation of azoic dye into nontoxic by-products,	Science of the Total Environment, 765, 2021, 142707	0048-9697,	8.0
27	P.B. Sathish, R. Narmadha, R. Selvakumar,	Synthesis and characterization of anti-adhesion tricompositeelectrospun nanofiber barrier membrane for use in post-surgical adhesion conditions,	Materials Letters, 285, 2021, 129038,	0167-577X,	2.7
28	V Elakkiya, K Krishnan, A Bhattacharyya, R Selvakumar	Advances in Ayurvedic medicinal plants and nanocarriers for arthritis treatment and management: A review,	Journal of Herbal Medicine, 24, 100412,2020	2210-8033	1.9
29	Karunakaran G, Eun-Bum C, G. Suresh Kumar, E. Kolesnikov, Gopinathan. J, Mamatha M. Pillai, Selvakumar R, Selvakumar B, K. Govindaraj S, M. P Rajeshkumar,	Mesoporous Mg-doped Hydroxyapatite Nanorods Prepared from Bio-waste Blue Mussel Shells for Implant Applications,	Ceramic International, 2020, 46(18)28514-28527	0272-8842	5.6
30	T Vijayaraghavan, M Bradha, B Pradeepta, Parida Kulamani, G Ramadoss, V Vadivel, R Selvakumar, Ashok Anuradha,	Influence of secondary oxide phases in enhancing the photocatalytic properties of alkaline earth elements doped LaFeO3 nanocomposites,	Journal of Physics and Chemistry of Solids, 2020, 140, 109377.	0022-3697	4.9
31	Deepa Prabhu, Jayakrishnan Nampoothiri, Elakkiya V, Narmada R, Selvakumar R, Gopalakrishnan P, Ravi K.R Sivasubramanian R,	Elucidating the role of microstructural modification on stress corrosion cracking of biodegradable Mg-4Zn alloy in simulated body fluid,	Material Science and Engineering C, 2020, 106, 110164	0928-4931,	6.0
32	G Sathiskumar, Aarthi Manisekaran, Senthilkumar R, Selvakumar R, Amitava Bhattacharyya	Biodegradable cellulosic sanitary napkins from waste cotton and natural extract based anti-bacterial nanocolorants,	Journal of the Indian Institute of Science, 2019, 99(3) 519	0019-4964	2.3
33	Mamatha M Pillai, J Gopinathan, Elakkiya V, Sundarrajan S R Sathishkumar M, Santosh Sahanand, Amitava	Knee Meniscus Injury: Insights on Tissue engineering Strategies Through Retrospective Analysis and In Silico Modeling,	Journal of Indian Institute of Sciences, 2019, 99(3) 429	0019-4964	2.3

	Bhattacharyya, R Selvakumar				
34	SP Suriyaraj, G Ramadoss, K Chandraraj, **R Selvakumar**	One pot facile green synthesis of crystalline Bio-ZrO2 nanoparticles using Acinetobacter sp. KCSI1 under room temperature,	Material Science and Engineering C, 2019, 105, 110021	0928-4931	6.0
35	Gopinathan Janarthanan, Mamatha M Pillai, Sahanand Santosh Kulasekaran, **Selvakumar Rajendran,** Amitava Bhattacharyya	Engineered knee meniscus construct: understanding the structure and impact of functionalization in 3D environment.	Polimer Bulletin, 77, 2611, 2020	1436-2449	4.0
36	R Dhanapal, R Ravindran, N Seethalakshmi, **R Selvakumar**	Surface functionalized diatomaceous earth for effective adsorption of strontium from aqueous solution,	Journal of Radioanalytical and Nuclear Chemistry,319 (3), 1301-1306, 2019	1745-8080	1.6
37	Karunakaran Gopalu, Eun-Bum Cho, Kumar G. Suresh, Evgeny Kolesnikov, Dmitriy YuKarpenkov, Gopinathan J, Mamatha M Pillai, **Selvakumar R,** Selvakumar Boobalan, Mikhail V. G	sodium dodecyl sulfate mediated microwave synthesis of biocompatible Super paramagnetic mesoporous hydroxyapatite nanoparticles using black Chlamys varia seashell as a calcium source for biomedical application,	Ceramic International, 45 (12),15143-15155,2019,	0272-8842	5.6
38	Karunakaran Gopalu, Eun-Bum Cho, Kumar G. Suresh, Evgeny Kolesnikov, GopinathanJanarthanan, Mamatha Muraleedharan Pillai, **Selvakumar Rajendran,**SelvakumarBoobalan, Mikhail V. Gorshenkov, Denis Kuzne	Ascorbic Acid-Assisted Microwave Synthesis of Mesoporous Ag-doped Hydroxyapatite Nanorods from Bio-Waste Seashells for Implant Applications	ACS Appl. Bio Mater, 25, 2280-2293, 2019,	2576-6422	4.7
39	Elakkiya Venugopal, NarmadhaRajeswaran, K Sahanand, Amitava Bhattacharyya, **Selvakumar Rajendran**	In vitro evaluation of phytochemical loaded electrospungelatin nanofibers for application in bone and cartilage tissue engineering,	Biomedical Materials, 14, 015004, 2019	1748-6041	3.7
40	Venugopal Elakkiya, K Santosh Sahanand, Amitava Bhattacharyya,	Electrospun PCL nanofibers blended with Wattakakavolubilis active phytochemicals for bone and cartilage tissue engineering,	Nanomedicine: Nanotechnology, Biology, and	1549-9634	4.6

	Rajendran Selvakumar		Medicine 2019, 21, 102044		
41	**R Selvakumar,** G Ramadoss, Mridula P Menon, K K Rajendran, P Thavamani, Ravi Naidu, MegharajMallavarappu	Challenges and complexities in remediation of uranium contaminated soils: A review.	Journal of Environmental Radioactivity, 192, 592-603, 2018,	0265-931x	2.1
42	Elakkiya Venugopal, Sujith Subash Eranezhath, Amitava Bhattacharya, Selvakumar Rajendran	In vitro evaluation of phytochemicals from Murivenna oil and Wattakakavolubilis leaf on fibroblast cells,	J. Ayurveda and Integrative Medicine 9(2),S12018, S1	0975-9476	1.9
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Total Number of Conference Papers/Proceedings: 15+

Technology transfer

Oct 2011 Design, fabrication & method of producing micro, meso&nanoporous three dimensional(3D) scaffolds for tissue engineering using removable needle technology, (Technology transferred to Intellectual Ventures, USA**.IN-819376 (RFI-090182)** dated 10th October 2011) (Exclusive)

Nov 2018 Simultaneous removal of chromium and TDS from electroplating industry using nanobubble technology (Technology transferred to Silver Crown Industries, Coimbatore). (non Exclusive)

March 2022 Antimicrobial cum wound care cocktail solution for advanced wound care applications(Technology transferred to Ardor Biomed India Pvt Ltd, Pollachi) (non Exclusive)

May 2025 "Nanobubble reactor system for simultaneous removal and recovery from metal containing industrial effluents" (Technology transferred to Vishaca Tech Engineers,, Coimbatore). (non Exclusive)

Products/Prototypes Developed

1. Micro, meso&nanoporous three dimensional(3D) scaffolds for tissue engineering.
2. Nanobubble technology for Metal removal from electroplating effluent
3. Antimicrobial cum wound care cocktail solution
4. Extremophile bacterial consortium for Zinc removal from electroplating effluent

Consultancy Projects

Ongoing: 2

Completed

Consultancy-- As Principal Investigator					
1	Characterization and bioactivity determination in treated water samples	2022	0.89	May 2022 Eureka Forbes Limited Bangalore	Completed Successfully

2	Biological activity of copper infused drinking water	2024	6.09	May 2022 Eureka Forbes Limited Bangalore	Completed Successfully

Other information

- Visiting Scientist- University of Newcastle, Australia, 2024-2025
- Convener, Association of Hydrologist of India- Coimbatore Chapter@PSGIAS
- Editorial board member, Journal of Environmental Pollution, Risk, and Remediation Insights (EPRRI), Scilight publishers, Australia
- Guest Editor, Frontiers in Microbiology Journal for special issue on Microbial Prospecting and Biomaterials
- Program Coordinator at PSGIAS for joint international programs at Colorado State University, USA and University of Newcastle, Australia
- Research Coordinator for Bharathiar University research programs at PSGIAS.
- Active reviewer of BIRAC-BIG, DST, Nidhi Prayas proposals