

DEPARTMENT OF BIOTECHNOLOGY ENGINEERING
GRANT DETAILS-2022-23

| External grant | | | | | | |
|---|--|--------------------------|-------------------------|--|----------------------------|---------------|
| S N | Name of the PI & Co-PI | Sponsoring Agency | Grant amount (₹) | Title of the Project | Duration of Project | Status |
| Fund Received by Faculty: | | | | | | |
| 1. | Dr. Ujwal P. and Dr. Santhosh Poojary | KSBDB-GoK | 3,80,000 | Biofuel research, information and demonstration centre, Nitte | Ongoing | Ongoing |
| 2. | Dr. Vidya S.M. | DAE-BRNS | 1,70,572 | Role of polysaccharides in the prevention of radiation induced intestinal injury | 2 | Completed |
| Total | | | 5,50,572 | | | |
| Research Grant received with UG Student Group (Faculty as mentor): | | | | | | |
| 1 | Dr. Shyama Prasad Sajankila & Dr Sandesh K | KSCST | 6000 | BIOSURFACTANT-MEDIATED DEGRADATION OF CASHEW KERNEL OIL BY MICROBES | Ongoing | Ongoing |
| Total | | | 6,000 | | | |

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| No. of External Research Grants: | 3 |
| No. of faculty received Research Grants: | 4 |
| Total Grant amount received | 5,56,572 |

| Other Research Grants (Funded by the Institute): Sanctioned Amount | | | | | | |
|---|---|--------------------------|-------------------------|---|----------------------------|---------------|
| S N | Name of the PI & Co-PI | Sponsoring Agency | Grant amount (₹) | Title of the Project | Duration of Project | Status |
| 1. | Dr. Louella Concepta Goveas & Dr. Sneha Nayak | Nitte University | Rs 1,60,000 | Carbon based Magnetic Nanocomposites using sustainable resources for removal of high molecular weight polyaromatic hydrocarbons | 2 years | Ongoing |
| 2. | Dr.Ujwal P and Dr Sandesh K | Nitte University | Rs 1,00,000 | | 2 years | Ongoing |
| 3. | Dr. Harshitha M Jathanna | Nitte University | Rs 1,00,000 | Harnessing biodiesel industry wastes to simultaneously produce dual industrially relevant products from single fungal species | 2 years | Ongoing |
| Sanctioned Grant Total (2022-23) | | | Rs 9,16,572 | | | |

DEPARTMENT OF BIOTECHNOLOGY ENGINEERING
Faculty Patents for AY August 01st 2022 – July 31st 2023

| S.N. | Faculty Names | Title | Patent Published/Granted | Application/Grant Number | Date of Publication/Grant |
|------|--|--|--------------------------|--------------------------|---------------------------|
| 1 | Dr. Sandesh K, Dr. Ujwal P and Dr. Vinayaka B Shet | Hydrolysis Process by Metal Nanoparticle Assisted Induction Heating | Granted | 421522 | 14/02/2023 |
| 2 | Dr. Sneha Nayak, Dr. Louella Concepta Goveas, Dr. Vidya SM | Liquid Herbal Shampoo Formulation and Development using <i>Cyclea peltata</i> | Published | 202241059347 | 25/11/2022 |
| 3. | Dr Chetan DM | Bio-bandage from human platelet lysate admixed with sericin polymer as an efficient wound healer | Published | 202241071431 | 30/12/2022 |
| 4. | Dr Chetan DM | Flexible Biodegradable Polymer for Delivering Bioactive Compounds | Published | 202241056882 | 14/10/2022 |

RESEARCH PAPER PUBLICATIONS FOR AY AUGUST 01ST 2022 – JULY 31ST 2023

| Sl No | Month | Paper | Details |
|-------|-----------|---|---|
| 1 | August | Ghate, P., Prabhu, D., Murugesan, G., Goveas, L.C. , Varadavenkatesan, T., Vinayagam, R., Chi, N.T.L., Pugazhendhi, A. and Selvaraj, R., Synthesis of hydroxyapatite nanoparticles using Acacia falcata leaf extract and study of their anti-cancerous activity against cancerous mammalian cell lines. <i>Environmental Research</i> , 2023. .113917. https://doi.org/10.1016/j.envres.2022.113917 | Journal: Environmental Research , Q1, Scopus WoS, Impact Factor 8.431 H Index: 149, Cite Score: 9.5, SJR: 1.51, SNIP: 1.758, ISSN: 00139351 10960953, Journal Link: https://www.sciencedirect.com/journal/environmental-research |
| 2 | August | Goveas LC , Selvaraj R, Kumar PS, Vinayagam R, Sajankila SP . Biodegradation kinetics and metabolism of Benzo (a) fluorene by Pseudomonas strains isolated from refinery effluent. <i>Chemosphere</i> . 2022, 307:136041. https://doi.org/10.1016/j.chemosphere.2022.136041 | Journal: Chemosphere, Q1, Scopus and Web of Science, H Index: 265 ISSN: 0045-6535, CiteScore: 11.7, SNIP: 1.708, SJR: 1.632, Impact Factor: 8.943 Journal Link: https://www.sciencedirect.com/journal/chemosphere |
| 3 | September | Goveas LC , Selvaraj R, Sajankila SP . Characterization of biosurfactant produced in response to petroleum crude oil stress by <i>Bacillus</i> sp. WD22 in marine environment. <i>Brazilian Journal of Microbiology</i> .2022 September 2 https://doi.org/10.1007/s42770-022-00811-4 | Journal: Brazilian Journal of Microbiology, Q3, Scopus and Web of Science, H Index: 70, Electronic ISSN: 1678-4405, Print ISSN: 1517-8382, Cite Score: 3.9, SJR: 0.497, SNIP: 1.114. Impact Factor: 2.476 Journal Link: https://www.springer.com/journal/42770 |
| 4 | September | Bhat Agni M, Hegde PS, Ullal H , Damodara Gowda KM. Nutritional efficacy of Astaxanthin in modulating orexin peptides and fatty acid level during adult life | Journal: Nutritional Neuroscience, Q1, Scopus, H Index: 63, ISSN: |

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| | | of rats exposed to perinatal undernutrition stress. Nutritional Neuroscience. 2022 Sep 21, 25(9):1-13 https://doi.org/10.1080/1028415X.2022.2123184 | 1028-415X, Cite Score: 8.4, SJR: 0.718, SNIP:0.961 , Impact Factor: 4.062 Journal Link: https://www.tandfonline.com/doi/full/10.1080/1028415X.2022.2123184?scroll=top&needAccess=true |
| 5 | October | Nayak S, Goveas LC , Selvaraj R, Vinayagam R, Manickam S. Advances in the Utilization of Carbon-Neutral Technologies for a Sustainable Tomorrow: A Critical Review and the Path Forward. Bioresource Technology. 2022, 364:128073, https://doi.org/10.1016/j.biortech.2022.128073 | Journal: Bioresource technology, Q1, Scopus WOS, H Index: 317, Cite Score: 17.4, SJR: 2.35, SNIP: 2.06, ISSN: 09608524, Impact Factor: 11.889, Journal Link: https://www.sciencedirect.com/journal/bioresourcetechnology |
| 6. | October | Chetan D. M , Raghavendra H. L, Ramesh S. Bhat, Narendra Kumar S, Venkatesh Kamath H , Assessment of physicochemical characteristics of various water sources, 13(6), 2022 DOI: 10.47750/pnr.2022.13.S06.196 | Journal: Journal of Pharmaceutical negative results, Q4, Scopus, H Index: 6, SJR: 0.13, ISSN [0976-9234] Journal Link: https://www.pnrjournal.com/index.php/home |
| 7. | October | Vinayagam R, Ganga S, Murugesan G, Rangasamy G, Bhole R, Goveas LC , Varadavenkatesan T, Dave N, Samanth A, Devi VR, Selvaraj R. 2, 4-Dichlorophenoxyacetic acid (2, 4-D) adsorptive removal by algal magnetic | Journal: Chemosphere, Q1, Scopus and Web of Science, H Index: 265 ISSN: 0045-6535, CiteScore: 11.7, |

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| | | activated carbon nanocomposite. Chemosphere, Volume: 310, 2022, 136883. https://doi.org/10.1016/j.chemosphere.2022.136883 | SNIP: 1.708, SJR: 1.632, Impact Factor: 8.943 Journal Link: https://www.sciencedirect.com/journal/chemosphere |
| 8. | October | Selvaraj R, Prabhu D, Kumar PS, Rangasamy G, Murugesan G, Rajesh M, Goveas LC , Varadavenkatesan T, Samanth A, Balakrishnaraja R, Vinayagam R. Adsorptive removal of tetracycline from aqueous solutions using magnetic Fe ₂ O ₃ /activated carbon prepared from <i>Cynometra ramiflora</i> fruit waste. Chemosphere. Vol 310, 2022, 136892. https://doi.org/10.1016/j.chemosphere.2022.136892 | Journal: Chemosphere, Q1, Scopus and Web of Science, H Index: 265 ISSN: 0045-6535, CiteScore: 11.7, SNIP: 1.708, SJR: 1.632, Impact Factor: 8.943 Journal Link: https://www.sciencedirect.com/journal/chemosphere |
| 9. | October | Goveas LC, Nayak S , Vinayagam R, Show PL, Selvaraj R. Microalgal remediation and valorization of polluted wastewaters for zero-carbon circular bioeconomy. Bioresource Technology. 2022, Vol 365, pp. 128169. https://doi.org/10.1016/j.biortech.2022.128169 | Journal: Bioresource technology, Q1, Scopus WOS, H Index: 317, Cite Score: 17.4, SJR: 2.35, SNIP: 2.06, ISSN: 09608524, Impact Factor: 11.889, Journal Link: https://www.sciencedirect.com/journal/bioresour-technology |
| 10. | November | Chetan D. M1, Raghavendra H. L2, *, Narendra Kumar S2, Venkatesh Kamath H4. Anilkumar HS "Production and characterization of levan by bacteria found in solid wastes, <i>Journal of Neuroquantology</i> : Volume13: Special Issue. 6:2022, PAGE 3744-3752 DOI:10.14704/NQ.2022.20.12. NQ773701 | Journal: <i>Journal of Neuroquantology</i> Q3, Scopus H Index: 21, SJR: 0.28 SNIP: 2.06, ISSN: 13035150, I |
| 11. | November | Vinayagam R, Hebbar A, Kumar PS, Rangasamy G, Varadavenkatesan T, Murugesan G, Srivastava S, Goveas LC , Kumar NM, Selvaraj R. Green synthesized cobalt oxide nanoparticles with photocatalytic activity towards dye removal from water | Journal: Environmental Research, Q1, Scopus and Web of Science, H Index: 149 ISSN: 00139351, 10960953 |

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| | | environment. Environmental Research. 2022, 216:114766. https://doi.org/10.1016/j.envres.2022.114766 | CiteScore: 9.1, Impact Factor: 8.431, SJR: 151 Journal Link: https://www.sciencedirect.com/journal/environmental-research |
| 12 | November | Vinayagam R, Quadras M, Varadavenkatesan T, Debraj D, Goveas LC , Samanth A, Balakrishnan D, Selvaraj R. Magnetic activated carbon synthesized using rubber fig tree leaves for adsorptive removal of tetracycline from aqueous solutions. Environmental Research. 2022, 216:114775. https://doi.org/10.1016/j.envres.2022.114775 | Journal: Environmental Research, Q1, Scopus and Web of Science, H Index: 149 ISSN: 00139351, 10960953 CiteScore: 9.1, Impact Factor: 8.431, SJR: 151 Journal Link: https://www.sciencedirect.com/journal/environmental-research |
| 13 | November | Nayak S, Goveas LC , Selvaraj R, Mutalik S, Sajankila SP . Use of <i>Cyclea peltata</i> mediated gold nanospheres for adsorptive degradation of methyl green dye. Bioresource Technology Reports. 2022, 20:101261. https://doi.org/10.1016/j.biteb.2022.101261 | Journal: Bioresource Technology Reports, Q1, Scopus, H Index: 27, Cite Score: 6.2, SNIP: 0.837, ISSN: 2589014X, Journal Link: https://www.journals.elsevier.com/bioresource-technology-reports |
| 14. | November | Vinayagam R, Murugesan G, Varadavenkatesan T, Bhole R, Goveas LC , Samanth A, Ahmed MB, Selvaraj R. Algal biomass-derived nano-activated carbon for the rapid removal of tetracycline by adsorption: Experimentation and adaptive neuro-fuzzy inference system modeling. Bioresource Technology Reports. 2022, 20:101291. https://doi.org/10.1016/j.biteb.2022.101291 | Journal: Bioresource Technology Reports, Q1, Scopus, H Index: 27, Cite Score: 6.2, SNIP: 0.837, ISSN: 2589014X, Journal Link: https://www.journals.elsevier.com/bioresource-technology-reports |
| 15. | December | Vinayagam R, Kandati S, Murugesan G, Goveas LC , Baliga A, Pai S, Varadavenkatesan T, Kaviyarasu K, Selvaraj R. Bioinspiration synthesis of hydroxyapatite nanoparticles using eggshells as a calcium source: Evaluation of Congo red dye adsorption potential. Journal of Materials Research and Technology. 2022. Vol 22, Pages 169-180, https://doi.org/10.1016/j.jmrt.2022.11.093 | Journal: Journal of Materials Research and Technology, Q1, Scopus, H Index: 59, Impact Factor: 6.267, Cite Score: 5.9, SNIP: 0.1672, SJR: 0.964, ISSN: 2589014X, Journal Link: https://www.sciencedirect.com/journal/journal-of-materials-research-and-technology |

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| 16. | December | Navalgund L, Joshi K, Deshannavar U, Shet VB , Emani S, Velidi G. Studies on removal of RBB and Safranin-O dyes from aqueous solution using concentrated acid treated red mud (CATRM) as adsorbent. REVIEWS OF ADHESION AND ADHESIVES. 2022 Aug 31;10(4). | Journal: REVIEWS OF ADHESION AND ADHESIVES Link: https://raajournal.com/menuscript/index.php/raajournal/article/view/318 Q3, Scopus, H Index: 16, ISSN: 2168-0965, E-ISSN: 2168-0973 Cite Score : 2.5, SJR : 0.317, SNIP: 0.528 |
| 17. | January | Goveas, L.C., Nayak, S., Kumar, P.S., Rangasamy, G., Vidya, S.M., Vinayagam, R., Selvaraj, R., Vo, D.V.N., 2023. Microplastics occurrence, detection and removal with emphasis on insect larvae gut microbiota. Marine Pollution Bulletin 188, 114580. https://doi.org/10.1016/J.MARPOLBUL.2023.114580 | Journal: Marine Pollution Bulletin , Q1, Scopus, WOS, H Index: 193, Impact Factor: 7.001, Cite Score: 9.2, SNIP: 1.517, SJR: 1.508, Online ISSN: 1879-3363, Print ISSN: 0025-326X Journal Link: https://www.sciencedirect.com/journal/marine-pollution-bulletin |
| 18. | January | Jathanna NN, Krishnamurthy GK, Paithankar JG, Hegde S, Goveas LC , Ravindranath BS, Gowdru M. Phyto-bacterial biosorption of basic fuchsin: A self-sustainable approach towards bioremediation of contaminant of emerging concern. Journal of Environmental Chemical Engineering. 2023, 11:109330. https://doi.org/10.1016/j.jece.2023.109330 | Journal: Journal of Environmental Chemical Engineering , Q1, Scopus, WOS, H Index: 90, Impact Factor: 7.968, Cite Score: 7.7, SNIP: 1.354, SJR: 1.042, Online ISSN: 2213-3437, Print ISSN: 2213-2929 Journal Link: https://www.sciencedirect.com/journal/journal-of-environmental-chemical-engineering |
| 19. | February | Goveas LC , Selvaraj R, Vinayagam R, Sajankila SP , Pugazhendhi A. Biodegradation of benzo (a)pyrene by Pseudomonas strains, isolated from petroleum refinery effluent: Degradation, inhibition kinetics and metabolic pathway. Vol 321, | Journal: Chemosphere, Q1, Scopus and Web of Science, H Index: 265 ISSN: 0045-6535, CiteScore: 11.7, |

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| | | Chemosphere. 2023, pp. :138066. https://doi.org/10.1016/j.chemosphere.2023.138066 | SNIP: 1.708, SJR: 1.632, Impact Factor: 8.943 Journal Link: https://www.sciencedirect.com/journal/chemosphere |
| 20. | February | Gowda SH, Dmello J, Poojary S . Process optimization of <i>Scleropyrum pentandrum</i> biodiesel production and study the effect of blends on CI engine characteristics for variation of engine parameters. Industrial Crops and Products. 2023, 194:116306. | Journal: Industrial Crops and Products, Q1, Scopus and Web of Science, H Index: 141, Online ISSN: 1872-633X Print ISSN: 0926-6690 , CiteScore: 9.6, SNIP: 1.706, SJR: 1.066, Impact Factor: 6.449 Journal Link: https://www.sciencedirect.com/journal/industrial-crops-and-products |
| 21. | March | Nayak S, Goveas LC, Mutalik S, Sajankila, S. Onsite detection of cadmium and nickel using gold nanospheres and nanotriangles capped with <i>Cyclea peltata</i> phytochemicals, Environmental Nanotechnology Monitoring and Management, 2023, 20, 100815. http://dx.doi.org/10.1016/j.enmm.2023.100815 | Journal: Environmental Nanotechnology Monitoring and Management, Q1, Scopus, Impact Factor: NIL, H Index: 36, Cite Score: 7.3, SJR: 0.86, ISSN: 2215-1532 Journal Link: https://www.sciencedirect.com/journal/environmental-nanotechnologymonitoring-and-management |
| 22. | April | Chetan D. M , Raghavendra H.L.2, Narendra Kumar S.3, Patil Ravikumar H.S.4, Venkatesh4, Venkatesh Kamath H.4 and Bhat Ramesh S.5, Evaluation of <i>Garcinia mangostana</i>, <i>Lantana camara</i> and <i>Piper betel</i> for Pharmaceutical Applications . Intern. J. Zool. Invest. WOS . Vol. 9, No. 1, [737-743] (2023) DOI: https://doi.org/10.33745/ijzi.2023.v09i01.082 . | |
| 23 | April | Poojari M, Hanumanthappa H, Prasad CD, Jathanna HM, Ksheerasagar AR, Shetty P, Shanmugam BK, Vasudev H. Computational modelling for the manufacturing of solar-powered multifunctional agricultural robot. International Journal on Interactive | International Journal on Interactive Design and Manufacturing (IJIDeM), Publisher Springer |

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| | | Design and Manufacturing (IJIDeM). 2023, 1-12, https://doi.org/10.1007/s12008-023-01291-y | Scopus Indexed,ISSN No.: 1955-2505 (Electronic) 1955-2513 (Print) SJR: 0.486, IF: 2.64, Q2, H index: 28 https://www.springer.com/journal/12008 |
| 24 | April | Goveas LC, Nayak S, Vinayagam R, Selvaraj R, Pugazhendhi A. Recent advances of Nano-photocatalysts involved in hydrogen production by water splitting. Fuel. 2023, 348:128460. https://doi.org/10.1016/j.fuel.2023.128460 | Journal: Fuel, Q1, Scopus and, Web of Science, H Index: 243, ISSN: 0016-2361, CiteScore: 11.2, SNIP: 1.906, SJR: 1.514 Impact Factor: 8.035 Journal Link: https://www.sciencedirect.com/journal/fuel |
| 25 | April | Poojari M, Vardhan H, Jathanna HM. Iron Ore Characterization Techniques in Mineral Processing. Journal of The Institution of Engineers (India): Series D. 2023 May :1-9. | Journal Name Journal of The Institution of Engineers (India): Series D Publisher Springer Nature Scopus Indexed (Yes/No) Yes SJR: 0.229, IF: 0.257, Q status: Q2, H index: 16, Journal Link: https://www.springer.com/journal/40033 , ISSN No.: 22502130, 22502122 |
| 26 | May | Shet VB, Kumar PS, Vinayagam R, Selvaraj R, Vibha C, Rao S, Pawan SM, Poorvika G, Quintero VM, Ujwal P, Rajesh KS. Cocoa pod shell mediated silver nanoparticles synthesis, characterization, and their application as nanocatalyst and antifungal | Journal: Applied Nanoscience, Q2, Scopus and, Web of Science, H Index: 69, IF: 3.674 ISSN: 2190-5517, SJR - 0.49, Journal Link: |

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| | | agent. Applied Nanoscience. 2023 May 10:1-1. https://doi.org/10.1007/s13204-023-02873-8 | https://www.springer.com/journal/13204 |
| 27 | May | Vinayagam R, Kar A, Murugesan G, Varadavenkatesan T, Goveas LC , Samanth A, Ahmed MB, Selvaraj R. Low temperature carbonized mesoporous graphitic carbon for tetracycline adsorption: Mechanistic insight and adaptive neuro-fuzzy inference system modeling. Bioresource Technology Reports. 2023, Vol 22, pp. 101468, https://doi.org/10.1016/j.biteb.2023.101468 | Journal: Bioresource Technology Reports, Q1, Scopus, H Index: 27, Cite Score: 6.2, SNIP: 0.837, ISSN: 2589014X, Journal Link: https://www.journals.elsevier.com/bioresource-technology-reports |
| 28 | June | Vibha R, Sandesh K, Ujwal P, Shet VB. RSM-and ANN-based modeling for a novel hydrolysis process of lignocellulose residues to produce cost-effective fermentable sugars. Biomass Conversion and Biorefinery. 2023 Jun 23:1-6. | Journal: Biomass Conversion and Biorefinery, Q3, Scopus, H Index: 39, SJR: 0.539 ISSN: 2190-6815, Journal Link: https://www.springer.com/journal/13399s |
| 29 | July | Sagar Seetharamaiah, Vidya Shimoga Muddappa , Manjunatha Bukkambudhi Krishnaswamy, · Rashmi Kanugodu Vasappa, 2023, Antineoplastic Effects of Mucuna pruriens Against Human Colorectal Adenocarcinoma, Applied Biochemistry and Biotechnology, https://doi.org/10.1007/s12010-023-04598-4 | Journal: Applied Biochemistry and Biotechnology, Q2, Scopus, H Index: 127, IF: 3.0, SJR: 0.51 ISSN: 0273-2289, Journal Link: https://www.springer.com/journal/12010 |

DEPARTMENT OF BIOTECHNOLOGY ENGINEERING

Book/Book Chapters for AY August 01st 2022 – July 31st 2023

| Sl No | Name | Book/ Book Chapter Details | ISSN/ISBN Number |
|-------|---|--|-------------------|
| 1 | Chetan DM, Narendra Kumar M, Anil Kumar HS | Textbook on Microbes and Diseases by IP Innovative Publication Pvt. Ltd- New Delhi. | 978-93-91208-43-1 |
| 2 | Louella Concepta Goveas, Sneha Nayak | Enhancing Petroleum hydrocarbon by indigenous microorganisms: Design of Experiments Strategies: In Synergistic Approaches for Bioremediation of Environmental Pollutants: Recent Advances and Challenges published by Academic Press (Elsevier) | 978-03-23918-60-2 |
| 3 | Satyendra Kumar Shet, Vinayaka B Shet | Role of Blockchain Technology:: Pandemic and Insight into Data Analysis for Covid-19. In Blockchain in Digital Healthcare 2021 Dec 29 (pp. 27-34). Chapman and Hall/CRC. | 9781003133179 |
| 4 | Vinayaka B. Shet, Keshava Joshi, Lokeshwari Navalgund | Future development, prospects, and challenges in application of nanomaterials and nanocomposites In Advanced Nanomaterials and Nanocomposites for Bioelectrochemical Systems, Link: https://doi.org/10.1016/B978-0-323-90404-9.00001-2 , published by Elsevier | 978-0-323-90404-9 |

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| 5 | Dr. Chetan D.M., Dr. Jayachandra S. Yaradoddi Dr. B.S Priya, Dr. S. Nanjunda Swamy , Dr. Ramesh S. Bhat | A to Z MCQs in Microbiology For UGC-CSIR NET Life Sciences Exam Paperback published by Innovative Publishers, Jan 2023 | ISBN-10 : 9391208665 ISBN-13 : 978-9391208660 |
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