

# Rout George Kerry

M.Sc. Biotechnology

(Ph. D. in Biotechnology Cont.)

Department of Biotechnology

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[ResearchGate](#) | [Google Scholar](#) | [ResearcherID/ Publons](#) | [Web of Science](#) | [Loop](#)

## Education

- 2015-2016 Regional Medical Research Center, Utkal University, Pre-Ph.D. Biotechnology
- 2012-2014 Roland Institute of Pharmaceutical Sciences, Berhampur University  
M.Sc. Biotechnology (80.25% with Distinction)
- 2009-2012 Academy of Management Information & Technology, Utkal University  
B.Sc. Biotechnology (61% with Distinction)
- 2007-2009 Seventh-Day Adventist Higher Secondary School, Khurda, Indian School Certificate (ISC) Board, +2 Science (55%)
- 2006-2007 Seventh-Day Adventist Higher Secondary School, Khurda, Indian Certificate of Secondary Education (ICSE), 10<sup>th</sup> Standard (61%)

## Work Experience

- 2018-Present *Research Fellow* at Post-Graduation Department of Biotechnology, Utkal University, Bhubaneswar, India. Supervisor: Dr. Sabuj Sahoo.  
**Project:** *Evaluation of bioactive terpenoid and flavonoid based silica nanoparticles against type-II diabetes and associated nephropathies.*
- 2016-2018 *Lecturer* at the Post Graduate department of Biotechnology, Academy of Management & information Technology, Bhubaneswar, India.

- 2014-2015** *Laboratory Instructor* at Post Graduate department of Biotechnology, Academy of Management & information Technology, Bhubaneswar, Odisha.
- 2012-2014** *M.Sc. Thesis project* at Roland Institute of Pharmaceutical Sciences, Berhampur University, Berhampur, India. Supervisor: Dr. Koustava Kumar Panda  
**Project:** *Green synthesis of silver and zinc nanoparticles their biological characterization.*
- 2009-2012** *B.Sc. Thesis project* at Academy of Management Information & Technology, Utkal University, Bhubaneswar, India. Supervisor: Dr. Sushanto Gouda.  
**Project:** *Extraction and Characterization of UV fluorescent pigments from Pseudomonas fluorescence for environmental sustainability.*

### **Mentoring and Teaching**

- 2016-2018** *Supervisor*, Graduate and Undergraduate Students Gyana Prakash Mahapatra, Ashutosh Pradhan, Lipun Kumar Pradhan, Manas Ranjan Sahoo and Srichandan Rath.
- 2014-2018** *Research Mentor and Classroom Teacher*, Post Graduate department of Biotechnology, Academy of Management & information Technology, Bhubaneswar, India.

### **Technical Knowledge**

- **Instrument Handled:** Inverted Microscope, Fluorescent Microscope, Spectrophotometer, Cell counter, Cooling Centrifuge, Electrophoresis Units, Autoclave, Hot air oven, Centrifugation Machine, Spectrophotometer, UV Transilluminator, Laminar air flow and pH meter, Thermal cycler.
- **Microbial Techniques:** Sterilization, Media Preparation, Culturing methods, Bacterial growth curve etc.

- **Molecular Techniques:** Isolation of DNA, Polymerase chain reaction, Agarose gel electrophoresis, Polyacrylamide gel electrophoresis (PAGE), RFLP, Restriction endonuclease digestions of bacterial DNA.
- **Immunological Techniques:** ELISA, Western blotting, Immunocytochemistry.
- **Biochemistry:** Protein estimation, Effect of PH and temperature on enzyme activity etc.
- **Bioinformatics:** Molecular docking, Simulation (Initial),
- ***In vivo* Models:** Mouse (BALB/c), Zebrafish (*Danio rerio*), Fruit fly (*Drosophila melanogaster*)

### **Software Experience**

- **Operating systems:** Windows, Linux
- **Application software:** Microsoft office package, Origin, Graphpad Prism, Discovery Studio 3D structural visualization tool, PyMol, Chimera, Babel, Autodock Vina, ImageJ, Inkspace, Gwiddion

### **Training Programs**

- Short term course on “Food Microbiology” from Medallion Institute of Bioscience Bhubaneswar from 17.05.2010 to 01.06.2010.
- Short term course on “Fermentation” from Medallion Institute of Bioscience, Bhubaneswar from 17.08.2010 to 27.08.2010.
- Short term course on “Biodiesel Production and Phytochemical Analysis” from Kalinga Plant Resource Center Pvt. Ltd, Samantarapur, Bhubaneswar.
- Short term course on Skill Development Program on Biotechnology conducted by Micro, Small and Medium Enterprises Development Institute, Cuttack at Tamando from 15.05.2012 to 29.05.2012

## **Publications**

1. **Rout George Kerry**, Singh KR, Mahari S, Jena AB, Panigrahi B, Pradhan KC, Pal S, Kisan B, Dandapat J, Singh J, Pandey SS. Bioactive potential of morin loaded mesoporous silica nanoparticles: A noble and efficient antioxidant, antidiabetic and biocompatible abilities in *in-silico*, *in-vitro*, and *in-vivo* models. **OpenNano**, 2023 10:100126. **IF-10 (Pred.)**
2. **Rout George Kerry**, Rout JR. Application of Novel Gene Editing Tools in Bioengineering of Probiotics. **World J Surg Surgical Res**. 2022; 5;:1430. **IF-1.989**
3. **Rout George Kerry**, Montalbo FJP, Das R, Patra S, Mahapatra GP, Maurya GK, Nayak V, Jena AB, Ukhurebor KE, Jena RC, Gouda S. An overview of remote monitoring methods in biodiversity conservation. **Environ Sci Pollut Res**, 2022. **IF-5.190**
4. **Rout George Kerry**, Mohapatra P, Jena AB, Panigrahi B, Pradhan KC, Khatua BR, Mahari S, Pal S, Perikala V, Kisan B, Lugos MD, Mondru AK, Sahoo SK, Mandal D, Majhi S, Patra JK. Biosynthesis of rutin trihydrate loaded silica nanoparticles and investigation of its antioxidant, antidiabetic and cytotoxic potentials. **J Inorg Organomet Polym Mater**, 2022, 32, 2065-2081. **IF-3.518**
5. **Rout George Kerry**, Das G, Golla U, Rodriguez-Torres MP, Shin H, Patra JK. Engineered probiotic and prebiotic nutraceutical supplementations in combating non-communicable disorders: A review, **Curr Pharm Biotechnol**, 2022, 23, 72-97. **IF-2.829**
6. **Rout George Kerry**, Ukhurebor KE, Kumari S, Maurya GK, Patra S, Panigrahi B, Majhi S, Rout JR, del Pilar Rodríguez-Torres M, Das G, Shin HS. A comprehensive review on the applications of nano-biosensor based approaches for non-communicable and communicable disease detection, **Biomater Sci**, 2021, 9, 3576-3602. **IF-7.59**
7. **Rout George Kerry**, GR Mahapatra, Maurya GK, Subasis M, Patra S, Das G, Patra JK, Sabuj S. Molecular prospect of type-2 diabetes: Nanotechnology based diagnostics and therapeutic intervention, **Rev Endocr Metab Disord**, 2021, 22, 421-451. **IF-9.306**

8. **Rout George Kerry**, Malik S, Redda YT, Sahoo S, Patra JK, Majhi S. Nano-based approach to combat emerging viral (NIPAH virus) infection, **Nanomed: Nanotechnol Biol Med**, 2019, 18, 196-220. **IF-6.458**
9. **Rout George Kerry**, SM Sahoo, G Das, JK Patra. Current advances in nanocarriers for biomedical research and their applications, **Artif Cells Nanomed Biotechnol**, 2018, 46, 1053-1062. **IF-6.355**
10. **Rout George Kerry**, Gouda S, Sil B, Das G, Shin HS, Ghodake G, Patra JK. Cure of tuberculosis using nanotechnology: An overview, **J Microbiol**, 2018, 56, 287-299. **IF-2.902**
11. **Rout George Kerry**, Mahapatra GP, Patra S, Sahoo SL, Pradhan C, Padhi BK, Rout JR. Proteomic and genomic responses of plants to nutritional stress, **BioMetals**, 2018, 31, 161-187. **IF-3.378**
12. **Rout George Kerry**, Patra JK, Gouda S, Park Y, Shin HS, Das G. Benefaction of probiotics for human health: A review, **J Food Drug Anal**, 2018, 26, 927-939. **IF-6.157**

#### Miscellaneous authored papers

13. Mishra AK, Das R, **Rout George Kerry**, Biswal B, Sinha T, Sharma S, Arora P, Kumar M. Promising management strategies to improve crop sustainability and to amend soil salinity, **Front Environ Sci**, 2023; 13. **IF-5.411**
14. Patnaik D, Jena AB, **Rout George Kerry**, Duttaroy AK. *In silico* profiling of nonsynonymous SNPs of fat mass and obesity-associated gene: possible impacts on the treatment of non-alcoholic fatty liver disease. **Lipids Health Dis**, 2023; 22(1):1-3. **IF-4.315**
15. Das G, Gouda S, **Rout George Kerry**, Cortes H, Prado-Audelo MLD, Leyva-Gómez G, Tsouh Fokou PV, Gutiérrez-Grijalva EP, Heredia JB, Shin HS, Patra JK. Study of traditional uses, extraction procedures, phytochemical constituents, and pharmacological properties of *Tiliacora triandra*, **J Chem**, 2022, 8754528. **IF-3.241**
16. Panigrahi B, Singh RK, Suryakant U, Mishra S, Potnis AA, Jena AB, **Rout George Kerry**, Rajaram H, Ghosh SK, Mandal D. Cyclic peptides

- nanospheres: A '2-in-1'self-assembled delivery system for targeting nucleus and cytoplasm, **Eur J Pharm Sci**, 2022, 106125. **IF-5.112**
17. Ukhurebor KE, Onyancha RB, Aigbe UO, UK-Eghonghon G, **Rout George Kerry**, Kusuma HS, Darmokoesoemo H, Osibote OA, Balogun VA. A methodical review on the applications and potentialities of using nanobiosensors for disease diagnosis, **Biomed Res Int**, 2022, 1682502. **IF-3.246**
  18. Akbar H, Skalicky M, Brestic M, Mahari S, **Rout George Kerry**, Maitra S, Sarkar S et al. Application of nanomaterials to ensure quality and nutritional safety of food, **J Nanomater**, 2021, 2021. **IF-3.791**
  19. Gouda S, **Rout George Kerry**, Das A, Chauhan NS. Wildlife forensics: A boon for species identification and conservation implications, **Forensic Sci Int**, 2020, 317, 110530. **IF-2.676**
  20. Mondal A, Bose S, Banerjee S, Patra JK, Malik J, Mandal SK, Kilpatrick KL, Das G, **Rout George Kerry**, Fimognari C, Bishayee A. Marine cyanobacteria and microalgae metabolites—A rich source of potential anticancer drugs, **Mar Drugs**, 2020, 18, 476. **IF-6.085**
  21. Patra S, **Rout George Kerry**, Maurya GK, Panigrahi B, Kumari S, Rout JR. Emerging molecular prospective of SARS-CoV-2: Feasible nanotechnology based detection and inhibition, **Front Microbiol**, 2020, 11:2098. **IF-6.064**
  22. Satapathy S, Rout JR, **Rout George Kerry**, Thatoi H, Sahoo SL. Biochemical prospects of various microbial pectinase and pectin: An approachable concept in pharmaceutical bioprocessing, **Front Nutr**, 2020, 7, 117. **IF-6.590**
  23. Farzaei MH , Singh AK, Kumar R, Croley CR, Pandey AK, Coy-Barrera E, Patra JK, Das G, **Rout George Kerry**, Annunziata G, Tenore GC, Khan H, Micucci M, Budriesi R, Momtaz S, Nabavi SM, Bishayee A. Targeting inflammation by flavonoids: Novel therapeutic strategy for metabolic disorders, **Int J Mol Sci**, 2019, 20, 4957. **IF-6.206**
  24. Rout JR, **Rout George Kerry**, Panigrahi D, Sahoo SL, Pradhan C, Ram SS, Chakraborty A, Sudarshan M. Biochemical, molecular, and elemental profiling of *Withania somnifera* L. with response to zinc stress, **Environ Sci Pollut Res**, 2019, 26, 4116-4129. **IF-5.190**

25. Gouda S, **Rout George Kerry**, Das G, Paramithiotis S, Shin H, Patra JK. Revitalization of plant growth promoting rhizobacteria for sustainable development in agriculture, *Microbiol Res*, **2018**, 206, 131-140. **IF-5.0**
26. Thaoti P, **Rout George Kerry**, Gouda S, Das G, Pramanik K, Thaoti H, Patra JK. Photo-mediated green synthesis of silver and zinc oxide nanoparticles using aqueous extracts of two mangrove plant species, *Heritiera fomes* and *Sonneratia apetala* and investigation of their biomedical applications, *J Photochem Photobiol B, Biol*, **2016**, 163, 311-318. **IF-6.814**

### Book Chapters

1. Valle-García JD, Ali A, Patra JK, **Rout George Kerry**, Das G, Fernández-Luqueño F. Integration of Eco-Friendly Biological and Nanotechnological Strategies for Better Agriculture: A Sustainable Approach. Agricultural and Environmental Nanotechnology: Novel Technologies and their Ecological Impact. 2023, 6:647-674.
2. Kingsley Eghonghon Ukhurebor, Ituabor Odesanya, Silas Soo Tyokighir, **Rout George Kerry**, Akinola Samson Olayinka and Ayodotun Oluwafemi Bobadoye (October 6th 2020). Wireless Sensor Networks: Applications and Challenges [Online First], IntechOpen, DOI: 10.5772/intechopen.93660. Available from: <https://www.intechopen.com/online-first/wireless-sensor-networks-applications-and-challenges>
3. Santosh Malik, Ananya Ghosh, **Rout George Kerry**, Jyoti Ranjan Rout. S.Keerthi Kumari (eds.). Nanotechnology in preclinical pharmacokinetics., Advances in Pharmaceutical Biotechnology, *Springer Nature*, ISBN:978-981-15-2194-2
4. Ananya Ghosh, Suahanto Gouda, **Rout George Kerry**, Gitishree Das, Jayanta Kumar Patra. Chitra G. (eds.). Viral and non-viral drug delivery systems for medical health care: an overview. Green Nanoparticles, *Springer Nature*, ISBN-978-3-030-39245-1
5. **Rout George Kerry**, Sabuj Sahoo, Gitishree Das, Jayanta Kumar Patra. Inamuddin et al. (eds.). Theranostic application of nanoparticulated system: Present and future prospects. *Biosensors Materials and Applications, Materials*

*Research Foundations*, Vol. 47, pp 241-288, 2019 DOI:  
<https://doi.org/10.21741/9781644900130-7>

6. **Rout George Kerry**, Jyoti Ranjan Rout, Gitishree Das, Leonardo Fernandes Fraceto, Spiros Paramithiotis, Jayanta Kumar Patra. S. Paramithiotis and J.K. Patra (eds.). Applications of nanotechnology in food and agriculture. Food Molecular Microbiology, *CRC Press Taylor & Francis Group*. ISBN 9781315110110
7. Sushanto Gouda, **Rout George Kerry**, Gitishree Das, Jayanta Kumar Patra. D.K. Tripathi et al. (eds.). Synthesis of nanoparticles utilizing sources from the mangrove environment and their potential applications: An overview. Nanomaterials in Plants, Algae, and Microorganisms Concepts and Controversies: Volume 2, *Academic press an imprint of Elsevier*. <https://doi.org/10.1016/B978-0-12-811488-9.01001-5>
8. Sushanto Gouda, **Rout George Kerry**, Dibyaranjan Samal, Gyana Prakash Mahapatra, Gitishree Das and Jayanta Kumar Patra. J.K. Patra et al. (eds.). Application of plant growth promoting rhizobacteria in agriculture. *Advances in Microbial Biotechnology*. ISBN 9781771886673
9. Sabuj Sahoo, Sarmistha Sarangi, and **Rout George Kerry**. J.K. Patra et al. (eds.). Bioprospecting of endophytes for agricultural and environmental sustainability. *Microbial Biotechnology*. [https://doi.org/10.1007/978-981-10-6847-8\\_19](https://doi.org/10.1007/978-981-10-6847-8_19)
10. Sushanto Gouda, Suman Nayak, Shristy Bishwakarma, **Rout George Kerry**, Gitishree Das, and Jayanta Kumar Patra. J.K. Patra et al. (eds.). Role of microbial technology in agricultural sustainability. *Microbial Biotechnology*, [https://doi.org/10.1007/978-981-10-6847-8\\_8](https://doi.org/10.1007/978-981-10-6847-8_8)
11. **Rout George Kerry**, Sushanto Gouda, Gitishree Das, Chethala. N. Vishnuprasad, and Jayanta Kumar Patra. J.K. Patra et al. (eds.). Agricultural nanotechnologies: Current applications and future prospects. *Microbial Biotechnology*, [https://doi.org/10.1007/978-981-10-6847-8\\_1](https://doi.org/10.1007/978-981-10-6847-8_1)
12. **Rout George Kerry**, Pratima Pradhan, Dibyaranjan Samal, Sushanto Gouda, Gitishree Das, Han-Seung Shin, and Jayanta Kumar Patra. J.K. Patra et al.



(eds.). Probiotics: The ultimate nutritional supplement. *Microbial Biotechnology*.  
[https://doi.org/10.1007/978-981-10-7140-9\\_7](https://doi.org/10.1007/978-981-10-7140-9_7)

13. **Rout George Kerry**, Sushmita Patra, Sushanto Gouda, Jayanta Kumar Patra, and Gitishree Das. J.K. Patra et al. (eds.). Microbes and their role in drought tolerance of agricultural food crops. *Microbial Biotechnology*,  
[https://doi.org/10.1007/978-981-10-7140-9\\_12](https://doi.org/10.1007/978-981-10-7140-9_12)

### **Edited Book Published**

- Biotechnological advances for microbiology, molecular biology, and nanotechnology: An interdisciplinary approach to the life sciences. (2021) **Editors:** Jyoti Ranjan Rout, **Rout George Kerry**, Abinash Dutta, ISBN: 9781771889995, CRC Press Taylor and Francis, Ohio, United States. <http://www.appleacademicpress.com/title.php?id=9781771889995>

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