

NITISH KUMAR BHOL

(M.Sc. , M.Phil.)

ADDRESS

S/O- Suman Kumar Bhol, AT- Raghunathpur, PO- Kainfulia, PS- Baripada,

Dist- Mayurbhanj, State- Odisha, Country- India, PIN- 757107

Email- bholnitishkumar@gmail.com,

Contact - +91 7978935547

Google Scholar- <https://scholar.google.com/citations?user=pEbPd8EAAAAJ&hl=en>



EDUCATION

Ph.D. in Biotechnology

Dept. of Biotechnology (Supported by DBT-Govt. of India, New Delhi),

Utkal University, Bhubaneswar-751004, Odisha, India

Thesis Topic/Title: “Anti-Thyroid Drug-Induced Neuroepigenetic Modifications and Complementary Interplay of A β -Tau Inflammatory Axis; A Possible Trigger for Neurodegeneration”.

Supervisor: Prof. Jagneshwar. Dandapat (Professor, Dept. of Biotechnology, Utkal University, BBSR)

2022- Cont.

Pre-Ph.D. course work

Percentage: 84%

M.Phil. in Life Sciences

School of life Sciences, Sambalpur University, Sambalpur, Odisha, India

Thesis Topic/Title: “Individual effect of Urea, 2,4- D Ethyl ester and combined effect of Chloropyrifos and cypermerthin on *Eisenia fetida* : Morphological and Histopathological analysis”.

Supervisor: Prof. Ekamber Kariali (Professor and Head, School of Life Sciences, SU)

2020 -2021

CGPA : 8.63

1st class with Distinction

M.Sc. in Life Sciences

Central University of Jharkhand, Ranchi, Jharkhand, India

Thesis Topic/Title: “Expression of tumor suppressor Adenomatous Polyposis coli (APC) and its regulation in gastrointestinal cancer progression”.

Supervisor: Dr. Rajakishore Mishra (Asst. Professor, DLS, CUJ)

July 2018- December 2020

CGPA : 8.63

1st class with Distinction

B.Sc.(Hons) in Zoology

Elective Papers: Botany and Chemistry

North Orissa University, Baripada, Mayurbhanj, Odisha, India

M P C Autonomous College, Takhatpur, Baripada, Mayurbhanj, Odisha, India

May 2015- June 2018

HONS. CGPA : 8.93

OVERALL CGPA : 8.61

1st Class with Distinction

+2 Science With Subject PCMB

Council of Higher Secondary Education, Odisha

M P C Junior College, Baripada, Mayurbhanj, Odisha, India

April 2013- May 2015

Percentage: 65.60%

1ST Class

10th in State Board

Board of Secondary Education, Odisha

Sri Aurobindo High School, Baripada, Mayurbhanj, Odisha, India

March 2010- April 2013

Percentage: 75.83%

1ST Class

LANGUAGE PROFICIENCY

Fluent in English, Hindi & Odia

RESEARCH EXPERIENCE

1. Project Fellow in DST- Government of Odisha Project, P.G Department of Biotechnology, Vani vihar, Bhubaneswar, Odisha, under the supervision of Prof. Jagneswar Dandapat. 25th Dec - 30th March 2022
2. Project Fellow in CCRH- Ministry of AYUSH, Govt. of India, P.G Department of Biotechnology, Vani vihar, Bhubaneswar, Odisha, under the supervision of Prof. Jagneswar Dandapat. 24th Jan - 30th March 2023
3. Project Fellow in CCRH- Ministry of AYUSH, Govt. of India, P.G Department of Biotechnology, Vani vihar, Bhubaneswar, Odisha, under the supervision of Prof. Jagneswar Dandapat. 19th Jan - 30th March 2024
4. JRF in DST- Government of Odisha Project, P.G Department of Biotechnology, Vani vihar, Bhubaneswar, Odisha, under the supervision of Prof. Jagneswar Dandapat. Oct 2024- Cont.

PUBLICATIONS

1. Atala Bihari Jena, Rashmi Rekha Samal, **Nitish Kumar Bhol**, Asim K. Duttaroy, Cellular Red-Ox system in health and disease: The latest update, **Biomedicine & Pharmacotherapy**, Volume 162, 2023, 114606, ISSN 0753-3322, <https://doi.org/10.1016/j.biopha.2023.114606> Impact Factor- 7.5
2. **Nitish Kumar Bhol**, Madhabi Madhusmita Bhanjadeo, Anup Kumar Singh, Umesh Chandra Dash, Rakesh Ranjan Ojha, Sanatan Majhi, Asim K. Duttaroy, Atala Bihari Jena. The interplay between cytokines, inflammation, and antioxidants: mechanistic insights and therapeutic potentials of various antioxidants and anti-cytokine compounds, **Biomedicine & Pharmacotherapy**, 178, 2024, 17177, <https://doi.org/10.1016/j.biopha.2024.117177> Impact Factor- 6.9
3. Umesh Chandra Dash, **Nitish Kumar Bhol**, Sandeep Kumar Swain, Rashmi Rekha Samal, Prabhat Kumar Nayak, Vishakha Raina, Sandeep Kumar Panda, Rout George Kerry, Asim K Duttaroy, Atala Bihari Jena. Oxidative stress and inflammation in the pathogenesis of neurological disorders: Mechanisms and implications. **Acta Pharmaceutica Sinica B** 15.1 (2025): 15-34. <https://doi.org/10.1016/j.apsb.2024.10.004> Impact Factor- 14.6
4. Sanjib Sahoo, **Nitish Kumar Bhol**, Namrata Kanungo, Sanatan Majhi, Jyotsnarani Pradhan, Jagneshwar Dandapat. Artificial Intelligence in Bio-Recovery of Noble Metals: A Sustainable Strategy for Circular Economy. *Int J Bioinform Intell Comput.* 2025;4(2):196-223. <https://doi.org/10.61797/ijbic.v4i2.555> Impact Factor- 6.9
5. Paresk Kumar Mohanty, Nupur Kumari, Rout George Kerry, Asit Ray, **Nitish Kumar Bhol**, Bijayananda Panigrahi, Sanatan Majhi, Prasana Kumar Rath, Sanghamitra Nayak, Sushanta Kumar Badamali. Ecofriendly Fabrication and Hierarchical Exploration of Cytocompatible Lignin Nanoparticles for Biomedical Applications. *ACS Applied Bio Materials* 8, no. 11 (2025): 9709-9729. <https://doi.org/10.1021/acsabm.5c00883> Impact Factor- 4.7

ACHIEVEMENTS

1. Actively Participated in “**ODISHA RESEARCH CONCLAVE- 2023**” held at Ravenshaw University, Cuttack, Odisha and present a poster in entitled topic “Antithyroid Drug, Propylthiouracil depletes glutathione, promotes ROS generation and global DNA methylation in cephalic tissues of Wistar Rat and *Drosophila*: Curcumin restores such changes”.
14th - 16th Nov 2023
2. Successfully completed DST-SERB sponsored High-End Karyashala on ‘**Immunological and molecular techniques for detection and quantification of cancer biomarkers**’ organized at Genetic Engineering of Virus Laboratory Division of Veterinary Biotechnology, ICAR-IVRI, Izatnagar- U.P, India.
5th -14th Sept 2023
3. Actively Participated and won 3rd prize in Poster presentation in national Seminar on “**Environmental sustainability and natural product development**” sponsored by IDP-OHEPEE held at MSCB University, Baripada, Mayurbhanj, Odisha and present a poster in entitled topic “ Catechin modulates epigenetic reprogramming and ameliorates oxidative Stress in the brain (cerebral cortex) of PTU (6-n-propyl-thiouracil)-Induced hypothyroid rat”.
14th -15th July 2023
4. Actively Participated in International Conference on “**Biotechnology and Bioinformatics: Prospectives and challenges**” held at MSCB University, Baripada, Mayurbhanj, Odisha and present a poster in entitled topic “ Anti-thyroid drug (6- Propyl-2-thiouracil)- induced redox imbalance, impaired development and compromised growth pattern in *Drosophila melanogaster*”.
8th - 9th Dec 2022
5. Actively Participated in “**ODISHA RESEARCH CONCLAVE- 2022**” held at Ravenshaw University, Cuttack, Odisha and present a poster in entitled topic “6- Propyl-2-thiouracil (PTU)- Induced redox imbalance, impaired development and compromised growth pattern in beyond the disruption of Hypothalamo-pituitary-thyroid (HPT) Axis : Evidence from *Drosophila melanogaster*”.
14th - 16th Nov 2022
6. Actively Participated in International conference on “**Recent Trends in Biotechnology**” held at Centurian University, Bhubaneswar, Odisha and present a poster in entitled topic “Individual effect of Urea, 2,4- D Ethyl ester and combined effect of Chloropyriphos and cypermerthin on *Eisenia fetida* : Morphological and Histopathological analysis”.
22nd-23rd June 2022
7. Actively Participated in International Symposium on “**Environmental Threats and Mitigation Strategies**” held at Ranchi and present a poster/ Oral Presentation in entitled topic “Expression of Adenomatous Polyposis coli (APC) and its correlation with Beta-catenin Pathway in gastrointestinalcancer”.
8th March 2020
8. Actively participated in a Two day program on **Young Graduate For Leadership in Biotechnology-2018**, held at Centre for Biotechnology, Siksha ‘O’ Anusandhan University, Bhubaneswar.
23-24th Feb 2018
9. Participated in the **Science Leadership Workshop** Organized by Central University of Punjab, Bathinda, India.
22-28th June 2020
10. Participated in a two day international webinar on “**Biotechnological innovations in 21st century**” organized by the dept. of Biotechnology, Maharaja Sriram Chandra Bhanja Deo University under OHEPP/ World bank sponsored IDP programme.
19-20th March 2021

- | | |
|---|------------------------------|
| 11. Participated in one day Webinar on COVID-19 and other infectious Viruses: Molecular characterization and contaminants through Medicinal plants and Ayurvedic Remedies, organised by DNA Labs- A Centre for Applied Sciences (DLCAS), Dehradun, Uttarakhand. | 11 th May 2020 |
| 12. Participated in the National webinar on “ Recent Advances in Animal Sciences (Neuroscience and Nanobiotechnology) ” organized by Dept. of Zoology, Kalahandi University, Bhawanipatna, Odisha, India | 31 st May 2021 |
| 13. Participated in the two days National seminar titled “ Statistical tools in research methodology ” organized by Dept. of Physics in association with IQAC, Govt. College Kariavattom, Tiruvananthapuram. | 21-22 nd Oct 2021 |
| 14. Participated in the national webinar on “ Biodiversity & Conservation ” organized by Dept. of Zoology, R.D.S Degree college Mahavidyalaya, Kundabai, Mayurbhanj, Odisha, India | 28 th June 2021 |
| 15. Resource person in UNNYAN (An Educational Social Responsibility of Central University of Jharkhand) 1 yr. TEACHING EXPERIENCE | 2019-2020 |

NATIONAL LEVEL OF EXAMINATION QUALIFIED

1. Life Sciences subject CUCET-2018.
2. ICAR-AICEE JRF/SRF- 2020 (Animal genetics and Breeding)

RESEARCH INTEREST

- | | |
|---------------------------------|---|
| ● Redox biology & Epigenetics | ● Cancer Biology and therapeutics |
| ● Neurobiology & Animal biology | ● Molecular biology and biophysical chemistry |
| ● Cell Culture and technology | ● Molecular techniques |

SKILLS RELEVANT TO RESEARCH

Computational Skills

2018-Present

- NIELIT ‘O’ level Computer exam qualified- 2018
- Proficient in Word, Excel and Power Point

Experimental Skills

2020-Present

Bioinformatics & Computational**Biology**

1. Auto Dock vina
2. MEGA-X
3. Chimera
4. Discovery studio
5. Pymol
6. Open Bibel
7. Chem-sketch
8. Inkscape

Equipments Handled

1. PCR
2. UV- Visible Spectrophotometer
3. Fluorescence Spectrophotometer
4. Gel Documentation unit
5. HPLC
6. ELISA- Multiplate reader
7. Cooling Centrifuge
8. Stereo microscope

Wet Lab Techniques

1. Isolation & Purification of DNA
2. RNA isolation
3. cDNA Preparation
4. Real Time - PCR
5. Electrophoresis (SDS-PAGE)
6. Western blotting
7. Redox biochemical assays (GSH, LPX, Catalase, SOD etc.)

Working experience on model

1. Human tissue sample
2. Rat
3. Drosophila
4. Earthworm

Qualitative Skills

2018-Present

Ability to Work in new challenging environment, as well as deadlines driven environments, willing to work in groups, ability to lead group activities, to learn new concepts and ideas involving new technologies with an ability to adapt quickly and effectively.

EXTRA-CURRICULAR/VOLUNTEER/HOBIES/ACTIVITIES/SERVICES

1. Volunteer, NSS, Central University of Jharkhand
2. Outdoor sports, including Cricket and cycling.