

COMPLETE CURRICULUM VITAE

Bibhu Prasad Panda (M. Pharm., PhD.)

Professor (Pharmaceutical Biotechnology)
Department of Pharmacognosy & Phytochemistry
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Education

2008- Ph.D, Jamia Hamdard, New Delhi, India

2001- M. Pharm. Pharmaceutical Biotechnology, Birla Institute of Technology, Ranchi, India

1998- B. Pharm. Berhampur University, Berhampur, Orissa, India

PhD thesis: “Study on fermentative production and cholesterol lowering effect of *Angkak*”

Professional Experience

2002-2004- Lecturer in Pharmacy, College of Pharmaceutical Science, Mohuda, Orissa, India

2004 to 2017 - Assistant Professor, Faculty of Pharmacy, Jamia Hamdard, New Delhi, India

2017 to 2019– Associate Professor, School of Pharmaceutical Education & Research, Jamia Hamdard, New Delhi, India

2020- continuing – Professor, School of Pharmaceutical Education & Research, Jamia Hamdard, New Delhi, India

Research Area:

Nutraceuticals, Bioprocess, Natural Drugs for Cardiovascular Disease, Diabetics, Bone Health, Osteoporosis and Alzheimer’s disease.

Grants Received

- I. 2005 – 2010 - “Innovative Programme in Pharmaceutical Biotechnology” University Grants Commission, Government of India, Amount: INR 28.00 lakhs as co-coordinator.
- II. 2009 – 2012 - “Development of a submerged fermentation process for production of natural astaxanthin” University Grants Commission, Government of India, Amount: INR 10.41 lakhs as principal investigator.
- III. 2009-2014 – DST FIST level 1 to Pharmacognosy & Phytochemistry, from Department of Science and Technology, Government of India, Amount: INR 67.00 lakhs as co-coordinator.

- IV. 2010 – 2013 - “Development of a bionutraceutical for prevention of coronary heart disease in human” from Department of Biotechnology, Government of India, Amount: INR 30.22 lakhs as principal investigator.
- V. 2011 – 2014 - “Development of new phytomolecules from *Gymnema sylvestre* through biotransformation process” from Department of Science and Technology, Government of India, Amount: INR 25.30 lakhs as mentor to principal investigator.
- VI. 2013 – 2016 - “Development of polymer-based protein formulation of nattokinase for prevention and treatment of Alzheimer’s disease” from Department of Science and Technology, Government of India, Amount: INR 25.00 lakhs as mentor to principal investigator.
- VII. 2017- 2020- “Production of beta carotene by *B. trispora* using submerged fermentation process” from Department of Science and Technology, Government of India, Amount: INR 25.00 lakhs as mentor to principal investigator.
- VIII. 2020-2025 – DST FIST level 1I to Pharmacognosy & Phytochemistry, from Department of Science and Technology, Government of India, Amount: INR 86.00 lakhs as co-coordinator.
- IX. 2022-2025- Development of nanofiber based vascular graft for coronary heart disease” from ICMR, Government of India, Amount: INR 48.00 lakhs as principal investigator
- X. 2023-2026- Production & bioactivity of nantokiase enzyme – INR 45.00 lakhs -DHR, Govt of India – as Mentor to young scientist
- XI. 2024-2027- Fermented herbs and its bioactivity -INR 48.00 lakhs -DHR- Govt of India as mentor to women scientist.

Fermentation process TECHNOLOGY TRANSFER:

01] **Non-exclusive International Technology Transfer** of Fermentation Technology for production of Astaxanthin production process from Yeast *Phaffia rhodozyma* to Chinese Industry (Beijing Global Biological Corporation, Beijing, China) with the value of \$50,000 USD by Dr. Bibhu Prasad Panda (2017).

Awards

2010 - Rapid grant young investigator, Department of Biotechnology, Government of India.
2011- Dr. P.D. Sethi Annual Awards for best chromatography paper, Anchorom, India.
2011- India innovation Initiative – For bioreactor design –DST, CII and Agilent technologies.
2011- Certificate of recognition– Publication in high impact factor journal- Jamia Hamdard.
2017- Certificate of recognition– Publication in high impact factor journal- Jamia Hamdard.

SELECTED PUBLICATIONS (2007-2024) in bioprocess & nutraceuticals

1. Kaur, J., Farooqi, H., Chandra, K. and Panda, B.P., 2024. Predicting the bioactive compounds of *Lentinula edodes* and elucidating its interaction with genes associated to obesity through network pharmacology and in-vitro cell-based assay. *Heliyon*, 10(5). **Impact factor: 3.4**
2. Nurullah, Md, Zakiya Usmani, Sheeraz Ahmad, Bibhu Prasad Panda, Saima Amin, and Showkat Rasool Mir. "Purification and characterization of Taxol and 10-Deacetyl baccatin III from the bark, needles, and endophytes of *Taxus baccata* by preparative high-performance liquid chromatography, ultra-high-performance liquid chromatography-mass spectrometry, and nuclear magnetic resonance." *Journal of Separation Science* 46, no. 6 (2023): 2200841. **Impact factor: 3.614**

3. Nagal, S., Raja, A., Gupta, I., Adin, S.N. and Panda, B.P., 2023. Screening and Development of β -Carotene Enriched *Phaffia rhodozyma* Cell by Culture Media Engineering. *Microbiology*, 92(1), pp.36-46. **Impact factor:1.400**
4. Jan, Y., Al-Keridis, L.A., Malik, M., Haq, A., Ahmad, S., Kaur, J., Adnan, M., Alshammari, N., Ashraf, S.A. and Panda, B.P., 2022. Preparation, modelling, characterization and release profile of vitamin D3 nanoemulsion. *LWT journal of food science and technology* 169, p.113980. **Impact factor: 6.056**
5. Birat, K., Binsuwaidan, R., Siddiqi, T.O., Mir, S.R., Alshammari, N., Adnan, M., Nazir, R., Ejaz, B., Malik, M.Q., Dewangan, R.P. and Ashraf, S.A., 2022. Report on Vincristine-Producing Endophytic Fungus *Nigrospora zimmermanii* from Leaves of *Catharanthus roseus*. *Metabolites*, 12(11), p.1119. **Impact factor: 5.581**
6. Manzoor, S., Rashid, R., Panda, B.P., Sharma, V. and Azhar, M., 2022. Green extraction of lutein from marigold flower petals, process optimization and its potential to improve the oxidative stability of sunflower oil. *Ultrasonics sonochemistry*, 85, p.105994. **Impact factor: 9.336**
7. Malik, M.A., Jan, Y., Al-Keridis, L.A., Haq, A., Ahmad, J., Adnan, M., Alshammari, N., Ashraf, S.A. and Panda, B.P., 2022. Effect of vitamin-D-Enriched edible mushrooms on vitamin D status, bone health and expression of CYP2R1, CYP27B1 and VDR gene in Wistar rats. *Journal of Fungi*, 8(8), p.864. **Impact factor: 5.724**
8. Birat, K., Siddiqi, T.O., Mir, S.R., Aslan, J., Bansal, R., Khan, W., Dewangan, R.P. and Panda, B.P., 2022. Enhancement of vincristine under in vitro culture of *Catharanthus roseus* supplemented with *Alternaria sesami* endophytic fungal extract as a biotic elicitor. *International Microbiology*, pp.1-10. **Impact factor: 3.097**
9. Altaf, A., Alkefai, N.H., Panda, B.P., Usmani, Z., Amin, S. and Mir, S.R., 2022. Microbial Composition of a Traditional Fermented Wheat Preparation—Nishasta and Its Role in the Amelioration of Retinoic Acid-Induced Osteoporosis in Rats. *Fermentation*, 8(4), p.182. **Impact factor: 5.123**
10. Madan, S., Abdul, S.I. and Panda, B.P., 2022. Fatty acids of *Pleurotus florida* mushroom: Potential molecules for blood glucose control. *Food Bioscience*, p.101558. <https://doi.org/10.1016/j.fbio.2022.101558> **Impact factor: 4.2**
11. Khan, W., Regmi, O. and Panda, B.P., 2021. Enrichment of dimerumic acid in *Monascus*-fermented rice and its in vivo antioxidant activity. *Food Frontiers*, 2(4), pp.547-556.
12. Birat, K., Siddiqi, T.O., Mir, S.R., Aslan, J., Bansal, R., Khan, W., Dewangan, R.P. and Panda, B.P., 2021. Enhancement of vincristine under in vitro culture of *Catharanthus roseus* supplemented with *Alternaria sesami* endophytic fungal extract as a biotic elicitor. *International Microbiology*, pp.1-10. doi: 10.1007/s10123-021-00213-w. **Impact factor: 2.479**
13. J Khan, S Sheoran, W Khan, BP Panda (2020) Metabolic differentiation and quantification of gymnemic acid in *Gymnema sylvestre* (Retz.) R.Br. ex Sm. leaf extract and its fermented products. *Phytochemical Analysis*, DOI.10.1002/pca.2912. **Impact factor: 3.373**
14. P. C. Bhatt, S. Pathak, V. Kumar, B. P. Panda (2018) Attenuation of neurobehavioral and neurochemical abnormalities in animal model of cognitive deficits of Alzheimer's disease by fermented soybean nanonutraceutical. *Inflammopharmacology*, 26 (1), 105–118. **(Impact factor 4.473)**
15. PC Bhatt, A Verma, F.A. Al-Abbasi, F. Anwar, V. Kumar, B. P. Panda (2017) Development of surface-engineered PLGA nanoparticulate-delivery system of Tet1-conjugated nattokinase enzyme for inhibition of A β ₄₀ plaques in Alzheimer's disease. *International Journal of Nanomedicine*. 12, 8749-8768. **(Impact Factor 6.400)**
16. S. F. Sayyad, B. P. Panda, S. R. Chaudhari (2016) Optimization of Process Parameters for Formulation of Ayurvedic Fermented Medicine Arjunarishta by Response Surface Methodology. *Journal of Pharmaceutical Innovation*. 11 (1) 102-108, **Impact factor: 2.750**
17. R. Kapoor, H. Harde, S. Jain, A. K. Panda, B. P. Panda (2015) Downstream processing,

- formulation development and antithrombotic evaluation of microbial nattokinase. *Journal of Biomedical Nanotechnology*. 11, 1213-1224. **Impact Factor: 4.409**
18. R. Singh, A. Puri, B. P. Panda (2015) Development of menaquinone-7 enriched nutraceutical: inside into medium engineering and process modeling. *Journal of Food Science and Technology*, 52(8):5212-9. **Impact factor 2.701**
 19. A. Puri, S. R. Mir, B. P. Panda (2015). Effect of sequential bio-processing conditions on the content and composition of vitamin K2 and isoflavones in fermented soy food. *Journal of Food Science and Technology*. DOI 10.1007/s13197-015-1903-3 **Impact factor 2.701**
 20. A. Puri, B. P. Panda (2015) Simultaneous estimation of glycosidic isoflavones in fermented and unfermented soybeans by TLC-Densitometric method. *Journal of Chromatographic Science*. 53(2):338-344. **Impact Factor:1.618**
 21. W. Khan, P. C. Bhatt, B. P. Panda (2015) Degradation kinetics of gamma amino butyric acid in *monascus*-fermented rice. *Journal of Food Quality*, 38: 123–129. **Impact factor: 2.450**
 22. M. Hasan , M. Azhar , H. Nangia , P. C. Bhatt , B. P. Panda (2015) Influence of high pressure homogenization, ultra-sonication and supercritical fluid on free astaxanthin extraction from β -glucanase treated *Phaffia rhodozyma* Cells. *Preparative Biochemistry and Biotechnology*. DOI: 10.1080/10826068.2014.995807. **Impact factor :2.162**
 23. P. C. Bhatt, R. Kapoor, B. P. Panda (2015) Purification and biochemical characterization of menaquinone-7 free, pure nattokinase from *Bacillus subtilis* MTCC 2616. *Indian journal of biochemistry and biophysics*, (52), 248- 253) (**impact factor 1.918**)
 24. R. Kapoor, S. Pathak, A. K. Najmi, V. Aeri, B. P. Panda (2014) Processing of soy functional food using high pressure homogenization for improved nutritional and therapeutic benefits. *Innovative Food Science and Emerging Technologies*. 26, 490-49. **Impact Factor: 5.916**
 25. M. Ahmad, M. Jalaluddin, B. P. Panda (2014), Enrichment of biologically active 18- β glycyrrhetic acid in *Glycyrrhiza glabra* root by solid state fermentation. *Annals of Microbiology*. 64 (2), 683-688. **Impact Factor: 2.112**
 26. M. P. Ansari, A. Puri, M. Ali, B. P. Panda (2013). Five new secondary metabolites from *Monascus purpureus*-fermented *Hordeum vulgare* and *Sorghum bicolor*. *Natural Product Research*. 27(20), 1848-1855 **Impact factor: 2.862**
 27. A. Ahmad, M. Mujeeb, R. Kapoor, B. P. Panda (2013). *In situ* bioconversion of compactin to pravastatin by *Actinomadura* species in fermentation broth of *Penicillium citrinum*. *Chemical Papers*. 67(6), 667-671. **Impact Factor: 2.097**
 28. P. C. Bhatt, M. Ahmad, B. P. Panda (2013) Enhanced bioaccumulation of astaxanthin in *Phaffia rhodozyma* by utilising low-cost agro products as fermentation substrate. *Biocatalysis and Agricultural Biotechnology*.2:58-63.
 29. B P Panda, M. Ali (2012) Reduction of citrinin biosynthesis by fatty acids in *Monascus* fermented food. *World Mycotoxin Journal*. 5, 163-167. **Impact Factor: 3.353**
 30. A Ahmad, BP Panda, M Mujeeb (2011) A validated stability indicating method for simultaneous estimation of mevastatin and pravastatin in the fermentation broth during bioconversion by *Actinomadura macra*. *Acta Chromatographica*. 23(1): 121–131. **Impact Factor: 1.639**
 31. B P Panda, S Javed S, M Ali (2010) Optimization of fermentation parameters for higher lovastatin production in red mold rice through co-culture of *Monascus purpureus* and *Monascus ruber*. *Food and Bioprocess Technology*, 3 (3): 373-378. **Impact Factor: 4.465**
 32. A Ahmad, M Mujeeb, B P Panda (2010) An HPTLC Method for the Simultaneous Analysis of Compactin and Citrinin in *Penicillium citrinum* Fermentation Broth. *Journal of Planar Chromatography -Modern TLC*. 23 (4): 282–285. **Impact Factor: 0.856**
 33. B P Panda, S Javed, M Ali (2009) Engineering rice based medium for production of

lovastatin with *Monascus* species. *Czech Journal of Food Sciences*. 27(5): 352–360.

Impact Factor: 1.279

34. BP Panda, S Javed, M Ali (2009) Statistical analysis and validation of process parameters influencing lovastatin production by *Monascus Purpureus* MTCC 369 under solid-state fermentation. *Biotechnology and Bioprocess Engineering*. 14(1):123-127. **Impact Factor: 2.836**
35. S Bhargav, B P Panda, M Ali, S Javed (2008) Solid-state fermentation: an overview, *Chemical and Biochemical Engineering Quarterly*, 22 (1), 49-70. **Impact Factor: 1.582**
36. SA Sayyad, **BP Panda**, S Javed and M Ali (2007) Optimization of nutrient parameters for lovastatin production by *Monascus purpureus* MTCC 369 under submerged fermentation using response surface methodology. *Applied Microbiology and Biotechnology*. 73(5): 1054-1058. **Impact Factor: 4.813**

Conference Proceeding/Oral presentation

1. Ambika Chamoli, Makhmur Ahmad, Mojeer Hasan, Bibhu Prasad Panda, Simultaneous determination of 18 α -glycyrrhetic acid and 18 β -glycyrrhetic acid in *Glycyrrhiza glabra* root by reversed phase high-performance liquid chromatography. Regulatory and quality aspect of herbal drugs and botanicals held on 14/02/2014, Drug Development and Therapeutics Year : 2016 | Volume : 7 | Issue : 1 | Page : 59-62
2. Hina Nangia, Mojeer Hasan, Mohd. Azhar , Prakash Chandra Bhatt, Bibhu Prasad Panda, Strain improvement of *Phaffia rhodozyma* for astaxanthin production. Regulatory and quality aspect of herbal drugs and botanicals held on 14/02/2014, Drug Development and Therapeutics Year : 2016 | Volume : 7 | Issue : 1 | Page : 63-68
3. Makhmur Ahmad, Jalaluddin , Mohammad Ali, Bibhu Prasad Panda, Screening and bioconversion of glycyrrhizin of *Glycyrrhiza glabra* root extract to 18 β -glycyrrhetic acid by different microbial strains. Regulatory and quality aspect of herbal drugs and botanicals held on 14/02/2014, Drug Development and Therapeutics Year : 2016 | Volume : 7 | Issue : 1 | Page : 69-72
4. Bibhu Prasad Panda “Development solid lipid nanoparticles delivery system for Astaxanthin and its *neuroprotective effects*” International Conference on Biotechnology and Nanotechnology (ICBN 2016) on January 30 to February 1- 2016, The Department of Biotechnology, IIS UNIVERSITY, Jaipur, India
5. Bibhu Prasad Panda ““Production, Purification and Anti-Thrombotic Potential of Nanosuspension and Chitosan Nanoparticles” Int-BIONANO-2016 on February, 10-12, 2016 Amity Institute of Biotechnology, Amity University, Gwalior.
6. Bibhu Prasad Panda “Anti-diabetic effects of gymnemic acids and gymnemagenin under *in vitro* and *in vivo* conditions: A comparative study” International symposium on ‘New Processes and Applications for Plant and Microbial Products’ (ISNPMP-

2016) on 1st & 2nd March, 2016 The Energy and Resources Institute (TERI) Darbari Seth Block, India Habitat Centre Lodhi Road, New Delhi

PATENTS

Malik Zainul Abidin, , Saleem Javed, Bibhu Prasad Panda , Parul Saxena, Seema Ahlawat	11/03/2016, No.2617/DEL/2014	An Improved Bioreactor For Suspension and Hairy Root Cultures
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Abstracts The present invention relates to a bioreactor for cultivation of cell suspension and hairy root culture. More particularly the present invention relates to a significant improvement in the design of the bioreactor which provides for a stable and optimum environment for cell cultivation thereby improving the yield of secondary metabolites or other therapeutic molecules. More specifically the reactor has a unique cubical shape which keeps the cells in motion and media static which helps in achieving high growth rate.

Book Chapter

P.C. Bhatt, M. Hasan, **B. P. Panda**, H. B. Singh (2014). Therapeutically potential herbs for prevention and management of osteoporosis. Conservation, cultivation and exploration of therapeutic potential of medicinal Plant. CCRAS, Department of AYUSH, Ministry of Health and Family Welfare, Government of India, pp.301-316.

Invited talks

1. Role of microorganism including Yeast in Biotechnology- ESDP on Biotechnology, February 8, 2011 at Faculty of science, Jamia Hamdard, New Delhi, India
2. Importance of optimization process in pharmaceuticals and research, July 1, 2011 at Roland institute of Pharmaceutical Sciences, Berhampur, India
3. Application of Bio-transformation process for development of newer phyto-pharmaceuticals, Punjab Technical University sponsored Current research methodology for herbal drug studies; February 8th -12th 2012, Shaheed Bhagat Singh College of Pharmacy, Patti, Amritsar, Punjab, India
4. Current trends and future prospects on solid state fermentation, Short term course on fermentation and enzyme technology under TEQUIP phase ii funded by World Bank, 1st Feb-5th Feb 2013. Department of Biotechnology, ET, Bhubaneswar Orissa, India
5. Production of yeast astaxanthin, specialized workshop on fermentation and zero effluents discharge June 24-26, 2013, Crest Biotech, New Delhi, India
6. Formulation optimization and anti-cancer drug targeting, National seminar on New frontier in drug delivery system: industrial perspectives, 27th July 2013, Talla Padmavati pharmacy college Warangal, Andhra Pradesh. India
7. Influence of mycotoxin on alcoholic fermentation indicators, All India Distillers' Association's Technical Seminar, 26th to 27th February, 2015, Gurgaon, Haryana, India

Other activities

1. As course coordinator for M. tech food technology programme in Jamia Hamdard New Delhi from 2011-2015
2. In charge of Pharmaceutical Biotech laboratory, faculty of pharmacy, Jamia Hamdard, New Delhi since 2004
3. Pharmacognosy Education tour in charge in the department of pharmacognosy, faculty of pharmacy, Jamia Hamdard, New Delhi since 2009
4. Admission committee member of Jamia Hamdard, New Delhi 2015
5. As a tabulator for exam section of Jamia Hamdard, New Delhi 2015

Reviewer for Journals

RSC Advances, Pharmaceutical Biology, Food and Bioproducts Processing, Journal of Food Science and Technology, Natural Product Research, Biotechnology Bioprocess Engineering, Journal of Chemical Technology and Biotechnology, Drug Research, Letters in Applied Microbiology, Asia-Pacific Journal of Chemical Engineering, Journal of Industrial Microbiology and Biotechnology, Biochemical Engineering Journal, Process Biochemistry, Food Bioscience.

STUDENTS Supervised /MENTORED

PhD. Students Supervision (as main supervisor): Completed 08, Ongoing 05

PhD. Students' co- supervision: Completed 03, Ongoing 04

Women Scientist (WOS A): 02 (02 Completed)

DST Young Scientist: 01 (01 completed)

M. Tech food technology Students as main supervisor: Completed 13

M. Pharm. Pharmaceutical Biotechnology Students as main supervisor: Completed 27



Dr. Bibhu Prasad Panda