

Faculty Profile

(Self-Declared Document)

Name	Dr. Balaram Das	
Designation	Assistant Professor	
Name of the Department	Department of Physiology	
Email ID	bdas.vu@gmail.com	
Mobile No	+91 9564913059	
Address	Vill- Teghari Barkamal; P.O- Chandkuri; P.S- Sabang; Dist- Paschim Medinipur; PIN- 721467	

Educational Qualification:

<u>Degree Name</u>	<u>Institute</u>	<u>Year of passing/awarded</u>
B. Sc (Physiology)	Vidyasagar University	2008
MSc. (Human Physiology)	Vidyasagar University	2010
PhD (Physiology)	Vidyasagar University	2018

Career Profile/Teaching Experience

Assistant Professor, Dept. of Physiology. Belda College, Paschim Medinipur Dist., West Bengal. (Since 01.08.2019).

Part time teacher (PTT), Dept. of Physiology. Ramnagar College, Depal, Purba Medinipur, West Bengal. (From 17.08.2010 to 31.07. 2019).

Specialization/Research Area

Immunology and Microbiology, Physiology.

Organic and Inorganic Drug Development and evaluate antimicrobial and anticancer activity.

Bacterial immunotherapy.

Toxicology and oxidative stress and antioxidant status

Formulation of biocompatible nanostructures for therapeutic application in various diseases model.

Course/ Subject Taught

UG Physiology: System physiology, Immunology, Microbiology, Community Health, Nutrition, Biochemistry

PG Physiology: Immunology, System Physiology

UG Nutrition: Molecular Biology.

PG Food Science and Nutrition: Immunology, Physiology.

B. Voc in MLT: Instrumentation, Biochemistry.

Publications in Journal / Book / Book Chapter

Papers

- ❖ Total Number of articles: 31(International – 29; National -02)
- ❖ GenBank publications: 08
- ❖ Total impact:105.76
- ❖ Average impact factor per paper: 3.412
- ❖ Total citation (Google scholar):1230
- ❖ h-index (Google scholar):18
- ❖ i10-Index (Google scholar):23

Title of the Paper	Journal Name with ISSN, Vol. etc.	Year of Publication
Prevalence and public health significance of anemia among non-pregnant, non-lactating tribal women of reproductive age (15-49 years) in India.	<i>International Journal of Science and Research Archive</i> , 2022; 07(02), 075–086. eISSN: 2582-8185	2022
Antibacterial potency of cytocompatible chitosan-decorated biogenic silver nanoparticles and molecular insights towards cell-particle interaction,	<i>International Journal of Biological Macromolecules</i> , 2022; Volume 219: 919-939. (IF:8.025) Print ISSN: 0141-8130 Online ISSN: 1879-0003	2022
Nutritional Status and Its Associated Factors among Adolescents Residing in Different Countries: A Review.	<i>IJFANS International Journal of Food and Nutritional Sciences Journal</i> . 2022, 11(8): 388-404. Online: 2320-7876	2022
The risk of low birth weight and associated factors in West Bengal, India: a community based cross-sectional study. Egypt Pediatric Association Gaz. 2020; 68, 27	Egypt Pediatric Association Gaz. 2020; 68, 27 ISSN: 2090-9942	2020
Analysis of fatty acids from oil of green tea (camellia sinensis L) by gas chromatography coupled with flame ionization detector and its anticancer and antibacterial activity in vitro.	<i>International Journal of Pharmacy and Pharmaceutical Sciences</i> . 2019; 11(3):104-111. Online ISSN: 0975-1491 Print ISSN: 2656-0097	2019
Green synthesized silver nanoparticles destroy multidrug resistant bacteria Oxygen Species mediated membrane damage.	<i>Arabian Journal of Chemistry</i> . 2017; 10(6): 862-876 (IF:6.212) Print ISSN: 1878-5352 Online ISSN: 1878-5379	2017
Eugenol Provokes ROS-Mediated Membrane Damage-Associated Antibacterial Activity against Clinically Isolated Multidrug-Resistant <i>Staphylococcus aureus</i> Strains.	<i>Infectious diseases: research and treatment</i> . 2016; 9:11. ISSN: 1178-6337 Online ISSN: 1178-6337	2016
Surface modification minimizes the toxicity of silver nanoparticles: an <i>in vitro</i> and <i>in vivo</i> study.	<i>Journal of Biological Inorganic Chemistry</i> . 2017; 22(6): 893–918. (IF:3.862) Electronic ISSN: 1432-1327	2017

One-pot synthesis of multifunctional nanoscale metal-organic frameworks as an effective antibacterial agent against multidrug-resistant <i>Staphylococcus aureus</i> .	<i>Nanotechnology</i> . 2017; 28 (9): 095102. (IF:3.953) Online ISSN: 1361-6528	2017
Ag/CuO nanoparticles prepared from a novel trinuclear compound [Cu (Imdz) 4 (Ag (CN) 2) 2](Imdz=imidazole) by a pyrolysis display excellent antimicrobial activity.	<i>Journal of Molecular Structure</i> . 2016; 1113: 9-17. (IF:3.841) Online ISSN: 1872-8014 Print ISSN: 0022-2860	2016
Nanotherapy on human acute myeloid leukemia cells using RGO/Ag nanocomposites.	<i>RSC Advances</i> . 2016; 6: 52403 (IF:4.036) ISSN 2046-2069	2016
Preparation and characterization of ferromagnetic nickel oxide nanoparticles from three different precursors: application in drug delivery.	<i>RSC Advances</i> . 2015; 5: 35917-35928. (IF:4.036) ISSN 2046-2069	2015
Theoretical and experimental study of folic acid conjugated silver nanoparticles through electrostatic interaction for enhance antibacterial activity.	<i>RSC Advances</i> , 2015; 5(28), 21515-21524. (IF:4.036) ISSN 2046-2069	2015
Self-assembled betulinic acid augments immunomodulatory activity associates with IgG response.	<i>Biomedicine and Pharmacotherapy</i> 2015; 75:205-17. (IF: 7.419) ISSN: 0753-3322	2015
Progressive increase in point mutations associates chloroquine resistance: Even after withdrawal of chloroquine use in India.	<i>International Journal for Parasitology: Drugs and Drug Resistance</i> . 2017; 7(3), 251-261. (IF:4.284) ISSN: 2211-3207	2017
Self- assembled betulinic acid protects doxorubicin induced apoptosis followed by reduction of ROS-TNF- α -Caspase 3 activity.	<i>Biomedicine and Pharmacotherapy</i> 2015; 72: 144–157. (IF: 7.419) ISSN: 0753-3322	2015
Betulinic acid, a natural bio-active compound: proficient to induce programmed cell death in human myeloid leukemia.	<i>World J Pharmacy Pharmaceutics. Sci.</i> 2014; 3:1348-1374. ISSN:: 2278-4357	2014
Bio- fabricated silver nanoparticles preferentially targets Gram positive depending on cell surface charge.	<i>Biomedicine and Pharmacotherapy</i> 2016; 83: 548-558. (IF: 7.419) ISSN: 0753-3322	2016
Self assembled nano fibers of betulinic acid: A selective inducer for ROS/TNF-alpha pathway mediated leukemic cell death.	<i>Bioorganic Chemistry</i> . 2015; 63:85-100. (IF:5.307) ISSN: 1090-2120	2015

Isolation and characterization of multi-drug resistance <i>Proteus vulgaris</i> from clinical samples of utiinfected patients from Midnapore, West Bengal.	<i>International journal of Life Science and Pharma Research.</i> 2015;5(2):L32-L45. ISSN 2250-0480	2015
Toxicity of cobalt oxide nanoparticles to normal cells; an in vitro and in vivo study.	<i>Chemico Biological Interaction.</i> 2015; 226; 58-71. (IF:5.168) ISSN: 1872-7786	2015
Cobalt oxide nanoparticles induced oxidative stress linked to activation of TNF-α/caspase-8/p38-MAPK signaling in human leukemia cells.	<i>Journal of Applied Toxicology.</i> 2015; 35; 603-13. (IF:3.628) Online ISSN:1099-1263	2015
Green one step morphosynthesis of silver nanoparticles and their antibacterial and anticancerous activities.	<i>New Journal of Chemistry.</i> 2015; 40 (3): 2749-2762. (IF:3.925) ISSN 1369-9261	2015
Chitosan-modified cobalt oxide nanoparticles stimulate TNF-α-mediated apoptosis in human leukemic cells.	<i>Journal of Biological Inorganic Chemistry.</i> 2014; 19: 399-414. (IF:3.862) Electronic ISSN: 1432-1327	2014
Double mutation in the pfmdr1 gene is associated with emergence of chloroquine-resistant <i>Plasmodium falciparum</i> malaria in Eastern India.	<i>Antimicrobial agents and chemotherapy.</i> 2014; 58 (10): 5909-5915. (IF:5.938) ISSN: 1098-6596	2014
Metal based nanoparticles as cancer antigen delivery vehicles for macrophage based antitumor vaccine.	<i>Vaccine.</i> 2016; 34 (7): 957-967. (IF: 4.169) ISSN: 1873-2518	2016
Sodium Selenite Attenuates Chromium-Induced Membrane Damage.	<i>Eur J Health Sci.</i> 2016; 2 (3):89-97. ISSN: 2520-4645	2016
One step synthesis of functionalized carbon dots for the ultrasensitive detection of <i>Escherichia coli</i> and Iron (III).	<i>Sensors and Actuators B: Chemical,</i> 2017, 245, 835-844. (IF:9.221) ISSN: 1873-3077	2017
Protective effect of <i>Andrographis paniculata</i> Nees and Vitamin-C in nicotine-induced oxidative stress in liver and kidney.	<i>World J Pharm Sci.</i> 2016; 4(9):345-352 ISSN:: 2278-4357	2016
Sodium selenite attenuates nicotine-induced oxidative stress in rat.	<i>World Journal of Pharmaceutical Research.</i> 2016; (5):1022-1036. ISSN: 2277-7105	2016
Green synthesized silver nanoparticles kill virulent multidrug-resistant <i>Pseudomonas aeruginosa</i> strains: A mechanistic study.	<i>BLDE Univ J Health Sci.</i> 2016; 1:89-101. ISSN: Print: 2468-838X, Online: 2456-1975	2016

GenBank publications:

1. Das, S., Tripathy, S., Chattopadhyay, S., Dash, S.K., Mandal, D., Das, B., KarMahapatra, S., Hati, A.K. and Roy, S. Plasmodium falciparum voucher PFR-36-2008 P-glycoprotein-like protein (mdr1) gene, partial cds. Accession KM056977.
2. Das, S., Mahapatra, S.K., Tripathy, S., Chattopadhyay, S., Dash, S.K., Mandal, D., Das, B., Hati, A.K. and Roy, S. Plasmodium falciparum voucher PFR-76-2008 P-glycoprotein-like protein (mdr1) gene, partial cds. Accession: KM056978.
3. Das,S., Mahapatra,S.K., Tripathy,S., Chattopadhyay,S., Dash,S.K., Mandal,D., Das,B., Hati,A.K. and Roy,S. Plasmodium falciparum voucher PFR-94-2008 P-glycoprotein-like protein (mdr1) gene, partial cds. Accession: KM056979
4. Das,S., Tripathy,S., Dash,S.K., Chattopadhyay,S., Mandal,D., Das,B., KarMahapatra,S. and Hati,A.K. Plasmodium falciparum voucher PFR-131-2008 P-glycoprotein-like protein (mdr1) gene, partial cds. Accession:KM056980.
5. Das,S., Tripathy,S., Dash,S.K., Chattopadhyay,S., Das,B., Mandal,D., Hati,A.K. and Roy,S. Plasmodium falciparum voucher SR-pf-crt-15 CRT protein (crt) gene, partial cds. Accession:KM188435.
6. Das,S., Tripathy,S., Chattopadhyay,S., Dash,S.K., Das,B., KarMahapatra,S., Hati,A.K. and Roy,S. Plasmodium falciparum voucher SR-pf- crt-4 CRT protein (crt) gene, partial cds. Accession:KM188436.
7. Das,S., Tripathy,S., Dash,S.K., Chattopadhyay,S., Das,B., Mandal,D., KarMahapatra,S., Hati,A.K. and Roy,S. Plasmodium falciparum voucher SR-pf- crt-20 CRT protein (crt) gene,partialcds. Accession:KM188437.
8. Das,S., Tripathy,S., Dash,S.K., Chattopadhyay,S., Das,B., Das,D., KarMahapatra,S., Hati,A.K. and Roy,S. Plasmodium falciparum voucher SR-pf- crt-25 CRT protein (crt) gene, partial cds. Accession:KM188438

Book/Book Chapter

Title of the Book	Publication Name with ISSN , Vol etc.	Year of Publication
Advances in Diabetes Research and Management	Springer, Singapore Print ISBN: 978-981-19-0026-6 Online ISBN978-981-19-0027-3	2023

Conference /Seminar/Workshop Attended/Organised**Papers presented in Conference/Seminar (International)**

1. **Das B. Poly Ethylene Glycol (PEG) functionalized Silver nanoparticles kill pathogenic bacteria through MQ activation.** In: Proceeding's of International conference on Contemporary Innovative Issues and Future Challenges in Physiology and allied Sciences (ICCIIFCPAS-2020), Dept. of Physiology, Vidyasagar University, 2020.
2. **Das, B., Mandal, D, Dash, S.K., Tripathy, S., Roy, S. "Copper oxide nanoparticles conjugated ciprofloxacin: a new era to combat bacterial resistance."** In: 11th

ISE Annual International Conference on “Ergonomics and Human Factors”, organized by Department of Human Physiology with Community Health, Vidyasagar University at Midnapore- 721102, West Bengal, India, on 4th-5th December,2013.

3. Mandal D, Dash SK, **DasB**, Ghosh T, Das D, Roy S. **Antimicrobial activity of Calcium and Cobalt Oxide Nanoparticles against Clinically Isolated Multi Drug Resistant *Proteus mirabilis* and *Enterococcus faecium* strains.** In: 11th ISE Annual International Conference on “Ergonomics and Human Factors”, organized by Department of Human Physiology with Community Health, Vidyasagar University at Midnapore- 721102, West Bengal, India, on 4th-5th December, 2013.
4. Dash SK, Chattopadhyay S, Ghosh T, Tripathy S, **Das B**, Das D. Roy S. **Poly ethylene glycol protected and folate decorated zinc oxide nanoparticles: A biocompatible nano missile for doxorubicin delivery.** In: 11th ISE Annual International Conference on “Ergonomics and Human Factors”, organized by Department of Human Physiology with Community Health, Vidyasagar University at Midnapore- 721102, West Bengal, India, on 4th-5th December, 2013.

Paper Presented in Seminar/ Conference etc: (National)

1. **Das B. Surface functionalized silver nanoparticles induced oxidative stress linked to DNA damage and reactive oxygen species generation in multidrug resistant bacteria.** In: Two day national level webinar on “A Glimpse of Animal Diversity: A Legal Perspective” Organized by Dept. of Zoology, Belda College in collaboration with Dept. of Geography, Belda College on 3rd and 4th October,2021.
2. **Das B. Surface Functionalized Silver nanoparticles augment MQ activation.....against pathogenic bacteria.** In: XXXIst Annual Conference of the Physiological Society of India on ‘Recent trends in Physiology and healthcare research for Sulubrious Society, Bankura Christian College, 2019.
3. **Das B. Surface functionalized silver nanoparticles augment macrophage activation followed by intracellular killing of pathogenic bacteria.** In: UGC-sponsored national seminar on “**Health Risks of Processed Food**” Organized by Dept. of Physiology, Chemistry and Nutrition, Ramnagar College, Depal, PurbaMedinipur, West Bengal, India, on 9th March,2018.
4. **Das B, Roy S. Surface modification minimizes the toxicity of silver nanoparticles: An in vitro and in vivo study.** In: UGC-sponsored national seminar on “Perspectives of Human Health, Microbial Biotechnology & Innovation” Organized by Dept. of Human Physiology with Community Health and Dept. of

Microbiology, Vidyasagar University, Midnapore- 721102, West Bengal, India, on 27th-29th March,2018.

5. **Das B**, Tripathy S, Dash SK, Mandal D, Roy S. **Surface modification minimizes the toxicity of silver nanoparticles and its antimicrobial activity : An in vitro and in vivo study.** In: 104th Indian Science Congress; Section of Medical Sciences (Including Physiology); Organized by SV University, Tirupati on 3rd – 7th January 2017.
6. Tripathy S, Dash SK, **Das B**, Mandal D, Roy S. **Nanochloroquine Delivery protects hepatic damage from Plasmodium berghei infection in Swiss mice.** In: 104th Indian Science Congress; Section of Medical Sciences (Including Physiology); Organized by SV University, Tirupati on 3rd– 7th January2017.
7. Dash SK, **Das B**, Ghosh T, Tripathy S, DeyA, Roy S. **Folic acid conjugated ultra-fine zinc oxide nanoparticles: A promising weapon for anti-leukemic therapy.** In: 104th Indian Science Congress; Section of Medical Sciences (Including Physiology); Organized by SV University, Tirupati on 3rd– 7th January2017.
8. **Das B**, Mandal D, Dash SK, Chattopadhyay S, Tripathy S, DeyA, Manna S, Dolai DP, Dey SK, Roy S. **Green synthesized silver nanoparticles successfully kill multi drug resistance and virulent Pseudomonas aeruginosa strains through reactive oxygen species induced membrane damage.** In: National Conference on Trends of Physiological research from Laboratory to Community, Organized by Vidyasagar University, Midnapore, West Bengal, India on 30th – 31st March2016.
9. Mandal D, **Das B**, Dash SK, Chattopadhyay S, Das S, Roy S. **Combined Efficacy of Green Synthesized Silver Nanoparticles and Different Antibiotics against Multidrug Resistant *Proteus vulgaris* and *Enterococcus faecalis*.**In: National Conference on Trends of Physiological research from Laboratory to Community, Organized by Vidyasagar University, Midnapore, West Bengal, India on 30th – 31st March 2016.
10. **Das B**, Dash SK, Ghosh T, Chattopadhyay S, Mandal D, Tripathy S, Das D, Roy S. **Effect of Green Synthesized Silver Nanoparticles on Multi Drug Resistant Bacteria.** In: National Conference on Current Trends of research in Human Physiology and Community Health, Organized by Vidyasagar University, Midnapore, West Bengal, India on 27th March2015.
11. Mandal D, **Das B**, Dash SK, Ghosh T, Roy S. **Effect of Green Synthesized Nanoparticles against Multi Drug Resistant *Enterococcus faecalis* and *Proteus vulgaris*.** In: National Conference on Current Trends of research in Human Physiology and Community Health, Organized by Vidyasagar University, Midnapore, West Bengal, India on 27th March2015.

12. **Das B**, Dash SK, Tripathy S, Chattopadhyay S, Adhikary J, Mandal D, Dey A, Dey SK, Roy S. **Comparative antibacterial efficacy and toxicity of green and chemically synthesized silver nanoparticles.** In: National Conference on Integrated Approaches for Promotion and Development of Herbal Medicine. Organized by Society for Ethnopharmacology, India. Jadavpur, Kolkata, India on 5th-6th December 2015.
13. **Das B**, Manna S, Mandal D, Dash SK, Chattopadhyay S, Tripathy S, Dolai DP, Dey SK, Roy S. **Eugenol potentiates bacterial membrane damage associated antibacterial activity through ROS generation in Clinically isolated multi drug resistant *Staphylococcus aureus* strains.** In: National Convention on Integrated Approaches for Promotion and Development of Herbal Medicine. Organized by Society for Ethnopharmacology, India. Jadavpur, Kolkata, India on 5th--6th December 2015.
14. **Das B**, Mandal D, Roy S. **Biochemical characterization and antibiotic susceptibility pattern of isolated pathogenic *Pseudomonas aeruginosa* strains from urine sample of UTI patients.** In: 101st Indian Science Congress; Section of Medical Sciences (Including Physiology); Organized by University of Jammu, Jammu, J&K, India on 3rd – 7th February 2014.
15. **Das B**, Mandal D, Roy S. **Isolation and Identification of *Pseudomonas aeruginosa* from urinary tract infection patients.** In: National Conference on Research methodology in higher education, Organized by Vidyasagar University Research Scholars' Association, Vidyasagar University, Midnapore, West Bengal, India on 19th March 2013.
16. Tripathy S, Das S, Dash SK, Chattopadhyay S, Mandal D, **Das B**, Pramanik P, Roy S. **Immunomodulatory Role of Chitosan-tripolyphosphate Conjugated Nanochloroquine.** In: National Conference on Research methodology in higher education, Organized by Vidyasagar University Research Scholars' Association, Vidyasagar University, Midnapore, West Bengal, India on 19th March 2013.
17. **Das B**, Chakraborty SP, Roy S. **in vitro Antimicrobial activity of *Andrographis peniculata* Nees against multi-drug resistant *Staphylococcus aureus* and *Escherichia coli*.** In: 100th Indian Science Congress; Section of Medical Sciences (Including Physiology); Organized by University of Calcutta, Kolkata, West Bengal on 3rd – 7th January 2013.
18. Paper presentation in the UGC sponsored National Seminar on “**Emerging Issues in Physiology and Allied Sciences**” Organized by Department of Human Physiology with Community Health, Vidyasagar University, West Bengal on 26th March 2010.

Seminar/ Conference attended/participated:**International: 17****National: 30****Invited Lectures/papers.**

Sl. No.	Title of the invited lecture /paper presented	Title of Conference/ Seminar with date	Organized By and date	Whether International/ National/ State or University
1.	Effect of green synthesized silver nanoparticles on multi drug resistant bacteria	XXXI st Annual Conference of The Physiological Society of India (PHYSICON) an Extension Programme hosted by "Recent Trends in Physiology and Healthcare Research for Salubrious Society"	Department of Physiology, Bankura Christian College, Bankura, West Bengal, India during 18-20 November 2022.	National Conference
2.	"Surface functionalized Ag NPs Augment MΦ activation Pathogenic bacteria".	National Conference PHYSICON-2019 on "Recent Trends in Physiology and Healthcare Research for Salubrious Society"	Dept. of Physiology, Bankura Christian College and Physiological Society of India (PSI) on 15-17 November, 2019.	National Conference
3.	"Poly ethylene glycol (PEG) functionalized silver nano particles kill pathogenic bacteria through Macrophage activation".	Two day international Conference on "Contemporary Innovative Issues and Future Challenges in Physiology and Allied Sciences (ICCIIFCPAS)"	Dept. of Physiology, Vidyasagar University on 21 st -22 nd January, 2020.	International Conference