CURRICULUM VITAE

Akalesh Kumar Verma, PhD.

Assistant Professor (Sr. Grd.)

Cotton University (December, 2015 to Till date)

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	All	Since 2016
Citations	1733	1284
h-index	25	22
i10-index	51	40
Scopus h-index	20	-
Scopus ID	54914841800	-
Researcher ID	AAF-6204-2020	-
Google scholar ID	c3XtOUkAAAAJ	-
Vidwan ID	259430	-

EDUCATION

1. **Post Doctoral Degree** (Indo-US Exchange Fellow): Morehouse School of Medicine (2015), Department of Microbiology, Biochemistry and Immunology, Atlanta, Georgia, USA.
2. **Ph.D**., Zoology, Cell & Tumor Biology Laboratory, North Eastern Hill University, Shillong, India, 2013 (supervisor- Prof. S.B. Prasad).
   Thesis: Studies on the antitumor efficacy and toxicity of the blister beetle, *Mylabris cichorii* extract in mice bearing ascites Dalton's lymphoma.
3. **M.Sc**., Life Sciences (Specialization- Biochemistry & Molecular Biology), ranking **1st class 1st**, Dibrugarh University, Dibrugarh, Assam, India, 2007.
4. **B.Sc.**, Zoology (Major), Lumding College, Lumding , Guwahati University, Guwahati, India, 2005.
5. Higher Secondary in Science, AHSEC (Physics, Chemistry & Biology), Lumding College, Lumding, India, 2002.
6. High School Leaving Certificate, SEBA, Karbi Anglong, Assam, India, 1999.

SHORT TERM CERTIFICATE COURSE

1. Certificate course in computer programming language (C/C^{++}), BDPS, Mumbai, India, 2009.
2. Certificate course in Matlab Programming, Computer Centre, NEHU, Shillong, India, 2011.

RESEARCH EXPERIENCE

Ph.D. research experience: Five years plus (2008-2013)
Post Doctoral research experience: 2 Years 7 Months years

1. **Post Doctoral Fellow (Indo-US Exchange Fellow)** at Morehouse School of Medicine (April, 2015 to December, 2015), Department of Microbiology, Biochemistry and Immunology, Atlanta, Georgia, USA.
   Title: Role of Chemokine receptor in disparities associated with prostate cancer progress.

2. **DBT-Post Doctoral Fellow** (April, 2013-April, 2015) at Cancer Institute, Addayar, Chennai.
   Title: Validation of the SNPs involved in promoting genetic susceptibility to oral cancer among long term tobacco chewers identified in the North-Eastern and Southern India population.

TECHNICAL SKILLS

1. Experience in culture of cancer cell lines (MCF-7, DL, EAC etc.) *in vitro* and maintenance of cancer cell lines in C3H/He mice strain, *in vivo*.
2. SNPs analysis and HPV subtyping of oral cancer in North East Indian population.
3. Experience in maintenance and breeding of mice, rats and rabbits at North Eastern Hill University (2008-2013)
4. Human peripheral blood lymphocytes, macrophages and thymocyte collection and culture for cytotoxicity assay, Enzymes assay and kinetics study.
5. Apoptosis, necrosis and autophagy study in different cancer cell lines with possible molecular mechanism by TEM, SEM, Flowcytometry, fluorescence microscope, PCR and confocal microscopy.
6. Maintenance and testing of anti-diabetic activity of natural products extracts in alloxan induced diabetic mice.
7. Screening of antioxidant and anticancer activity of plants and insects extracts *in vivo* and *in vitro.*
8. Phytochemicals analysis, isolation, purification and crystallization of active compound from plants and animals sources using NMR, IR, GC-mass, UV, CHNO- elemental analysis, HPLC and X-ray diffractometer.
9. Study of cell proliferation and kinetics by flowcytometry, fluorescent and Giemsa staining method.
10. Working experience in PCR, Q-PCR, PCR primer design and western blot analysis.
11. Separation of biological sample using agarose gel, SDS-PAGE, Immuno electrophoresis, Immunodiffusion, TLC and column chromatography.
12. Genotoxicity assay (Chromosome aberration, comet-NE assay, sperm abnormality and micronucleus assay) using confocal microscope.
13. Experience in haematology studies (RBC/WBC counts, Hb and PCV), histopathology with histomorphometric analysis, urine test, liver function test and kidney function test after drug treatment on experimental animals.
14. Virtual screening using ligand based pharmacophore generation and their QSAR analysis.
15. *In silico* 3D Molecular modeling of protein structure determination.
16. *In silico* genome analysis, protein function prediction and phylogenetic tree analysis.
17. Proficient in statistical analysis and software (Origin Pro & Matlab).
18. Good working knowledge of computer.

CURRENT AREAS OF RESEARCH

1. Cytokines and chemokines mediated Androgen receptor transcriptional activation in prostate cancer.
2. SNP profiling, HPV sub typing and polyploidy analysis of oral cancer from extensive tobacco chewers of North East Indian population.
3. Studies of molecular mechanisms of cancer progression and treatments through Her-2, ER, PR, ALDH-1 and P-16.

4. 3D Nuclei design & Freshwater pearl culture
5. Bio-activity guided isolation, characterization and structure elucidation of anticancer active principle(s) from different medicinal insects and plants collected from North East India.
6. *In silico*- Drug designing & Network Pharmacology.

WORKSHOPS AND TRAINING ATTENDED

1. Certificate in High Performance computing course C-DAC, Pune, March 03-06, 2009.
2. CIMAP Training school on Advance Instrumentation and Analytical Techniques for Natural Products (AIAT-2009). The instruments covered were GC, GC-MS, HPLC, HPTLC, NMR, LC-MS, FT-NIR and ICP. June 10-16, 2009
3. Participated in the workshop on FT-NMR spectroscopy: Theory, Application, and Experimentation. SAIF, NEHU, Shillong, Nov 16- 19, 2009.
4. Participated in the 16th DBT-sponsored training course on "*In silico* Approach to Genome Analysis, BIC-NEHU, February, 5-11, 2009.
5. Certificate course (6 months) in C & C++ from BDPS, Mumbai, India 2009.
6. Participated in the workshop on "Atomic Absorption Spectroscopy Basic principles, Applications and Practical demonstration, Nov 11- 13, 2009.
7. Hands on training program on Bee hive rearing, culture and managements at Agriculture University, Jorhat, Assam (India), December 15-20, 2006.
8. Three month project work experience at Dibrugarh University entitled "The Effect of Endosulfan (35% E.C.) on The Muscle Tissue of Fresh Water Air-Breathing Teleost (*Channa gachua)".*
9. Short term course on Advance Technique in Cellular and Molecular Biology held at IIT, Guwahati organized by dept. of Biotechnology, November 15 -19, 2010.
10. Short term training course (3 months) in Matlab Programming, NEHU, Computer Centre 2011.
11. Participated in the workshop on 'Techniques in Molecular Biology' Under State Level Biotech Hub Project, NEHU, Shillong, November 17- 25, 2011.
12. A Short term training on Protein 3D Structure Modeling. Tezpur University, Tezpur, November 23-26, 2011.
13. A short term course in Disaster management. Organized by UGC-Academic staff College NEHU, 7-9 Feb, 2012.
14. Attended in a training program on 'In silico characterization of Proteins from sequences and Molecular modeling approaches'. BIF, Veterinary College, Assam Agriculture University, Guwahati, November 7-9, 2012.
15. Attended in a training program on 'Computational Approaches to understand Protein-Protein and Protein-Ligand interactions'. BIF, Veterinary College, Assam Agriculture University, Guwahati, February 16-19, 2016.
16. Participated in a workshop entitled "Capacity building in grant writing skills and effective management of Intellectual property Rights (IPR) in Biotechnology by universities and research institutions in North East Region" at Dibrugarh University, Dibrugarh, Assam. Organised by BCIL, New Delhi, November 16-18, 2016.
17. Participated in a workshop entitled Campus Bird Count; Organised by Cotton College State University (Now Cotton University) from 12-15 February, 2016.
18. Participated in a workshop entitled "Computational approach to understand protein-protein and protein-ligand interactions" Conducted by the Bioinformatics Infrastructure Facility, C.V.Sc., AAU., Khanapara, Guwahati from 16-19 February, 2016.
19. Participated in a workshop entitled "Biomolecular Interactions and Dynamics" Conducted by the Bioinformatics Infrastructure Facility, C.V.Sc., AAU., Khanapara, Guwahati from 3-6 January, 2017.
20. Participated in UGC Sponsored Orientation Program; Organised by HRD Centre, Gauhati University, from 29 May to 25 June, 2017.
21. Attended International Workshop on "Tools and Techniques to Perform Molecular Modelling and Computer-Aided Drug Design" seven days international workshop 'MMTT-2021' organized by the Department of Medicinal Chemistry, NIPER Guwahati, January 11-17, 2021.

22. Faculty Development Program on Basic and Advanced Proteomics Approaches, Indian Institute of Technology Bombay, 15-26 February, 2021.

RESEARCH PAPERS PUBLISHED/ACCEPTED

1. Sawkmie, M., Banothu, V., **Verma, A.K**., Paul, A.K., Krajewski, S., Kaminsky, W. and Kollipara, M.R. (2023). Cyclopentadienyl and indenyl ruthenium (II) complexes containing diazafluorenone derivative ligands: Syntheses, characterization, antibacterial and cytotoxicity studies. *Journal of Organometallic Chemistry*, p.122876.
   Impact factor: 2.3
   DOI: https://doi.org/10.1016/j.jorganchem.2023.122876
2. Chakraborty, R., Dutta, A., Baruah, B.J., Rajni, K., Sarma, P., Sharma, A., Goswami, K., Myakala, H. and **Verma, A. K.*** (2023). Pancreatic cancer: A review on pathophysiology, naturopathy, clinical treatment and outcomes. Current Cancer Therapy Reviews (Accepted).
   Impact factor: 0.6
   DOI: 10.2174/1573394719666230830125213
3. Nongpiur, C.G.L., Soh, C., Diengdoh, D.F., **Verma, A.K.**, Gogoi, R., Banothu, V., Kaminsky, W. and Kollipara, M.R. (2023). 3-acetyl-coumarin-substituted thiosemicarbazones and their ruthenium, rhodium and iridium metal complexes: An investigation of the antibacterial, antioxidant and cytotoxicity activities. *Journal of Organometallic Chemistry*, p.122788.
   Impact Factor: 2.345
   https://doi.org/10.1016/j.jorganchem.2023.122788
4. Borah, L., Ahmed, R., **Verma, A. K**., and Chetri, S. (2023). Potential of *Curcuma longa* Linn. (Turmeric) in management of *Callosobruchus chinensis* L.: *In-silico* analysis. *Journal of Biological Control,* 36 (2&3): 151-162,
   https://doi.org/10.18311/jbc/2022/31878
5. Nongpiur, C.G.L., **Verma, A.K.**, Ghate, M.M., Poluri, K.M., Kaminsky, W. and Kollipara, M.R. (2023). Synthesis, cytotoxicity and antibacterial activities of ruthenium, rhodium and iridium metal complexes containing diazafluorene functionalized ligands. *Journal of Molecular Structure*, p.135474.
   Impact Factor: 3.841
   https://doi.org/10.1016/j.molstruc.2023.135474.
6. Adhikari, S., Sheikh, A.H., Baildya, N., Mahmoudi, G., Choudhury, N.A., Okpareke, O., Sen, T., ***Verma, A.K**., Singh, R.K., Pathak, S. and Kaminsky, W. (2023). Antiproliferative Evaluation and Supramolecular Properties of a Pd (II) complex Harvested from Benzil bis (pyridyl hydrazone) Ligand: Combined Experimental and Theoretical Studies. *Inorganic Chemistry Communications*, 110646.
   Impact Factor: 3.428
   https://doi.org/10.1016/j.inoche.2023.110646.
7. Sharma, P., Gomila, R.M., Barceló-Oliver, M., ***Verma, A.K**., Dutta, D., Frontera, A. and Bhattacharyya, M.K., (2023). Unconventional Dual Donor-Acceptor Topologies of Aromatic Rings in Amine-Based Polymeric Tetrahedral Zn (II) Compounds Involving Unusual Non-Covalent Contacts: Antiproliferative Evaluation and Theoretical Studies. *Crystals*, *13*(3), 382.
   Impact Factor: 2.670
   https://doi.org/10.3390/cryst13030382
8. Baishya, T., Gomila, R.M., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K**. and Bhattacharyya, M.K. (2022). Enclathration of Mn (II)(H2O) 6 Guests and Unusual Cu⋯ O bonding Contacts in Supramolecular Assemblies of Mn (II) Co-crystal Hydrate and Cu (II) Pyridinedicarboxylate: Antiproliferative Evaluation and Theoretical Studies. *Polyhedron*, 116243.
   Impact Factor: 3.052

https://doi.org/10.1016/j.poly.2022.116243

9. Dutta, D., Baishya, T., Gomila, R.M., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K**. and Bhattacharyya, M.K. (2022). Supramolecular Assemblies involving Energetically Significant Unconventional π (CN)-π and Anion-π (nitrile) Contacts in Zn (II) Coordination Compounds: Antiproliferative Evaluation and Theoretical Studies. *Journal of Molecular Structure*, 134568.
Impact Factor: 3.841
https://doi.org/10.1016/j.molstruc.2022.134568
10. Nongpiur, C.G.L., **Verma, A.K**., Singh, R.K., Ghate, M.M., Poluri, K.M., Kaminsky, W. and Kollipara, M.R. (2022). Half-sandwich ruthenium (II), rhodium (III) and iridium (III) fluorescent metal complexes containing pyrazoline based ligands: DNA binding, cytotoxicity and antibacterial activities. *Journal of Inorganic Biochemistry*, p.112059. **Accepted**
Impact Factor: 4.336
https://doi.org/10.1016/j.jinorgbio.2022.112059
11. Baishya, T., Sharma, P., Gomila, R.M., Frontera, A., Barceló-Oliver, M., ***Verma, A.K.** and Bhattacharyya, M.K. (2022). Fumarato and Phthalato Bridged Dinuclear Metal-Organic Cu (II) and Mn (II) Compounds involving Infinite Fumarate-water Assemblies and Unusual Structure-guiding H-bonded Synthons: Antiproliferative Evaluation and Theoretical Studies. New Journal of Chemistry. **Accepted**
Impact Factor: 3.925
https://doi.org/10.1039/D2NJ01860H
12. Dutta, D., Sharma, P., Gomila, R.M., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K**., Baishya, T. and Bhattacharyya, M.K., (2022). Supramolecular Assemblies involving Unconventional Non-Covalent contacts in Pyrazole-Based Coordination Compounds of Co (II) and Cu (II) Pyridinedicarboxylates: Antiproliferative Evaluation and Theoretical Studies. *Polyhedron*, 224, 116025.
Impact Factor: 3.052
https://doi.org/10.1016/j.poly.2022.116025
13. Sarma, P., Gomila, R.M., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K.,** Saikia, S. and Bhattacharyya, M.K. (2022). Terephthalato and Succinato bridged Mn (II) and Zn (II) Coordination Polymers involving Structure-guiding H-bonded Tetrameric Assemblies: Antiproliferative Evaluation and Theoretical Studies. *Polyhedron*, 224, 115982.
Impact Factor: 3.052
https://doi.org/10.1016/j.poly.2022.115982
14. Dutta, D., Sharma, P., Gomila, R.M., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K.**, Baruwa, B. and Bhattacharyya, M.K. (2022). Solvent-driven structural topologies in phenanthroline-based co-crystals of Zn (ii) involving fascinating infinite chair-like {[(bzH) 4 Cl 2] 2−} n assemblies and unconventional layered infinite {bz-H 2 O-Cl} n anion-water clusters: antiproliferative evaluation and theoretical studies. *New Journal of Chemistry*, *46*(12), 5638-5652.
Impact Factor: 3.925
https://doi.org/10.1039/D1NJ05234A
15. Sarma, P., Sharma, P., Gomila, R.M., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K.**, Baruwa, B. and Bhattacharyya, M.K. (2022). Charge assisted hydrogen bonded assemblies and unconventional O⋯ O dichalcogen bonding interactions in pyrazole-based isostructural Ni (II) and Mn (II) compounds involving anthraquinone disulfonate: Antiproliferative evaluation and theoretical studies. *Journal of Molecular Structure*, 1250(1):131883. **Cited by 2**
Impact Factor: 3.841
https://doi.org/10.1016/j.molstruc.2021.131883
16. Sharma, P., Baishya, T., Gomila, R.M., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K.**, Das, J. and Bhattacharyya, M.K., 2022. Structural topologies involving energetically significant antiparallel π-stacking and

unconventional N (nitrile)··· π (fumarate) contacts in dinuclear Zn (ii) and polymeric Mn (ii) compounds: antiproliferative evaluation and theoretical studies. *New Journal of Chemistry*, *46*(11), 5296-5311. **Cited by 3**
Impact Factor: 3.925
https://doi.org/10.1039/D1NJ04786H

17. Dkhar, L., ***Verma, A.K.**, Banothu, V., Kaminsky, W. and Kollipara, M.R., 2022. Ruthenium, rhodium, and iridium complexes featuring coumarin hydrazone derivatives: Synthesis, characterization, and preliminary investigation of their anticancer and antibacterial activity. *Applied Organometallic Chemistry*, *36*(4), e6589.
Impact Factor: 4.072
https://doi.org/10.1002/aoc.6589
18. Das, A., Sharma, P., Gomila, R.M., Frontera, A., ***Verma, A.K.**, Sarma, B. and Bhattacharyya, M.K., 2022. Synthesis, structural topologies and anticancer evaluation of phenanthroline-based 2, 6-pyridinedicarboxylato Cu (II) and Ni (II) compounds. *Polyhedron*, *213*, 115632. **Cited by 4**
Impact Factor: 3.052
https://doi.org/10.1016/j.poly.2021.115632
19. Nath, H., Sharma, P., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K**., Das, J. and Bhattacharyya, M.K., 2022. Phenanthroline-based Ni (II) coordination compounds involving unconventional discrete fumarate-water-nitrate clusters and energetically significant cooperative ternary π-stacked assemblies: Antiproliferative evaluation and theoretical studies. *Journal of Molecular Structure*, *1248*, 131424. **Cited by 4**
Impact Factor: 3.841
https://doi.org/10.1016/j.molstruc.2021.131424
20. Roy, M.K., Swargiary, A. and **Verma, A.K.**, 2021. Antiproliferative and apoptosis-inducing properties of selected medicinal plants of Assam, India. *Archives of Medicine and Health Sciences* 9(2), 236-243. https://doi.org/10.4103/amhs_210_21
21. Dutta, D., Sharma, P., Gomila, R.M., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K**., Gogoi, M. and Bhattacharyya, M.K., 2021. Solvent driven structural topologies involving unconventional OH (methanol)··· π contact and anti-cooperative HB··· anion-π··· HB assemblies with unusual enclathration of dual guest (H2O) 4 cores in Mn (II) and Ni (II) coordination compounds: Antiproliferative evaluation and theoretical studies. *Polyhedron*, *210*, 115503. **Cited by 1**
Impact Factor: 3.052
https://doi.org/10.1016/j.poly.2021.115503
22. Chetri, S., Ahmed, R., **Verma, A.K.**, 2021. Efficacy of *Cassia fistula* against *Callosobruchus chinensis* (Linn.): An in-silico approach. *International Journal of Entomology Research.* 6(4), 202-207.
https://www.entomologyjournals.com/archives/2021/vol6/issue4/6-4-48
23. Sharma, P., Dutta, D., Gomila, R.M., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K.** and Bhattacharyya, M.K., 2021. Benzoato bridged dinuclear Mn (II) and Cu (II) compounds involving guest chlorobenzoates and dimeric paddle wheel supramolecular assemblies: Antiproliferative evaluation and theoretical studies. *Polyhedron*, *208*, 115409. **Cited by 3**
Impact Factor: 3.052
https://doi.org/10.1016/j.poly.2021.115409
24. Nabiyeva, T., Roufosse, B., Odachowski, M., Baumgartner, J., Marschner, C., ***Verma, A.K.** and Blom, B., 2021. Osmium Arene Germyl, Stannyl, Germanate, and Stannate Complexes as Anticancer Agents. *Acs Omega*, *6*(29), 19252-19268.
Impact Factor: 4.132
https://doi.org/10.1021/acsomega.1c02665
25. Nath, H., Sharma, P., Gomila, R.M., Frontera, A., Barceló-Oliver, M., ***Verma, A.K.**, Dutta, K. and Bhattacharyya, M.K., 2021. Unconventional enclathration of guest adipic acid and energetically significant antiparallel π-stacked ternary assemblies involving unusual regium-π (chelate) contacts in phenanthroline-based

Ni (II) and Cu (II) compounds antiproliferative evaluation and theoretical studies. *Journal of Molecular Structure*, *1245*, 131038. **Cited by 7**
Impact Factor: 3.841
https://doi.org/10.1016/j.molstruc.2021.131038

26. Swargiary, A., Roy, M.K. and **Verma, A.K.**, 2021. In vitro study of the antioxidant, antiproliferative, and anthelmintic properties of some medicinal plants of Kokrajhar district, India. *Journal of Parasitic Diseases*, *45*(4), 1123-1134. **Cited by 3**
Impact Factor: 1.43
https://doi.org/10.1007/s12639-021-01410-0
27. Das, A., Sharma, P., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K.**, Ahmed, R.S., Hussain, S. and Bhattacharyya, M.K., 2021. Supramolecular assemblies involving biologically relevant antiparallel π-stacking and unconventional solvent driven structural topology in maleato and fumarato bridged Zn (ii) coordination polymers: antiproliferative evaluation and theoretical studies. *New Journal of Chemistry*, *45*(29), 13040-13055. **Cited by 7**
Impact Factor: 3.925
https://doi.org/10.1039/D1NJ00619C
28. Sarma, P., Sharma, P., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K.**, Barthakur, T. and Bhattacharyya, M.K., 2021. Unconventional π-hole and Semi-coordination regium bonding interactions directed supramolecular assemblies in pyridinedicarboxylato bridged polymeric Cu (II) Compounds: Antiproliferative evaluation and theoretical studies. *Inorganica Chimica Acta*, *525*, 120461. **Cited by 7**
Impact Factor: 3.118
https://doi.org/10.1016/j.ica.2021.120461
29. Sarma, P.P., Gurumayum, N., ***Verma, A.K.** and Devi, R., 2021. A pharmacological perspective of banana: Implications relating to therapeutic benefits and molecular docking. *Food & Function*, *12*(11), 4749-4767. **Cited by 6**
Impact Factor: 6.317
https://doi.org/10.1039/D1FO00477H
30. Sharma, P., Nath, H., Frontera, A., Barcelo-Oliver, M., ***Verma, A.K.**, Hussain, S. and Bhattacharyya, M.K., 2021. Biologically relevant unusual cooperative assemblies and fascinating infinite crown-like supramolecular nitrate–water hosts involving guest complex cations in bipyridine and phenanthroline-based Cu (ii) coordination compounds: antiproliferative evaluation and theoretical studies. *New Journal of Chemistry*, *45*(18), 8269-8282. **Cited by 7**
Impact Factor: 3.925
https://doi.org/10.1039/D1NJ01004B
31. ***Verma, A.K.**, Kumar, V., Singh, S., Goswami, B.C., Camps, I., Sekar, A., Yoon, S. and Lee, K.W., 2021. Repurposing potential of Ayurvedic medicinal plants derived active principles against SARS-CoV-2 associated target proteins revealed by molecular docking, molecular dynamics and MM-PBSA studies. *Biomedicine & Pharmacotherapy*, 137:1-17. **Cited by 36**
Impact Factor: 7.419
https://doi.org/10.1016/j.biopha.2021.111356
32. Chetry, S., Sharma, P., Frontera, A., Saha, U., ***Verma, A.K.**, Sarma, B., Kalita, P.J. and Bhattacharyya, M.K., 2021. Biologically relevant and energetically significant cooperative ternary (π–π) 2/(π–π) 1/(π–π) 2 assemblies and fascinating discrete (H 2 O) 21 clusters in isostructural 2, 5-pyridine dicarboxylato Co (ii) and Zn (ii) phenanthroline compounds: antiproliferative evaluation and theoretical studies. *New Journal of Chemistry*, *45*(7), 3699-3715. **Cited by 12**
Impact Factor: 3.925
https://doi.org/10.1039/D0NJ04338A
33. Sharma, P., Sarma, P., Frontera, A., Hussain, S., ***Verma, A.K.** and Bhattacharyya, M.K., 2021. Energetically significant anti-parallel π-stacking and unconventional anion-π interactions in phenanthroline based Ni (II) and Cu

(II) coordination compounds: Antiproliferative evaluation and theoretical studies. *Inorganica Chimica Acta*, *516*, 120082. **Cited by 12**
Impact Factor: 3.118
https://doi.org/10.1016/j.ica.2020.120082

34. Sharma, P., Sarma, P., Frontera, A., Barceló-Oliver, M., ***Verma, A.K.**, Sarma, B., Barthakur, T. and Bhattacharyya, M.K., 2021. Energetically significant cooperative π-stacked ternary assemblies in Ni (II) phenanthroline compounds involving discrete water clusters: Anticancer activities and theoretical studies. *Journal of Molecular Structure*, *1229*, 129486. **Cited by 12**
Impact Factor: 3.841
https://doi.org/10.1016/j.molstruc.2020.129486
35. Dutta, D., Sharma, P., Frontera, A., Gogoi, A., ***Verma, A.K.**, Dutta, D., Sarma, B. and Bhattacharyya, M.K., 2020. Oxalato bridged coordination polymer of manganese (iii) involving unconventional O⋯ π-hole (nitrile) and antiparallel nitrile⋯ nitrile contacts: antiproliferative evaluation and theoretical studies. *New Journal of Chemistry*, *44*(46), 20021-20038. **Cited by 12**
Impact Factor: 3.925
https://doi.org/10.1039/D0NJ03712E
36. ***Verma, A.K.** and Aggarwal, R., 2020. Repurposing potential of FDA-approved and investigational drugs for COVID-19 targeting SARS-CoV-2 spike and main protease and validation by machine learning algorithm. *Chemical Biology & Drug Design*, *97*(4), 836-853. **Cited by 25**
Impact Factor: 2.873
https://doi.org/10.1111/cbdd.13812
37. ***Verma, A.K.**, 2020. Cordycepin: a bioactive metabolite of Cordyceps militaris and polyadenylation inhibitor with therapeutic potential against COVID-19. *Journal of Biomolecular Structure and Dynamics*, *40*(8), 3745-3752. **Cited by 14**
Impact Factor: 3.392
https://doi.org/10.1080/07391102.2020.1850352
38. Chetry, S., Sharma, P., Frontera, A., Dutta, D., ***Verma, A.K**. and Bhattacharyya, M.K., 2020. Unconventional formation of a 1D-chain of H-bonded water molecules in bipyridine-based supramolecular hexameric hosts of isostructural coordination compounds of Co (II) and Zn (II): Antiproliferative evaluation and theoretical studies. *Polyhedron*, *191*, 114809. **Cited by 14**
Impact Factor: 3.052
https://doi.org/10.1016/j.poly.2020.114809
39. Das, A., Sharma, P., Frontera, A., ***Verma, A.K.**, Barcelo-Oliver, M., Hussain, S. and Bhattacharyya, M.K., 2021. Energetically significant nitrile⋯ nitrile and unconventional C–H⋯ π (nitrile) interactions in pyridine based Ni (II) and Zn (II) coordination compounds: Antiproliferative evaluation and theoretical studies. *Journal of Molecular Structure*, *1223*, 129246. **Cited by 14**
Impact Factor: 3.841
https://doi.org/10.1016/j.molstruc.2020.129246
40. Swargiary, A., **Verma, A.K**., Singh, S., Roy, M.K. and Daimari, M., 2021. Antioxidant and antiproliferative activity of selected medicinal plants of lower Assam, India: An in vitro and in silico study. *Anti-Cancer Agents in Medicinal Chemistry (Formerly Current Medicinal Chemistry-Anti-Cancer Agents)*, *21*(2), 267-277. **Cited by 14**
Impact Factor: 2.527
https://doi.org/10.2174/1871520620666200719000449.
41. Nath, H., Dutta, D., Sharma, P., Frontera, A., ***Verma, A.K.**, Barceló-Oliver, M., Devi, M. and Bhattacharyya, M.K., 2020. Adipato bridged novel hexanuclear Cu (ii) and polymeric Co (ii) coordination compounds involving cooperative supramolecular assemblies and encapsulated guest water clusters in a square grid host: antiproliferative evaluation and theoretical studies. *Dalton Transactions*, *49*(28), 9863-9881. **Cited by 23**
Impact Factor: 4.569

https://doi.org/10.1039/D0DT01007C

42. ***Verma, A.K.** and Singh, S., 2020. Phytochemical analysis and in vitro cytostatic potential of ethnopharmacological important medicinal plants. *Toxicology Reports*, *7*, 443-452. **Cited by 37**
Impact Factor: 4.807
https://doi.org/10.1016/j.toxrep.2020.02.016
43. Nath, H., Sharma, P., Frontera, A., ***Verma, A.K.**, Das, A., Barceló-Oliver, M. and Bhattacharyya, M.K., 2020. Energetically significant unconventional OH··· π contacts involving discrete guest (H2O) 8 clusters in a fumarato bridged polymeric supramolecular host of Ni (II) phenanthroline: Antiproliferative evaluation and theoretical studies. *Polyhedron*, *176*, 114266. **Cited by 22**
Impact Factor: 3.052
https://doi.org/10.1016/j.poly.2019.114266
44. Bhattacharyya, M.K., Dutta, D., Nashre-ul-Islam, S.M., Frontera, A., Sharma, P., ***Verma, A.K.** and Das, A., 2020. Energetically Significant antiparallel π-stacking contacts in Co (II), Ni (II) and Cu (II) coordination compounds of pyridine-2, 6-dicarboxylates: Antiproliferative evaluation and theoretical studies. *Inorganica Chimica Acta*, *501*, 119233. **Cited by 27**
Impact Factor: 3.118
https://doi.org/10.1016/j.ica.2019.119233
45. Sharma, P., Gogoi, A., ***Verma, A.K.**, Frontera, A. and Bhattacharyya, M.K., 2020. Charge-assisted hydrogen bond and nitrile··· nitrile interaction directed supramolecular associations in Cu (ii) and Mn (ii) coordination complexes: anticancer, hematotoxicity and theoretical studies. *New Journal of Chemistry*, *44*(14), 5473-5488. **Cited by 29**
Impact Factor: 3.925
https://doi.org/10.1039/D0NJ00075B
46. Bhattacharyya, M.K., Saha, U., Dutta, D., Frontera, A., ***Verma, A.K**., Sharma, P. and Das, A., 2020. Unconventional DNA-relevant π-stacked hydrogen bonded arrays involving supramolecular guest benzoate dimers and cooperative anion–π/π–π/π–anion contacts in coordination compounds of Co (ii) and Zn (ii) phenanthroline: Experimental and theoretical studies. *New Journal of Chemistry*, *44*(11), 4504-4518. **Cited by 20**
Impact Factor: 3.925
https://doi.org/10.1039/C9NJ05727G
47. Gogoi, K., Baishya, G., Saikia, B., Barua, N.C., Dohutia, C., **Verma, A.K.** and Prakash, A., 2019. Antimalarial activity of a novel series of artemisinin-derived 1, 2, 3-triazole dimers. *Asian Pacific Journal of Tropical Medicine*, *12*(5), 195-203. **Cited by 4**
Impact Factor: 3.041
https://doi.org/10.4103/1995-7645.259240
48. Gogoi, A., Das, A., Frontera, A., ***Verma, A.K.** and Bhattacharyya, M.K., 2019. Energetically significant unconventional π-π contacts involving fumarate in a novel coordination polymer of Zn (II): In-vitro anticancer evaluation and theoretical studies. *Inorganica Chimica Acta*, *493*, 1-13. **Cited by 38**
Impact Factor: 3.118
https://doi.org/10.1016/j.ica.2019.04.047
49. Gogoi, A., Dutta, D., ***Verma, A.K.**, Nath, H., Frontera, A., Guha, A.K. and Bhattacharyya, M.K., 2019. Energetically favorable anti-electrostatic hydrogen bonded cationic clusters in Ni (II) 3, 5-dimethylpyrazole complexes: Anticancer evaluation and theoretical studies. *Polyhedron*, *168*, 113-126. **Cited by 33**
Impact Factor: 3.052
https://doi.org/10.1016/j.poly.2019.04.043
50. Bhattacharyya, M.K., Saha, U., Dutta, D., Das, A., ***Verma, A.K.** and Frontera, A., 2019. Solvent-driven structural topology involving energetically significant intra-and intermolecular chelate ring contacts and anticancer activities of Cu (II) phenanthroline complexes involving benzoates: experimental and theoretical studies. *RSC advances*, *9*(29), 16339-16356. **Cited by 39**

Impact Factor: 4.036
https://doi.org/10.1039/C9RA01181A

51. Nashre-ul-Islam, S.M., Dutta, D., ***Verma, A.K.**, Nath, H., Frontera, A., Sharma, P. and Bhattacharyya, M.K., 2019. Antiproliferative evaluation and supramolecular association involving electrostatically enhanced π-π interaction in isostructural coordination solids of Mn (II), Co (II) and Zn (II) chlorobenzoates: Experimental and theoretical studies. *Inorganica Chimica Acta*, *498*, 119161. **Cited by 21**
Impact Factor: 3.118
https://doi.org/10.1016/j.ica.2019.119161
52. Bhattacharyya, M.K., Gogoi, A., Chetry, S., Dutta, D., ***Verma, A.K**., Sarma, B., Franconetti, A. and Frontera, A., 2019. Antiproliferative evaluation and supramolecular association in Mn (II) and Zn (II) bipyridine complexes: Combined experimental and theoretical studies. *Journal of Inorganic Biochemistry*, *200*, 110803. **Cited by 36**
Impact Factor: 4.336
https://doi.org/10.1016/j.jinorgbio.2019.110803
53. Palepu, N.R., Premkumar, J.R., **Verma, A.K.**, Bhattacharjee, K., Joshi, S.R., Forbes, S., Mozharivskyj, Y. and Rao, K.M., 2018. Antibacterial, in vitro antitumor activity and structural studies of rhodium and iridium complexes featuring the two positional isomers of pyridine carbaldehyde picolinic hydrazone ligand. *Arabian journal of chemistry*, *11*(5), 714-728. **Cited by 21**
Impact Factor: 6.212
https://doi.org/10.1016/j.arabjc.2015.10.011
54. Kundu, S., Ramshankar, V., **Verma, A.K.**, Thangaraj, S.V., Krishnamurthy, A., Kumar, R., Kannan, R. and Ghosh, S.K., 2018. Association of DFNA5, SYK, and NELL1 variants along with HPV infection in oral cancer among the prolonged tobacco-chewers. *Tumor Biology*, *40*(8), 1010428318793023. **Cited by 12**
Impact Factor: 3.65
https://doi.org/10.1177/1010428318793023
55. Palepu, N.R., Adhikari, S., **Verma, A.K.**, Shepherd, S.L., Phillips, R.M., Kaminsky, W. and Kollipara, M.R., 2017. Half-sandwich ruthenium, rhodium and iridium complexes featuring oxime ligands: Structural studies and preliminary investigation of in vitro and in vivo anti-tumour activities. *Applied Organometallic Chemistry*, *31*(7), e3640. **Cited by 13**
Impact Factor: 4.072
https://doi.org/10.1002/aoc.3640
56. Rao Palepu, N., Richard Premkumar, J., **Verma, A.K.**, Bhattacharjee, K., R Joshi, S., Forbes, S., Mozharivskyj, Y., Kaminsky, W. and Mohan Rao, K., 2016. In vitro Biological Activity Studies of Platinum Group Metal Complexes Containing N, N'-Bis (picolinoyl) hydrazine Ligand. *Current Inorganic Chemistry (Discontinued)*, *6*(2), 127-140.
Impact Factor: 5.436
https://www.ingentaconnect.com/content/ben/cic/2016/00000006/00000002/art00008
57. Swargiary, A. and **Verma, A.K.**, 2013. Investigation on the Binding Affinities of Different Anthelmintic Drugs on the 3D Model Protein Structure of Acetylcholinesterase of Schistosoma mansoni: An in silico Approach. *British Biomedical Bulletin*, 3: 20-33.
https://hal.archives-ouvertes.fr/hal-03710835
58. Palepu, N.R., Nongbri, S.L., Premkumar, J.R., **Verma, A.K**., Bhattacharjee, K., Joshi, S.R., Forbes, S., Mozharivskyj, Y., Thounaojam, R., Aguan, K. and Kollipara, M.R., 2015. Synthesis and evaluation of new salicylaldehyde-2-picolinylhydrazone Schiff base compounds of Ru (II), Rh (III) and Ir (III) as in vitro antitumor, antibacterial and fluorescence imaging agents. *JBIC Journal of Biological Inorganic Chemistry*, *20*(4), 619-638. **Cited by 36**
Impact Factor: 3.358
https://doi.org/10.1007/s00775-015-1249-3

59. Bihani, M., Bora, P.P., **Verma, A.K.**, Baruah, R., Boruah, H.P.D. and Bez, G., 2015. PPL catalyzed four-component PASE synthesis of 5-monosubstituted barbiturates: Structure and pharmacological properties. *Bioorganic & Medicinal Chemistry Letters*, *25*(24), 5732-5736. **Cited by 15**
Impact Factor: 2.94
https://doi.org/10.1016/j.bmcl.2015.10.088
60. Kumar, R., Ghosh, S.K., **Verma, A.K**., Talukdar, A., Deka, M.K., Wagh, M., Bahar, H.M., Tapkire, R., Chakraborty, K.P. and Kannan, R.R., 2015. p16 expression as a surrogate marker for HPV infection in esophageal squamous cell carcinoma can predict response to neo-adjuvant chemotherapy. *Asian Pacific Journal of Cancer Prevention*, *16*(16), 7161-7165. **Cited by 24**
Impact Factor: 1.77
https://doi.org/10.7314/APJCP.2015.16.16.7161
61. **Verma, A.K.** and Arjen, J., 2015. Effect of endosulfan on the lactate dehydrogenase profile of a fresh water air-breathing teleost fist, Channa gachua. *Bioscience Biotechnology Research Communications*, *8*(1), 8-14.
http//www.bbrc.in
62. **Verma, A.K**., & Prasad, S.B., 2015. Cantharidin inhibits proliferation and induces apoptosis in Ehrlich Ascites Carcinoma through inhibition of lactate dehydrogenase activity. *Bio-science Letter*, *1*, 13-20.
63. **Verma, A.K.**, Prasad, S.B., Rongpi, T and Arjun, J., 2014. Traditional healing with animals (Zootherapy) by the major ethnic group of Karbi Anglong district of Assam, India. *International journal of Pharmacy and Pharmaceutical sciences*, *6*(8), 593-600. **Cited by 42**
Impact Factor: 2.327
https://innovareacademics.in/journals/index.php/ijpps/article/view/2763.
64. Kalita, S., **Verma, A.K.** and Prasad, S.B., 2014. Chlorambucil and ascorbic acid-mediated anticancer activity and hematological toxicity in Dalton's ascites lymphoma-bearing mice. *Indian Journal of Experimental Biology*. 52: 112-124. **Cited by 15**
Impact Factor: 0.944
https://pubmed.ncbi.nlm.nih.gov/24597143/
65. Arjun, J., **Verma, A.K**. and Prasad, S.B., 2014. Method of preparation and biochemical analysis of local tribal wine Judima: an indegenous alcohol used by Dimasa tribe of North Cachhar Hills District of Assam, India. *International Food Research Journal*, *21*(2): 463-470. **Cited by 16**
https://www.proquest.com/openview/1a13b192c1f88d6c6b1e5d0eff0f4345/1?pq-origsite=gscholar&cbl=816390
66. Deka, M.K., Talukdar, A., Kannan, R., Tapkire, R., Kumar, R. and **Verma, A.K.**, 2014. A rare case of primary clear leg in an elderly. *International Medical Journal*, *1*(3): 91-93. https://www.researchgate.net/profile/Monoj-Deka/publication/352038737_A_rare_case_of_primary_clear_cell_sarcoma_of_the_leg_in_an_elderly/links/60f9b65a1e95fe241a80e8c4/A-rare-case-of-primary-clear-cell-sarcoma-of-the-leg-in-an-elderly.pdf
67. Deka, M.K., Talukdar, A., Tapkire, R., **Verma, A.K.**, Kannan, R., 2014. A rare case of giant biliary mucinous cystadenoma in a 16 year old boy. *International Medical Journal*. 1: 259-261. https://www.researchgate.net/profile/Monoj-Deka/publication/352038471_A_rare_case_of_giant_biliary_mucinous_cystadenoma_in_a_16_year_old_boy/links/60f9ba0b2bf3553b29066c69/A-rare-case-of-giant-biliary-mucinous-cystadenoma-in-a-16-year-old-boy.pdf
68. **Verma, A.K.** and Prasad, S.B., 2014. Cantharidin: An Active Compound of Blister Beetle Caused Mitochondrial Damage and Induced Apoptosis, Necrosis and Autophagy in Dalton's Ascites Lymphoma in vivo. *Microscopy and Microanalysis*, *20*(S3), 1286-1287.
Impact Factor: 4.099
https://doi.org/10.1017/S1431927614008162
69. Kumar Verma, A. and Bali Prasad, S., 2013. Changes in glutathione, oxidative stress and mitochondrial membrane potential in apoptosis involving the anticancer activity of cantharidin isolated from redheaded blister beetles, Epicauta hirticornis. *Anti-Cancer Agents in Medicinal Chemistry (Formerly Current Medicinal Chemistry-Anti-Cancer Agents)*, *13*(7), 1096-1114. **Cited by 52**

Impact Factor: 2.527
https://www.ingentaconnect.com/content/ben/acamc/2013/00000013/00000007/art00015

70. Swargiary, A., **Verma, A.K.** and Sarma, K., 2013. Homology modeling and docking studies of phosphoenolpyruvate carboxykinase in Schistosoma mansoni. *Medicinal Chemistry Research*, *22*(6), 2870-2878. **Cited by 6**
Impact Factor: 2.351
https://doi.org/10.1007/s00044-012-0289-2
71. **Verma, A.K.** and Prasad, S.B., 2013. Antitumor effect of blister beetles: An ethno-medicinal practice in Karbi community and its experimental evaluation against a murine malignant tumor model. *Journal of Ethnopharmacology*, *148*(3), 869-879. **Cited by 23**
Impact Factor: 5.195
https://doi.org/10.1016/j.jep.2013.05.032
72. Prasad, S.B. and **Verma, A.K**., 2013. Cantharidin-mediated ultrastructural and biochemical changes in mitochondria lead to apoptosis and necrosis in murine Dalton's lymphoma. *Microscopy and Microanalysis*, *19*(6), 1377-1394. **Cited by 50**
Impact Factor: 4.099
https://doi.org/10.1017/S143192761301324X
73. **Verma, A.K.**, Prasad, S.B., Kaliyappan, R.K. and Arjun, J., 2013. Crystal structure of cantharidin (2, 6-dimethyl-4, 10-dioxatricyclo-[5.2. 1.02, 6] decane-3, 5-dione) isolated from red headed blister beetle, Epicauta hirticornis. *International Journal of Bioassays*, *2*, 527-530. **Cited by 5**
https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1004.4088&rep=rep1&type=pdf
74. Kardong, D., **Verma, A.K.**, Upadhyaya, S. and Borah, D., 2013. Phytochemical and cytotoxic properties of wild *Sarchoclamys pulcherrima* goud from Assam, North Eastern India. *International Journal of Pharmacy and Pharmaceutical Sciences.* 5:394-397. **Cited by 2**
https://innovareacademics.in/journal/ijpps/Vol5Suppl4/7963.pdf
75. **Verma, A.K.** and Prasad, S.B., 2013. Dietary Ascorbic Acid-Mediated Augmentation of Antitumor Activity and Protection Against Toxicities Induced by Cis-Diamminedichloroplatinum-(II) in Daltons Lymphoma-Bearing Mice. *Journal of Cancer Research Updates*, *2*(2), 116-130. **Cited by 7**
https://doi.org/10.6000/1929-2279.2013.02.02.6
76. **Verma, A.K.**, Nath, P., Prasad, S., Kardong, D., Arjun, J., Kashyap, D. and Chillawar, R., 2013. Homology Modeling and characterization of Phosphoenolpyruvate Carboxykinase (PEPCK) from Schistosoma japonicum. *IOSR Journal of Pharmacy and Biological Sciences*, *8*, 2319-7676. **Cited by 2**
https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.682.6465&rep=rep1&type=pdf
77. **Verma, A.K.** and Prasad, S.B., 2012. Bioactive component, cantharidin from Mylabris cichorii and its antitumor activity against Ehrlich ascites carcinoma. *Cell Biology and Toxicology*, *28*(3), 133-147. **Cited by 50**
Impact Factor: 6.691
https://doi.org/10.1007/s10565-011-9206-6
78. **Verma, A.K.**, Swargiary, A., Prasad, S.B. and Arjun, J., 2012. Homology modeling of phosphoenolpyruvate carboxykinase of Ascaris suum. *Journal of Pharmacy Research*, *5*(2), 1248-1255. **Cited by 4**
https://www.academia.edu/50125446/Homology_Modeling_of_Phosphoenolpyruvate_Carboxykinase_of_Ascaris_suum
79. Brahma, B., Prasad, S.B., Verma, A.K. and Rosangkima, G., 2011. Study of the antitumor efficacy of some select medicinal plants of Assam against murine ascites dalton's lymphoma. *Pharmacologyonline*, *3*, 155-168. **Cited by 13**
https://www.researchgate.net/publication/234619398_study_o_the_atitumor_efficacy_of_some_select_medicial_plats_of_assam_agaist_murie_ascites_dalto's_lymphoma

80. Prasad, S.B., **Verma, A.K.**, Gabriel, R., Bijoy, B., Thengtom, R. and Jashodeb, A., 2010. Antitumor activity of Mylabris cichorii extracts against murine ascites Dalton's lymphoma. *Journal of Pharmacy Research*, *3*(12), 3006-3009. **Cited by 12**
https://www.researchgate.net/publication/233412567_antitumor_activity_of_mylabris_cichorii_extracts_against_murine_ascites_dalton's_lymphoma#fulltextfilecontent
81. **Verma, A. K**., and Prasad, S.B., 2010. Antitumor activity of n-butanol fraction of *Mylabris cichorii* extract in murine ascites Dalton's lymphoma. *Bulletin of Life Sciences*. 16: 92-100.
82. Kardong, D., **Verma A.K.**, Gogoi, P., Singh, S., Gogo, K., Bora, G. and Sood, K., 2009. Endosulfan induced behavioral and biochemical changes in air breathing teleost Channa gachua (Bloch & Schneider) in tea garden Localities of upper Assam. *Bulletin of Life Sciences*. 15: 83-93.

BOOK PUBLISHED

1. **General Zoology** (for UG & PG students), Authors: **Dr. Akalesh Kumar Verma** & Dr. Sweta Singh, 2022. Publisher: BlueRose Publishers, Daryaganj, Delhi, 110002, ISBN: 978-93-93899-65-1

BOOK CHAPTERS/PROCEEDING PAPERS PUBLISHED/ACCEPTED

1. **Verma A.K.**, Prasad S.B., Bordoloi M.J. (2013). (Eds). Buragohain, J. Anticancer and cytotoxic effect of *Mylabris cichorii* extract against Dalton's lymphoma ascites-induced tumor model. Daya Publishing House, New Delhi-02. *Traditional Phytotherapy*. Pp. 68-78. ISBN: 978-81-7035-821-3.
2. Kalita S., Prasad S.B. and **Verma A.K**. (2013). (Eds). Kalita, J. Modulatory effect of Ascorbic acid (Vitamin- C) on Chlorambucil-mediated antitumor activity against murine ascites Dalton's lymphoma. Zoological Society of Assam. Saraighat Printers, Guwahati-03, India. *International Seminar on Bioresources and Human sustenance*. Pp. 131-137. ISBN: 978-93-82384-36-6.
3. **Verma, A.K**., Prasad, S.B. and Bordoloi, M.J. (2011). (Eds). Baruah, P.K. Evaluation of antitumor potential of *Mylabris cichorii* Fabr and *Cassia tora*, Lin combined extracts and their active principle(s) against murine ascites Dalton's lymphoma. Bhawani Print and Publications, Guwahati-26, India. *Proceeding Plant Resource Management and Conservation Strategies in N.E. Region*, pp. 149-155. ISBN: 978-93-81139-47-9.
4. Gogoi, D., **Verma, A.K**., Singh, R.K., Bordoloi, M.J., Bezbarua, R.L., Kangabam, R.D., Pradeep, S. and Konwar, B.K. (2013). (Eds). Buragohain J. Ligand based virtual screening on some of the anti-cancer phytochemicals to develop a novel inhibitor of β-catenin against cancer: Part-II. Daya Publishing House, New Delhi-02, India. *Traditional Phytotherapy*. Pp. 9-26. ISBN: 978-81-7035-821-3.
5. Prasad, S.B. and **Verma, A.K.** (2014). (Eds). P.P. Mathur. Studies on antitumor activity and tissues toxicity of cantharidin, a monoterpenoid, isolated from blister beetles, *Mylabris cichorii*. Narendra Publishing House, New Delhi-06, India, Chapter-12 in *Contemporary Topics in Life Sciences*, pp.197-214. ISBN: 978-93-82471-77-6.
6. **Verma, A.K.** and Prasad, S.B. (2017). (Eds). G.S. Solanki. Cantharidin, a bioactive compound from blister beetles, Epicauta hirticornis triggers apoptotic cell death and arrests cell cycle in a murine tumor model. Biodiversity Conservation strategy and application. Edt:, In Section-III: Biodiversity & Technology. Pp. 214-228. ISBN-13: 978-8193732748.
7. **Verma, A.K.** and Singh, S. (2021). (Eds). Rantumoni Sharma, Namita Nath and Mohan Chandra Kalita. Entomo-therapeutic potential of *Lyttavesicatoria* (Linnaeus, 1758) in human breast cancer by blocking cell proliferation and inducing apoptosis *via* mitochondria stress-related signaling pathway. Wild edible bioresources of North East India. ISBN: 9789390434589. EBH Publisher, Panbazar, Guwahati-01, India.
8. Jumi Das, Namram Sushindrajit Singh, Rohit Aggarwal, Diksha Dutta, Bandita Baruwa, Trinayan Barthakur and **Akalesh Kumar Verma** (2021). (Eds). Jayanta Sonowal, Dr. Urmika Phangchopi and Sajidur Rahman. A review on bioactive metabolites and pharmacological characteristics of Cordyceps spp. Current Biological Research. ISBN: 978-93-5566-144-9. Publisher: Department of Botany and Zoology Namrup College. 30/10/2021.

PATENT FILED/GRANTED

1. **United Kingdom design patent (Granted)**: Title: Cancer Detection Device. Design application number: 6302729, Grant date: 18 August 2023. Version: 14-2023. **Class** 24 -Medical and laboratory equipment, **Sub class** 01 - Apparatus and equipment for Doctors, Hospitals and Laboratories. **Innovators**: Verma, A.K., Mopuri, R., Singh, N., Singh, R., Sarkar, B., Bachanna, P.
2. **Indian patent (Filed):** Title of invention: Mother of pearl (MOP) infused pre-school learning and play kits: A multisensory approach to early education. Application Number: 202331055323, Date of Filing: 17/08/2023. **Innovators**: Verma, A.K., Singh, N.S., Singh, S., Arjun, J., Barthakur, T., Devi, M., Dutta, D., Das, J., Dutta, K., Gogoi, M., Gogoi, R., Singh, R.K. and Paul A.K.
3. **Indian patent (Filed):** Title of invention: Animal Shell upcycling machine. **Innovators**: Verma, A.K., Shukla, R.K., Singh, S., Prasad, S.S., Ahmed, R. Application Number: 394818-001 (Cbr no.: 211360, Date: 11-09-2023).

PARTICIPATION & PAPER PRESENTATION IN NATIONAL SEMINAR/SYMPOSIUM

1. Kardong. D., **Verma A.K**., Yadav R.N.S., Gogoi B.K., Bora T.C. Biochemical and Microbial analysis of Saimond or Po:ro apong (Oral presentation) in National Seminar on Biodiversity. Organised by North East Biotechnological Consortium, IIE, Guwahati, 18th to 19th Dec 2007, pp 29.
2. **Verma, A.K**., B. Brahma., T. Rongpi., G. Rosangkima., Amenla., S.B. Prasad. Anticancer activity of different fractions of *Mylabris cichorii* extract in mice (C_3H/He) bearing ascites Dalton's lymphoma. (Poster presentation) in National Seminar on Recent Trends in Phytochemicals & Phytopharmaceuticals Research and Future Prospects. Organized by Dept.of Chemistry, Gauhati University, Gauwahati, 26th-27th March, 2010, pp 56.
3. **Verma, A.K**., S.B. Prasad and M. J. Bordoloi. Zootherapeutics potentials of a blister beetle against murine ascites Dalton's lymphoma. National Seminar on Biodiversity of North East India Issue and Concern. Organized by Regional Centre National Afforestation and Eco- Development Board, NEHU, Shillong, 22nd May, 2010, pp 5.
4. Participated in National seminar entitled" Application of radiation in medical research, organized by Department of Atomic Energy, NEIGRIHM, Shillong" India, 15th May, 2010.
5. **Verma, A.K**., S.B. Prasad and M. J. Bordoloi. Anticancer and Cytotoxic effect of *Mylabris cichorii* extract against Dalton's lymphoma ascites- induced tumor model. National Seminar on Recent Trend in traditional phytotherapy: Safety, Efficacy, Drug discovery and priority issue 14anuary14z by Namrup College, Dibrugarh, 2nd -3rd December, 2010, pp 21.
6. Participation in 96th Indian Science Congress, North Eastern Hill University, Shillong , 3rd -4th January, 2009.
7. **Verma, A.K**., Dhrubajyoti Gogoi, M.J. Bordoloi. Ligand-based virtual screening on some of the Anticancer Phytochemicals to develop a novel inhibitor of β-catenin against cancer. National Seminar on Recent Trend in traditional phytotherapy: Safety, Efficacy, Drug discovery and priority issue 14anuary14z by Namrup College, Dibrugarh, 2nd -3rd December, 2010, pp 13.
8. **Verma, A.K**., S.B. Prasad and M. J. Bordoloi. Anticancer activity of active fraction of *Mylabris cichorii* extract *in vivo* and *in vitro.* National Seminar on Recent Advances in Synthesis and Catalysis. Organized by Department of chemistry, Dibrugarh University, 10th -12th February, 2011, pp 39.
9. **Verma, A.K**., S.B. Prasad and M. J. Bordoloi. Evaluation of Antitumor potentials of *Mylabris cichorii* (Fabr) and *cassia tora* (Lin) combined extract and their active principle(s) against murine ascites 14anuar's lymphoma. National seminar on plant resource management and conservation strategies in N.E. region. Organized by Department of Botany, Cotton College, Guwahati, 18th -19th February, 2011.
10. **Verma, A.K**., Dhrubajyoti Gogoi, M.J. Bordoloi. Virtual screening to find potent inhibitor of HSP90: An in silico approach to develop potent anticancer drug candidates. National Seminar on Recent Advances in Synthesis and Catalysis. Organized by Department of chemistry, Dibrugarh University, 10th -12th February, 2011, pp 83.

11. **Verma, A.K.** apoptotic and anticancer activities of Cantharidin isolated from *Mylabris cichorii* (Fab), against Murine Ascites Dalton's lymphoma. 99th ISCA, KIIT University, Bhubaneswar, 3rd -7th January 2012, pp 7.
12. **Verma, A.K.** Changes in glutathione and glutathione-related enzymes induces mitochondrial stress and apoptosis in the anticancer activities of cantharidin isolated from red-headed blister beetles, *Epicauta hirticornis* and its mechanism of action. 100th ISCA, Calcutta University, 3rd -7th January, 2013, pp 8.
13. **Verma, A.K**., S.B. Prasad. Cantharidin inhibits proliferation and induces apoptosis in Ehrlich ascites carcinoma through inhibition of Lactate dehydrogenase enzyme activity. National Seminar on Faunal Diversity and Ecophysiology. Department of Zoologyy, NEHU, 28th -29th February, 2012, pp 63.
14. **Verma, A.K**., S.B. Prasad. Cantharidin mediated biochemical and ultrastructural changes in mitochondria of tumor cells. National Seminar on Faunal Diversity and Ecophysiology. Department of Zoologyy, NEHU, 30 March, 2016, pp 5.
15. **Verma, A**.K. Cantharidin, a promising chemotherapeutic agent from blister beetles, *Epicauta hirticornis* triggers apoptotic cell death and cell cycle arrest in a murine malignant tumor model. Cotton University Symposium held during 27-28 January, 2017.
16. **Verma, A.**K. Traditional healing with blister beetles. National Symposium on Molecular Insect Science. Department of Entomology, Assam Agriculture University, Jorhat, Assam from 6-8 February, 2017.
17. Kataki, B., **Verma, A.K**., Singh, N.S. Changes in *Tinosporia cordifolia* extract mediated biochemical, haematological and histological parameters in Swiss albino mice. National Conference on Ethno-medicine and traditional health practices in North East Region of India. Organised by NIPER, Guwahati, Assam, India. 25th August, 2018, pp. 12.
18. Dutta, K., Singh, N.S., **Verma, A.K**. Effect of *Carica papaya* leaf extract in combination with coconut water on platelets count in chloroquine induced thrombocytopenic mice. National Conference on Ethno-medicine and traditional health practices in North East Region of India. Organised by NIPER, Guwahati, Assam, India. 25th August, 2018, pp. 64.
19. Rana, V., Singh, N.S., **Verma, A.K**. Effect of *Carica papaya* leaf extract on haematological and histopathological parameters in Swiss albino mice. National Conference on Ethno-medicine and traditional health practices in North East Region of India. Organised by NIPER, Guwahati, Assam, India. 25th August, 2018, pp. 94.
20. Saikia, S., Ahmed, R., **Verma, A.K**. *In silico* screening and molecular docking of Phytochemical compounds to identify novel beta-tubulin inhibitor(s) from the Microsporidium, Endoreticulatus sp. Zhenjiang, isolated from *Bombyx mori*. National Conference on Bioresources for Sustaining life and livelihoods in North-East India. Organised by Nowgong College, Department of Zoology, Assam, India. 4th-5th October, 2018, pp.48.
21. Barthakur, T., **Verma, A.K**., Singh, N.S., Rongpi, S. Effect of propolis methanol extract (70%) on biochemical, haematological and histopathological parameters of albino mice. National Seminar on recent advances in bio-Sciences. Organised by Department of Zoology, Pragjyotish College, Assam, India. 21st – 22th September, 2018, pp.43.
22. Boruah, M., Bhuyan, T., **Verma, A. K**. Identification of novel natural inhibitor(s) of CCR9 using structure-based virtual screening and their wet lab validation. Organised by Down Town University, Panikhaiti, Guwahati, 10-11 November, 2018. pp32. **Best Poster award.**
23. **Verma, A. K**. and Singh, N. S. Innovation in nucleus engineering and golden freshwater designer pearl production: A first report. Assam Biotech Conclave-2022, Organised by Biotech Park, Guwahati and IIT Guwahati. May 20-22, 2022.
24. Gogoi.M, Singh N .S, **Verma A.K,** Dutta.K, Devi.M, Das.J, Dutta.D. In vitro antitumor activity of Gnetum gnemon leaf extract (methanol: 70%) in Dalton's lymphoma ascites bearing tumor mice. National Seminar on Emerging trends in Biological Sciences: A North East India perspective. Organized by Department of Biotechnology & Bioinformatics, NEHU,Shillong-793022, Meghalaya, India in collaboration with Bio-Resources Development Centre(BRDC),Shillong & BioNest Bioincubator facility,NEHU, Tura Campus, Meghalaya,28th February-1st March,2023, pp 71.

1. **Verma, A.K**., S.B. Prasad and J. Arjun. Synergistic anticancer activity of *Mylabris cichorii* and C*assia tora* extract against Dalton's ascites lymphoma bearing mice. International conference on recent trend in medicinal and aromatic plant researches. Department of Life sciences and Bioinformatics, Assam University, Assam, 1-5 December, 2010, pp 63.
2. **Verma A.K.** and Prasad S.B. Blister beetles and their active compound, Cantharidin isolated from *Mylabris cichorii* (Fab), as cancer chemopreventive agent against Ehrlich ascites carcinoma. International Seminar on Bioresources and Human sustenance. Cotton College, Guwahati, 20-22 October, 2011, pp 84.
3. Brahma B, Prasad S.B and **Verma A.K**. Anti-tumor activity of some traditional medicineal plants from Assam against murine ascites Dalton's lymphoma. International Seminar on Bioresources and Human sustenance. Cotton College, Guwahati, 20-22 October, 2011, pp 187.
4. Kalita S, Prasad S.B and **Verma A.K**. Modulatory effect of Ascorbic acid (Vitamin- C) on Chlorambucil-mediated antitumor activity against murine ascites Dalton's lymphoma. International Seminar on Bioresources and Human sustenance. Cotton College, Guwahati, 20-22 October, 2011, pp 189.
5. Prasad S.B. **and Verma A.K.** Zootherapy with blister beetle, *Mylabris cichorii and* its isolated compound, cantharidin against murine tumor model. International seminar on Natural Product Research & Development. Jadavpur University, Kolkata, 1-3 March, 2012, pp 56.
6. Kaliyappan, R.K., **Verma, A.K**., Rao, K.M. Arene ruthenium complexes containing di-(2-pyridyl) ketone 2,4-dinitrophenylhydrazone ligand: synthesis, molecular structure, anticancer activity against Ehrlich ascites carcinoma and molecular docking with cancer target protein. International Conference on Biological Inorganic Chemistry. Department of Chemistry, Periyar University, February 20-22, 2013, pp 128.
7. Prasad S.B. **and Verma A.K.** Studies on the cantharidin-mediated antitumor activity and toxicity in tumor-bearing mice. 2nd International summit on toxicology, Hampton Inn Tropicana, Las Vegas, NV, USA. October 7-9, 2013, pp115.
8. **Verma A.K.** and Prasad S.B. Cytotoxic and mutagenic effects of Cantharidin, A type of terpenoid isolated from red-headed blister beetle (*Epicauta hirticornis*) on the growth of normal and T- cell lymphoma. International Conference on harnessing natural resources for sustainable development- Global trend, Cotton College, Guwahati, Assam. 29- 31 January, 2014, pp 45.
9. **Verma A.K.**, Prasad S.B. and Arjun J. Flow cytometry based study of cantharidin-mediated mitochondrial membrane 16anuary16zation and cell cycle analysis in Dalton's ascites lymphoma *in vivo*. Indo-US Symposium on Clinical Hematological Malignancies, Cachar Cancer Hospital & Reseach Centre, Meherpur, Silchar, Assam. 8-9 February, 2014, pp 16.
10. **Verma A.K.** and Prasad S.B. Apoptotic, necrotic and autophagic effects of cantharidin, a potent antitumor compound isolated from blister beetle, *Epicauta hirticornis* and study of underlying mechanisms of action against murine T-cells lymphoma, International Conference on Entomology, Punjabi University, Patiala, India. 21-23 February, 2014, pp 47.
11. Rajeev Kumar, R. Ravi Kannan, **Akalesh Kumar Verma**, Anuradha Talukdar, Monoj Kumar Deka, Ritesh Tapkire, Litika Vermani, Sankar Kumar Ghosh. High ALDH1, S phase fraction, $p16^{INK4A}$ in esophageal squamous cell carcinoma could predict response to neoadjuvant chemotherapy [abstract]. In: Proceedings of the American Association for Cancer Research Annual Meeting 2017; 2017 Apr 1-5; Washington, DC. Philadelphia (PA): AACR; Cancer Res 2017;77(13 Suppl):Abstract nr 2788. Doi:10.1158/1538-7445.AM2017-2788.
12. **Verma A.K.** Freshwater pearl farming and surgical procedures. Special invited lecture in International virtual event "Applied Biology Research & Innovation Conference 2022 (ABRICON-22)" held during December 03-05, 2022.
13. **Verma A.K.,** Dutta D., Das J. Biological activities of *Cordyceps militaris* (Caterpillar fungus) and its bioactive compounds. Invited lecture in International Conference on "Biodiversity & Conservation-cum-Workshop on Traditional Medicine" held on 14th and 15th December, 2022 at St. Anthony's College Auditorium, Shillong.

14. Dutta. D, **A.K. Verma** and N.S. Singh. Anticancer potential of an entomophagous caterpillar fungus, Cordyceps militaris: An in vitro and in silico study. International Seminar on Climate Change: Impact and Resilience. Organized by Department of Zoology, Assam Don Bosco University, Sonapur-782402, Assam, in collaboration with Zoological Society of Assam, 27-28 February, 2023, pp 49.
15. Singh, R.K., **A.K. Verma**., A.K. Paul and N.S. Singh. Influence of nucleus materials on nacre layer synthesis leading to high quality fresh water pearl formation. International Seminar on Climate Change: Impact and Resilience. Organized by Department of Zoology, Assam Don Bosco University, Sonapur-782402, Assam, in collaboration with Zoological Society of Assam, 27-28th February 2023, pp 54. **Best Poster award.**

INVITED LECTURE/RESOURCE PERSON

1. **Verma, A.K.** Anticancer Effect of Cantharidin against Murine Ascites Tumor Model. 99th ISCA, KIITS University, Bhuwneswar, Orissa. 3rd -7th January, 2012. (Section: Animal, Veterinary and Fishery Sciences).
2. **Verma, A.K.** Changes in glutathione and glutathione-related enzymes induces mitochondrial stress and apoptosis in the anticancer activities of cantharidin isolated from red-headed blister beetles, *Epicauta hirticornis* and its mechanism of action. 100th ISCA, Calcutta University, 3rd -7th January, 2013. (Section: Animal, Veterinary and Fishery Sciences).
3. **Verma, A.K.** Fundamentals in Bioinformatics and its Application. Organised by Institutional Biotech Hub, Namrup College from 27th -31st , March, 2017.
4. **Verma, A.K.** Antibody microarray and computational approaches in target identification and drug discovery. In 20th INDO-US Flow Cytometry Workshop Symposium on Advanced Molecular Techniques. Organised by Cachar Cancer Hospital and Research Centre, Silchar, Assam, India, March 24th -27th , 2019.
5. **Verma, A.K.** Fresh water pearl culture, in one-week workshop on skill development and career opportunities in biological sciences. Organized by: B.Borooah College, Date:19th to 24th July, 2021.
6. **Verma, A.K.** Fresh water Pearl culture and human resource development organized by Department of Science and Technology (DST) Government of India and State Council of Science, Technology & Environment (SCSTE), Meghalaya "Celebration of Vigyan Utsav as part of the Azadi ka Amrit Mahotsav". Date: 20th October, 2021.
7. **Verma A.K.** Development of training needs assessment package including development of selected training modules aiming at climate-resilient management of aquatic resources in the North Eastern Region of India" on 8th December 2022. Organised by The Ministry of Environment, Forest & Climate Change (MoEFCC), Government of India, in partnership with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) is implementing an Indo-German Technical Cooperation project.
8. **Verma A.K.** Freshwater pearl farming and surgical procedures. Special invited lecture in International virtual event "Applied Biology Research & Innovation Conference 2022 (ABRICON-22)" organized by: Indian Consortium for Research & Innovation in Biology (ICRIB), Chandigarh, India and held during December 03-05, 2022.
9. **Verma A.K.** Workshop on freshwater pearl farming for enterpreneurship development. Invited by Department of Zoology, University of Science & Technology Meghalaya (USTM), 10th December 2022.
10. **Verma A.K.** Biological activities of *Cordyceps militaris* (Caterpillar fungus) and its bioactive compounds. Invited lecture in International Conference on "Biodiversity & Conservation-cum-Workshop on Traditional Medicine" held on 14th and 15th December, 2022 at St. Anthony's College Auditorium, Shillong.
11. **Verma A.K.** Entrepreneurship development workshop on "Freshwater pearl farming cum livelihood generation" held on 17th and 18th February, 2023 at Department of Zoology, University of Science & Technology Meghalaya (USTM).

12. **Verma A.K.** A Value Added Course on "Surgical Procedure of designer pearl farming" held on 11th March, 2023 at Department of Zoology, University of Science & Technology Meghalaya (USTM).
13. **Verma A.K.** Entrepreneurship Development in Pearl Farming, held on 31st March 2023, organised by Department of Zoology, St. Joseph University, Nagaland.
14. **Verma A.K.** Pearl culture in Freshwater Mussels, held on 12-13 May 2023, organised by Department of Zoology, B Borooah College, Guwahati-07, Assam.

AWARDS/HONOURS/APPRECIATIONS/FELLOWSHIPS

1. **ISCA** (Indian Science Congress Association) Young Scientist Award for the year 2012-2013
2. **Indo-US Exchange Fellowship Award**- February, 2015 (Post Doctoral Fellowship) at Morehouse School of Medicine, Department of Microbiology, Biochemistry and Immunology, Atlanta, Georgia, USA.
3. **Governor Excellent Award** for the year 2020 for best research publications under the category of Science, Organised by Cotton University, May 21st 2022; Chief Guest Governor of Assam, Prof. Jagdish Mukhi.
4. **Talent Search Contest Award-2019** by Guwahati Biotech Park (DBT), Startup Assam and Science & Technology Department, Govt. of Assam (Venue: Assam startup-The Nest, Ambari, Guwahati) entitled "Entrepreneurs development through cultivation of *Cordyceps militaris* and its spawn: The most expensive fungus in the world and development of economically viable synergistic nutraceutical formulations thereof" in GBP's Talent search contest on 20th Nov, 2019.
5. **Talent Search Contest Award-2021** by Guwahati Biotech Park (DBT) and Science & Technology Department, Govt. of Assam entitled "Development of innovative method for nucleus design and implantation in pearl oyster followed by community mobilization and sensitization for the freshwater pearl culture leading to entrepreneurship development" in GBP's Talent search contest on 6th March, 2021.
6. **Assam Startup: Cohort-4:** Selected as one of the incubates in fourth batch under the Assam Startup COHORT 4.0 programme 2022 (Sep 22, 2022), Topic: **Color Designer Pearl Farming**. An initiative by the Industries & Commerce Department, Government of Assam in association with IIM Calcutta Innovation Park.
7. **Recognition of startup** by North East Entrepreneurship Development Program (NEEDP), IIM Calcutta Innovation Park, Joka, Diamond Harbour Road, Kolkata 700104. Registration number: BR103557MC, Startup name: BudEDU Tools, Date: 15 March 2023.
8. **Wiley Top Cited Article 2021-2022 Award**. Chemical Biology & Drug Design Journal. Repurposing potential of FDA-approved and investigational drugsfor COVID-19 targeting SARS-CoV-2 spike and main protease andvalidation by machine learning algorithm. Among work published in an issue between 1 January 2021 – 15 December 2022.
9. **Highly cited author award** for the year 2021 by Royal Society of Chemistry, USA for publishing research in the top 5% of highly cited works from Indian institutions, dated 06 Jun 2022.
10. **Product developed:** A nutraceutical herbal products (*fssai*: Lic. No: 20819003000138) is released into market in the month of September, 2019. The work was carried out between Department of Zoology, Cotton University and Cosmic Farm, Faridabad, India (Under MOU). All the products are presently available in IndiaMART (https://www.indiamart.com/cosmiccordycepfarms/herbal-capsules.html#)
11. M.Sc. (Life Sciences), **First class First** in Zoology, 2007.
12. **UGC Research Fellowship Award**, November, 2009.
13. **UGG Meritorious Fellowship Award** in science for meritorious student F-4-1/2006(BSR)/5- 120/2007(BSR), Dated 20th January'2009.
14. **Best poster presentation Award:** Akalesh Kumar Verma, 2012, Cantharidin inhibit proliferation of Dalton's lymphoma by inhibition…….enzymes activity, North Eastern Hill University in a National seminar on Faunal Diversity and Ecophysiology, 28th -29th February, 2012.

15. **Best poster presentation award:** Monikongkona Boruah, Tandralee Bhuyan, Akalesh K. Verma. Identification of novel natural inhibitor(s) of CCR9 using structure-based virtual screening and their wet lab validation. Organised by Down Town University, Panikhaiti, Guwahati, 10-11 November, 2018. pp32.
16. **Winner of Ideathon # 2:** Bio-Innovation Challenge-2022, "Topic: Innovative in nucleus design and implantation in pearl oysters, followed by community mobilization and sensitization for pearl farming leading to entrepreneurship development". Dec 30, 2022 Organized by National Institute of Pharmaceutical Education and Research Guwahati (NIPER-G) Sila Katamur, Changsari, Kamrup -781101, Assam, India.
17. **Best poster presentation award:** Singh, R.K., **A.K. Verma.**, A.K. Paul and N.S. Singh. Influence of nucleus materials on nacre layer synthesis leading to high quality fresh water pearl formation. Two-Day International Seminar on Climate Change: Impact and Resilience. Organized by Department of Zoology, Assam Don Bosco University, Sonapur-782402, Assam, in collaboration with Zoological Society of Assam, 27-28th February 2023.
18. **Winner of FAME Biotech 2.0 Hackathon** (Ideation & Prototype Stage), Organized by: Institute of Advanced Study in Science and Technology (IASST), Vigyan Path Garchuk, Paschim, Boragaon, Guwahati, Assam 781035, on 26th April 2023, at IASST Auditorium.

Fellows of Scientific Societies

Life Member of Assam Science Society (Established: 1953), Guwahati, Assam. Sl no. 1805, Membership no. 6604 on 07-11-2022.

ORGANIZED SEMINARS/WORKSHOPS/TRAINING

1. Organizing member of Indo-US Clinical Cytometry Symposium and wet labs on **Haematological Malignancies:Challenges & Management Strategies**, 8th -9th February, 2014, Organised by: Dr. S. Krishnamurthi Centre for Research & Education in Cancer, Cachar Cancer Hospital & Research Centre, Silchar, Assam, India.
2. Organising member of Workshop on **Grossing of Surgical Specimens and standard reporting in Oncology**, 24th -25th November, 2014. Organised by: Department of Pathology, Cachar Cancer Hospital & Research Centre, Silchar, Assam, India and National Cancer Grid, India.
3. Convener in a training program on **Hands on training on flowcytometry data analysis & interpretation**, 21st – 23rd 19 January, 2015, Organised by: Dr. S. Krishnamurthi Centre for Research & Education in Cancer, Cachar Cancer Hospital & Research Centre, Silchar, Assam, India.
4. Jt-Convener in a National Conference on **"National Seminar on Recent advances in Zoological research and Integrative biology"**, 27-28 February, 2017 at Cotton University, Assam India.
5. Jt-Convener in a National Workshop on **"Hands on training in basic cellular and bioinformatics techniques"**. 24-25 February, 2017 at Cotton University, Assam India.
6. Jt-Convener in a National Conference on "**National Conference on Green, Sustainable and Evolving Sciences (GSES-2019)** during 28-29 June, 2019 at Cotton University, Assam India.
7. Convener in National webinar on **Pearl culture technology cum entrepreneurship development**, 9-10 September, 2021, organized by Department of Zoology, Cotton University, Guwahati, Assam.
8. Convener in National Training Program on "**Freshwater Pearl Culture for Entrepreneurship Development": Phase-I**, Organized by: Department of Zoology, Cotton University, Guwahati, Assam-01 & Indian National Pearl Culture Society, Assam, India. Date of Training– 21-23 October, 2022.
9. Convener in National Training Program on "**Freshwater Pearl Culture for Entrepreneurship Development": Phase-II**, Organized by: Department of Zoology, Cotton University, Guwahati, Assam-01 & Indian National Pearl Culture Society, Assam, India. Date of Training– 11th, 12th and 13th November, 2022.

ESTABLISHMENT OF ACADEMIC SOCIETY

The **Indian National Pearl Farming Society (INPFS)** is a non-profit organisation whose mission is to promote freshwater pearl farming as a viable means of livelihood among Indian farmers, women, startup, entrepreneurs, students, and unemployed youth. Established in 2021 (A/F registration). Founder & President: Dr. Akalesh Kumar Verma, Assistant Professor, Cotton University, Assam, India

https://sites.google.com/view/indiannationalpearlfarmsoc/home

SOCIAL AWARENESS/SERVICES UNDERTAKEN

1. Social awareness on freshwater pearl culture technology cum entrepreneurship development. Served as a **Convener** & organized National webinar on "**Pearl culture technology cum entrepreneurship development"**, 9-10 September, 2021, Venue: Department of Zoology, Cotton University, Guwahati, Assam.
   Weblink of event:
   https://zoology.cottonuniversity.ac.in/notification_details?p=N0Q3QzFkeWZtb05IMlNER2hzU3J5dz09
   The Aim of the event was to increase the awareness and to encourage farmers, students, unemployed youths, Startup and entrepreneurs for freshwater pearl culture. More than 300 participants were attended the event.
2. **Nominated working member of Unnat Bharat Abhiyan, Cotton University, Guwahati, Assam.**
   The Aim of this program is to update nearby villagers/farmers (Guwahati area) about new technology of agriculture and farming. We also train them about technique of mushroom cultivation, Value addition in agricultural product. The team is also involved in mega plantation drive on environment day.
3. **Establishment of Academic Society**: **The Indian National Pearl Farming Society (INPFS)** is a non-profit academic organization whose mission is to promote freshwater pearl farming as a viable means of livelihood among Indian farmers, students, and unemployed youth. Established in 2021 (A/F registration). **Founder & President:** Dr. Akalesh Kumar Verma, Assistant Professor, Cotton University, Assam, India Website: https://sites.google.com/view/indiannationalpearlfarmsoc/home
4. **Product developed:** A nutraceutical herbal products (*fssai*: Lic. No: 20819003000138) is released into market in the month of September, 2019. The work was carried out between Department of Zoology, Cotton University and Cosmic Farm, Faridabad, India (Under MOU). All the products are presently available in IndiaMART (https://www.indiamart.com/cosmiccordycepfarms/herbal-capsules.html#)
5. **Human Resource Development:** Hands-on training to UG & PG students, Cotton University about pearl culture technology.

FACULTY DEVELOPMENT PROGRAM

Sl. No.	Name of the Course	Duration (From – To)	Conducting Institute /HRDC
1	Orientation Program	29th May–25th Jun, 2017	HRDC-Gauhati University
2	Refresher Course in Life Sciences	17th – 30th October, 2019	HRDC-Gauhati University
3	Faculty Development Program on "Basic and advanced	15th -26th February 2021	IIT Bombay

	Proteomics Approaches".		
4	Faculty Development Program on ICT Tools for Effective Teaching and Learning	14th-18th March 2022	Tezpur University
5	Faculty Development Program on "Understanding, scouting, protecting and utilizing Intellectual Property from North East"	23-27 May 2022	NECTAR & TIFAC

DATA SUBMITTED

1. Crystallographic data for the structure analysis of 2,6-Dimethyl-4,10-dioxatricyclo-[5.2.1.$0^{2,6}$]decane-3,5-dione has been deposited with the Cambridge Crystallographic Data Center, CCDC No. 835281. Director, CCDC, 12 Union Road Cambridge CB2 1EZ UK (fax: +44 1223 336033; email: deposit@ccdc.cam.ac.uk; http://www.ccdc.cam.ac.uk).

RESEARCH PROJECT

Sl no.	**Project title**	**Funding agency, duration and years**	**Role**	**Project cost (Lakh)**
1.	Study of anticancer potential of North East Indian propolis and isolation of possible active principle(s).	DST ECR/2016/000079 (2016-2019)	Project Investigator (PI)	20.35
2.	Study of traditionally used dyes yielding plants for staining cells and cellular components and identification thereof: An eco-friendly and non-toxic alternative method.	S & T Division, ASTEC, Guwahati, Assam, India ASTEC/S&T/1614/7/2018-19/1580-1584 (2019-2021)	Project Investigator (PI)	1.4
3	Structure-based pharmacophore modeling and biological evaluation of novel CCR9 inhibitor(s) for the treatment of prostate cancer	CU/REGOFF/2017/012/7211 Cotton University (In house) (2019-2020)	Co-PI	1
4	DBT-BUILDER: Cotton University Interdisciplinary Life Science Programme for Advance Research and Education focusing Medicinal Plant Research and Biodiversity Conservation.	DBT BT/INF/22/SP45376/2022 (2022-2027)	Project Investigator (PI)	500 (5 Cr.)
5	Design of positively charged biomaterial/biopolymer coated pearl nucleus, and implantation into freshwater pearl oyster followed by survivability study and pearl quality assessment.	CU/Dean/R&D/2019/05/1995 Cotton University (In house) (2022-2023)	Project Investigator (PI)	1
6	Innovation in colored pearls production, and community mobilization and sensitization for the freshwater pearl culture leading to entrepreneurship development in Northeast India	North East Centre For Technology Application and Reach(NECTAR) TOSS-2022 (2023-2025)	Project Investigator (PI)	6.5
7	Innovative in nucleus design and implantation in pearl oysters, followed by	BIO-NEST National Institute of	Project Investigator	1

	community mobilization and sensitization for pearl farming leading to entrepreneurship development	Pharmaceutical Education and Research Guwahati (NIPER-G) (2023-2024)	(PI)	
8	Development of educational and learning tools for kids using North East Indian freshwater mussels shell 's crafts: An effort towards waste-to-wealth management and circular economy	North East Entrepreneurship Development Program (NEEDP), IIM Calcutta Innovation Park, Joka, Diamond Harbour Road, Kolkata 700104. **Recognition of startup:** Registration number: BR103557MC, Startup name: BudEDU Tools, Date: 15 March 2023	Project Investigator (PI)	1

JOURNALS REVIEWER

1. Journal of Ethnopharmacology
2. Anticancer Agent in Medicinal Chemistry
3. Current Nutraceuticals
4. Anti-Infective Agents
5. Bulletin of the World Health Organization
6. Plos One
7. Journal of Biomolecular Structure and Dynamics
8. Philippine Journal of Science
9. Indian Journal of Experimental Biology
10. Indian Journal of Traditional Knowledge
11. Journal of Molecular Structure
12. Frontiers in Bioscience-Landmark
13. Metabolites
14. Molecules

NATIONAL & INTERNATIONAL RESEARCH COLLABORATIONS

1. Cancer Cancer Hospital & Research Centre, Silchar, Assam, India
2. North East Cancer Hospital and Research Institute, Guwahati, Assam, India
3. Cosmic Cordyceps Farm, Faridabad, India
4. Department of Chemistry, NIT, Silchar, Assam
5. Bodoland University, Kokrajhar, Assam, India
6. Department of Bioinformatics, Stella Maris College (Autonomous), Tamil Nadu, India
7. Central Drug Research Institution (CDRI), Lucknow, India
8. Chemistry Department, Cotton University, Assam, India
9. Chemistry Department, North Eastern Hill University, Meghalaya, India
10. Maastricht University, Netherland
11. Morehouse School of Medicine, Atlanta, USA
12. Gyeongsang National University (GNU), Republic of Korea
13. Universidade Federal de Alfenas, Alfenas, Minas Gerais , Brazil
14. Maastricht University, MD Maastricht, Netherlands

15. COMSATS University Islamabad, Pakistan
16. Universitat de les Illes Balears, Spain

PERSONAL DETAILS

Father's Name: Sri Harsh Nath Verma
Mother's Name: Smt. Ram ruchi Devi

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2. **Prof. R.N.S.Yadav**
   (Director, Centre of Biotechnology)
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DECLARATION

I do hereby declare that the statements made in this curriculum vitae are true, complete and correct to the best of my knowledge and belief.

Place: Guwahati

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