

**Dr. Somanatha Jena, Ph.D.****Assistant Professor**

Area: Plant Biotechnology, Plant Genetic Engineering, Molecular Plant Breeding, Plant Metabolomics, Plant Volatolomics, Anti-oxidants, Anti-diabetic Activity.

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Educational Qualificatio :

Ph.D.	Biotechnology	Utkal University	2016
M.Sc.	Biotechnology	Visva Bharati University	2006
B.Sc.	Botany	North Orissa University	2004

PUBLICATIONS:**PROCEEDINGS**

1. **Somanatha Jena**, Swati Swagatika Swain, Ajanta Pal, Sagar Kumar Mishra, Pradeep Kumar Chand. Transformed hairy root cultures of an important medicinal shrub *Sida acuta* L. induced by phytopathogenic *Agrobacterium rhizogenes*. National Seminar on New Frontiers in Plant Science Research for Sustainable Development, Pranath (Autonomous) College, Khurda, Odisha, 2012: 36-54.

NATIONAL PAPERS

1. **Somanatha Jena**, Sagar Kumar Mishra, Goutam Ghosh, Pradeep Kumar Chand. Antidiabetic activity of root of *Sida acuta* Linn. in normoglycaemic and alloxan induced diabetic rats. Indian Drugs. 2011, 48(03):27-33.
2. Ansuman Sarangi, **Somanatha Jena**, Ashok Kumar Sarangi, Banita Swain. Anti-diabetic effects of *Withania somnifera* root and leaf extracts on streptozotocin induced diabetic rats. Journal of Cell and Tissue Research. 2013, 13(1):3597-3601.
3. Sonali Priyadarshini, Bhol Rasmita, Sulava Sushree, **Somanatha Jena**. Green synthesis of silver nanoparticles by using *Mangifera indica* and *Aegle marmelos* leaf extract: Optimization of the process and anti-microbial activity against bacterial pathogens causing urinary tract infections. Journal of Cell and Tissue Research. 2020, 20(1):6889-6896.
4. Sushree Sulava, Sakti Prasada Andia, Rasmita Bhol, **Somanatha Jena**. In vitro micropropagation of *Asparagus racemosus* by using of nodal explants. Journal of Cell and Tissue Research. 2020, 20(1): 6883-6888.

INTERNATIONAL PAPERS

1. Aparajeya Panda, **Somanatha Jena**, Pramod Kumar Sahu, Sanghamitra Nayak, Payodhara Padhi. Effect of polyherbal mixtures on the treatment of diabetes. *ISRN Endocrinology*, 2013: 1-5.
2. **Somanatha Jena**, Ram Chandra Jena, Rasmita Bhol. In vitro propagation of *Acampe papillosa* Lindl. (Orchidaceae) through direct somatic embryogenesis using leaf explants. *Asian Journal of Biological and Life Science*, 2013: 3(3), 234-240.
3. Pramod Kumar Sahu, Ram Chandra Jena, **Somanatha Jena**, Aparajeya. Panda, Rasmita Bhol. Anti-Diabetic and Anti-Oxidant Activity of Leaf and Bark Extracts of *Murraya koenigii* on Streptozotocine Induced Diabetic Rats. *Asian Journal of Chemistry*, 2013:25 (12), 6591-6596.
4. Lopamudra Sahu, **Somanatha Jena**, Swasti Swagatika Swain, Sabuj Sahoo, Pradeep Kumar Chand. *Agrobacterium rhizogenes* –mediated transformation of a multi-medicinal herb, *Boerhaavia diffusa* L.: Optimization of the process and anti-microbial activity against bacterial pathogens causing UTIs. *Frontiers in life Science*, 2013: 7 (3-4), 197-209.
5. Ananta kumar nayak, Ram Chandra Jena, **Somanatha Jena**, Rasmita Bhol, Hemanta kumar Patra. Phytoremediation of hexavalent chromium by *Triticum aestivum* L. *Scientia Agriculture*, 2014: 8(10), 85-91.
6. **Somanatha Jena**, Lopamudra Sahu, Denesh Kumar Ray, Sagar Kumar Mishra, Pradeep Kumar Chand. PIXE – based determination of trace element composition of genetically transformed rhizocloned of a multi-medicinal plant *Sida acuta* Burm.f. *Journal of Radioanalytical and Nuclear Chemistry*, 2015: 303, 2101-2112.
7. Bishnu Charana Das, Aparajeya panda, Pramod Kumar Sahoo, **Somanatha Jena**, Payodhar Padhi. Effect of chromium (VI) on wheat seedlings and role of chelating agents. *Current Science*, 2014:106(10), 1387-1393.
8. **Somanatha Jena**, Ram Chandra Jena, Rasmita bhol, Khusbu Agarwal, Ansuman Sarangi, Pramod Kumar Sahu, Swarnalata Mishra. A comparative study of the anti-oxidative and anti-hyperglycemic activity of in vitro and in vivo roots and leaf extracts of *Withania somnifera* on streptozotocin induced diabetic rats. *International Journal of pharmacy and pharmaceutical Sciences*, 2016: 8(10), 85-91.
9. Srikanta Panda, Roshni Tirkey, Basanta Manjari Swain, **Somanatha Jena**, Ashok Kumar Sarangi, Anshuman Sarangi. Acute pancreatitis, its diagnosis with special reference to contrast enhanced CT scan (CECT) and serum enzyme studies: a comparative study in tertiary referral hospital of Odisha, India. *International Surgery Journal*, 2017: 4(12), 4022-4028.
10. Srikanta Panda, Minati Mohapatra, Unmesh Kumar Jena, Preetam Kumar Kar, Anshuman Sarangi, **Somanatha Jena**, Ashok Kumar Sarangi. An epidemiological study of burn cases admitted to a tertiary care centre of Odisha. *International Journal of Community Medicine and Public Health*, 2018 :5(2), 616-619.

11. Srikant Panda, Minati Mohapatra, Sudhir Kumar Panigrahi, Anshuman Sarangi, **Somanatha Jena**. An evaluation of efficacy of Lichtenstein mesh hernioplasty in emergency settings: a study in tertiary care hospital in Odisha. *International Journal of Research in Medical Sciences*, 2018;6(5),1761-1764.
12. Srikanta Panda, Narendranath Samantaray, Monisha Patanaik, Debasish Sahoo, Anshuman Sarangi, **Somanatha Jena**. Assessment of level of depression and anxiety in pre and postoperative stages: a prospective cross-sectional study in scb medical college, cuttack. *Apollo Medicine*, 2019: 16 (1), 22-25.
13. Sonali Priyadarshini, Sushree Sulava, Rasmita Bhol and **Somanatha Jena**. Green synthesis of silver nanoparticles using *Azadirachta indica* and *Ocimum sanctum* leaf extract: optimization of the process and anti-microbial activity against bacterial pathogens causing urinary tract infections, *Current Science*, 2019;117 (8), 1300 -1307.
14. Shahani Begum, **Somanatha Jena**, Pradeep Kumar Chand. Silver nanocrystals bio-fabricated using *Rhizobium rhizogenes*-transformed in vitro root extracts demonstrate health proactive properties, *BioNanoScience*, <https://doi.org/10.1007/s12668-022-01040-7>, 2022.
15. Totan Adak, Arabinda Mohanty, **Somanatha Jena**, Basana Gowda, Naneen kumar Patil, Guru Pirasanna Pandi Govindharaj , Annamalai Mahendiran, Prasanthi Golive, Prakash Rath. Volatolomics to Decrypt the Monophagous Nature of a Rice Pest, *Scirpophaga Incertulas* (Walker). *Journal of Chemical Ecology*, <https://doi.org/10.1007/s10886-024-01498-7>, 2024.

AWARDS

1. National Fellowship-2009-2010 to 2014, (JRF and SRF), UGC, New Delhi.
2. Second Prize on International Conference on Biotechnology in Human Welfare, Department of Biotechnology, Kakatia University, Warangal, A.P, India.
3. Agricultural Research Service (ARS) - ICAR- NET-2016.
4. MMTTC, Utkal University, Refresher Course on Bio Sciences 19 Feb to 3March, 2024.
5. NPTEL Online Certification on Nanotechnology in Agriculture, Jan-Mar 2024.

MOTIVATIONAL NOTE: “Knowledge is the true organ of sight, not the eyes”