**Dr. Sunil Kumar Senapati**

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sunilsenapati007@gmail.com

**Educational Qualifications**

PhD in Botany, Utkal University, Bhubaneswar, 2010

Master of Science in Botany, Utkal University, 1st division Orissa, 2003

Bachelor of Science, Utkal University with 1st division, 2000

**Teaching Experience (07 years)**

21st October 2016 to till date: Lecturer at R. C. M. Science College, Khallikote, Ganjam, Odisha, India

04st August 2014 to 29th Sept. 2016: Asst. Professor (ad-hoc) at Guru Ghasidas Vishwavidyalaya (a central University) , Bilaspur, India.

18th July 2013 to 31st May 2014: Asst. Professor at Guru Ghasidas University, Bilaspur, India.

01st August 2012 to 31.12.2012: Asst. Professor at Guru Ghasidas University, Bilaspur, India.

11th August 2011 to 31st May 2012: Asst. Professor at Guru Ghasidas University, Bilaspur, India.

01st July 2009 – 30th November 2010: Sr. Lecturer at MITS School of Biotechnology, Infocity, Patia, Bhubaneswar, India.

**Research Experience (17 years)**

- 2005 to 2009 at Regional Plant Resource Centre worked as Junior Research Fellow and Senior Research Fellow in Biotechnology Division.
- 2009 to 2010 actively involved in the research going on at MITS School of Biotechnology, Bhubaneswar, and also guided students in their project dissertations.
- 2010 to 2011 worked as Research scientist at IIT Guwahati in a DBT supported project entitled “Fundamental research in Biotechnology”.
- 2011 to 2016 actively involved in the research going on at Guru Ghasidas Vishwavidyalaya (a central university, Govt. of India) and also guided no. of under graduate (B.Sc.) and post graduate (M.Sc.) students in their project dissertations.
- 2016 to till date actively involved in the research going on at R. C. M. Science College, Khallikote, Ganjam, Odisha, India

**Research Area**

My research is focused on various aspects of **plant Biotechnology**, i.e. development of micropropagation technologies for different rare/endangered/medicinal and horticultural plant species. Selection of genetically superior cell lines for various traits, optimization of tissue culture protocols for use in genetic transformation, development of cell culture technologies for production of **phyto-pharmaceuticals**. I have optimized the tissue culture protocols of *Curculigo orchiodies*, *Nyctanthus arborstritis*, *Accacia chundra*, *Rosa hybrid, Rauwolfia serpentine, Celastrus paniculatus* etc. for their rapid multiplication and large scale production. I have also developed low-cost tissue culture technologies for large-scale production of plant material like Banana and sugarcane and ornamentals (11 cutivers of rose, Dianthus, Chrysanthemum). I have experience on **molecular markers techniques** like RAPD, ISSR and AFLP and their utilization for molecular phylogeny and conservation study. I have also experienced on different nursery propagation techniques for large scale production and in vitro conservation. Up-scaling the production of medicinal metabolites through in vitro techniques, understanding molecular biology of their biosynthesis and engineering plant cells for their enhanced production and marker characterization for the specific traits are my future priorities.

**Students Supervised/under supervision**

1. B.Sc. (Hons.)/B. Tech Biotechnology- 10
2. M.Sc./M. Tech. Biotechnology- 15

**Awards/Honors**

1. GATE (Graduate Aptitude Test of Engineering), India
2. Junior Research Fellowship, NMPB, New Delhi, India
3. Senior Research Fellowship, ICAR, New Delhi, India.

**Personal Details**

- Date of Birth: 13 March, 1980
- Marital Status: Married
- Sex: Male
- Languages Known: English, Hindi and Odia
- Nationality: Indian
- Contact number: +91-8827515130, +91-7587312652

**Declaration**

I do hereby declare that all the statement made in this Curriculum Vita is true and correct to the best of my knowledge & belief and could provide documentary proof whenever required.

**(Sunil Kumar Senapati)**

# List of Publications

**Research papers**

1. **Senapati, S.K.** (2020) Green synthesis of Gold Nanoparticles from flower extract of Tageteserecta at room temperature and physiological pH and their Nanoscopic Characterization by Spectroscopy and Microscopy. European Journal of Advances inEngineering and Technology, 7: 57-60.
2. **Senapati, S.K.** (2019)A Rapid, Easier and Inexpensive Method for Isolation of Genomic DNA from Plant tissue of Jatrophacurcus. International Journal ofResearch Studies in Science, Engineering and Technology, 6: 1-14.
3. **Senapati S.K.** (2016) A Review on Research Progress on in vitro Regeneration and Transformation of Tomato. **Annual Research & Review in Biology,** 9(6): 1-9**.**
4. Aparajita S., **Senapati S.K** and Rout G.R. (2016) Population structure delineated with inter simple sequence repeat markers in fragmented populations of legume tree **International Journal of advanced Research** , 4(2):1126-1132.
5. **Senapati S.K.** (2015) A Double Phase Culture System: An Economic and Time Saving Protocol for ***InVitro*** Propagation of Plant. **SAJ Biotechnol** 1(3): 302-308
6. **Senapati, S.K**., Lahre N., Tiwary B.N (2014) Improved in vitro clonal propagation of Rauwolfia serpentinaL. Benth – An endangered medicinal plant. **Plant Biosystems**, doi.org/10.1080/11263504.2013.845264
7. **Senapati, S.K**., Aparajita, S. and Rout, G. R. (2013) Micropropagation and assessment of genetic stability in *Celastrus paniculatus*: An endangered medicinal plant. **Biologia**, 68(4): 627-632.
8. **Senapati, S.K. and Rout, G.R** (2013) In vitro mutagenesis in *Rosa hybrida* using oryzalin as mutagen and screening of mutants by RAPD marker. **African journal of Biotechnology**, 10(30): 5705-5712.
9. Jha H., Barapatre A., Prajapati M., Aadil K.R. and **Senapati S.K.** (2013) Antimicrobial activity of rhizome of selected *Curcuma* variety. **Int. J. Lifesc. Bt & Pharm. Res.** 2(3): 183-189.
10. **Senapati, S.K.,** Rout, G. R. and Aparajita, S. (2012) An assessment of genetic fidelity of *in vitro* grown plantlets of rose (*Rosa hybrida*) through molecular markers. **African journal of Biotechnology**. 11(100):16532-16538
11. **Senapati, S.K.,** Das, G.K., Aparajita, S. and Rout, G. R. (2012) Assessment of genetic variability in the Asoka Tree of India. **Biodiversity**, 1:1-8.

12. **Senapati, S.K.,** Rout, G. R. and Aparajita, S. (2011) Identification of Species-Diagnostic ISSR Markers for Ten *Phyllanthus* Species" **Z. Naturforsch**, 66 c, 167 – 172.
13. Das, G.K., **Senapati, S.K.** and Rout, G.R. (2011) Effect of auxins on adventitious root development from nodal cuttings of *Saraca asoka* (Roxb.) de Wilde and associated biochemical changes. **Journal of Horticulture and Forestry** 3(10), pp. 320-326.
14. Rout, G.R., **Senapati, S. K.** and Aparajita, S. (2010) Identification and Phylogenetic analysis of *Ipomoea* Species collected from Eastern India using Inter Simple Sequence Repeat Markers. **International Journal of Pharma and Bio Sciences**. 4, 1-13.
15. Rout, G.R., **Senapati, S. K.** and Aparajita, S. (2010) Study of Relationships among Twelve *Phyllanthus* Species with the Use of Molecular Markers. **Czech J. Genet. Plant Breed.**, 46, (3): 135–141.
16. Rout, G.R. **Senapati, S.K.** Aparajita, S. and Palai S.K (2009) Studies on genetic identification and genetic fidelity of cultivated banana using ISSR markers. **Plant Omics Journal** 2(6):250-258.
17. **Senapati, S. K.** and Rout, G. R. (2008) Mutagenesis of rose: early selection of through molecular markers. **Indian Journal of Horticulture**. 65 (4):452 – 460.
18. **Senapati, S. K.** and Rout, G. R. (2008) *In vitro* mutagenesis of rose with ethyl methane sulphonate (EMS) and early selection using RAPD markers. Adv**. in Horticultural Science**, 22(3):218 – 222.
19. **Senapati, S. K.** and Rout, G.R. (2008) Study of culture conditions for improved micropropagation of hybrid rose, **Hort. Sci.**, *35*(1): 27 – 34.
20. **Senapati, S. K**, Mohapatra, A. and Rout, G.R (2008) *In vitro* mutation in *Rosa hybrida* "Pusa Gaurav" and selection through RAPD and ISSR Markers. Floriculture and Ornamental Biotechnology. Global Science Book 2 (2):55 – 59
21. Rout, G.R., **Senapati, S. K.** and Aparajita, S (2008) Micropropagation of *Acacia chundra* (Roxb.) DC. **Hort. Sci.**, 35 (1): 22 - 26.
22. Rout, G.R., Mahato, A and **Senapati, S. K** (2008) *In vitro* clonal propagation of *Nyctanthes arbo-tristi*. **Biologia plantarum**, (3): 521 – 524.
23. Aparajita, S., **Senapati, S.K.** and Rout, G.R. (2008) Studies on identification and genetic relationship among the *Albizia* species using morphological and molecular markers, **Plant Biosystems**,142(1):30 – 39.

24. Rout, G. R., **Senapati, S. K** and Panda, J.J. (2008) "*In Vitro* selection and Biochemical characterisation of salt tolerant plants of *Nicotiana tabacum* L". **Acata Biologica Hungarica** 59(1): 77-92.
25. Francis, S.V., **Senapati, S. K** and Rout, G.R (2007) "Rapid clonal propagation of *Curculigo orchioides* Gaertn., an endangered medicinal plant". **In Vitro Cell. Dev.Bio.-Plant** 43: 140-143.
26. Rout, G.R., Kullu, J. **Senapati, S. K.**, Aparajita, S. and Mohapatra (2007) Identification and Genetic relationship among *Polyscias* and *Schefflera* (Araliaceae) using RAPD and ISSR markers". **Plant Biotechnology**, 24: 519 – 525.
27. Rout, G.R., **Senapati, S. K and** Aparajita, S (2007) Studies on the genetic relationship among 13 cultivars of *Calathea* (Marentheceae) using RAPD and ISSR markers. **Adv. Hort. Sci.** 21(3):147 -155.
28. Rout, G. R., Mahato, A and **Senapati, S. K** (2007) *In vitro* clonal propagation of *Nyctanthes arbotristis*- A medicinal tree. **Hort. Science**. 34(2): 84 – 89.
29. Barik, S., **Senapati, S. K.**, Aparajita, S., Mohapatra, A and Rout, G. R (2006). Identification and Genetic Variation among *Hibiscus* species (Malavaceae) Using RAPD markers. **Z. Naturforsch**, 61c**:** 123 - 128.

**Proceedings**

1. Aparajita, S., **Senapati, S. K.,** Dey, S**.** and Rout .G.R (2008) Genetic diversity in genus Ficus using molecular markers. Proc. Env. Seminar, 55 – 68.

**Books/Book Chapters**

1. Rout G.R. and **Senapati S.K.** (2013) Stress Tolerance in Plants: A Proteomics Approach. ed: G.R. Rout and A.B. Das : Molecular Stress Physiology of Plants, Springer India, pp359-386 (Book chapter).
2. **Senapati S.K.** (2011) In vitro mutagenesis in Rose, ISBN 978-3-8465-3864, Lambert Academic Publishing (LAP), Germany (Research Monographs)
3. **Senapati, S. K**, Mohapatra, A. and Rout, G.R (2010) Improvement of Rose through in vitro mutagenesis and its molecular characterization. ed: Dutta S.K and Chakraborti D. Floriculture: Role of tissue culture and molecular techniques. Pointer Publication, pp75-89. (Book chapter)

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