**Curriculum vitae**

1. Name and full correspondence address : **Dr. Gaurab Gangopadhyay**

 Associate Professor

 Division of Plant Biology

 Bose Institute (Main Campus)

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2. Email(s) and contact number(s) : gaurab@jcbose.ac.in

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3. Institution : Bose Institute, Kolkata

4. Date of Birth : 24.07.1966

5. Gender (M/F/T) : M

6. Category Gen/SC/ST/OBC : Gen

7. Whether differently abled (Yes/No) : No

8. Academic Qualification (Undergraduate Onwards)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Degree  | Year  | Subject  | University/Institution  | % of marks  |
| 1. B.Sc. | 1986 | Botany (Hons.) | Presidency College/ University of Calcutta | 61.3 |
| 2. M.Sc. | 1988 (result in 1989) | Botany | University of Calcutta | 63.6 |
| 3. Ph.D. | 1997 | Science (Botany) | University of Calcutta | - |

 9. Ph.D thesis title, Guide’s Name, Institute/Organization/University, Year of Award.

*In vitro* studies on salt and water stresses in *Nicotiana tabacum* L. var. Jayasri and *Brassica juncea* (L) Czern. Var. 85-59

Professor Sukumar Gupta

Bose Institute, degree under University of Calcutta

Date of submission: 15.12.1995, Date of award: 20.09.1997

10. Work experience (in chronological order).

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| --- | --- | --- | --- | --- | --- |
| S.No.  | Positions held  | Name of the Institute  | From  | To  | Pay Scale  |
| 1 | Assistant Professor | Bose Institute | 23.06.2008 | 22.06.2012 | Rs. 15,600-39,100 GP Rs. 7,600/- |
| 2 | **Associate Professor** | Bose Institute | **23.06.2012** | **Till date** | Rs. 37,400-67,000 GP Rs. 8,700/- |

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

|  |  |  |  |
| --- | --- | --- | --- |
| S.No  | Name of Award  | Awarding Agency  | Year  |
| 1 | Research Associateship (Ad hoc) | CSIR | 1999 |

 12. Publications *(****List of papers published in SCI Journals, in year wise descending order****).*

1. Bose. S., **Gangopadhyay, G.** and Sikdar, S.R. **2019**. *Rorippa indica* *HSPRO2* expression in transgenic *Brassica juncea* induces tolerance against mustard aphid *Lipaphis erysimi*. **Plant Cell Tissue and Organ Culture** 136: 431 – 443 (online version <https://doi.org/10.1007/s11240-018-1524-4>)
2. Bose. S., **Gangopadhyay, G.** and Sikdar, S.R. **2018**. RiHSPRO2, a nematode resistance protein-like homolog from a wild crucifer *Rorippa indica* (L.) Hiern, is a promising candidate to control mustard aphid *Lipaphis erysimi*. **Arthropod-Plant Interactions** 12:701–714 (online version <https://doi.org/10.1007/s11829-018-9615-z>)
3. Sultana, M. and **Gangopadhyay, G. 2018**. Early expression of WUSCHEL is a marker for *in vitro* shoot morphogenesis in tobacco and *Beta palonga*. **Plant Cell Tissue and Organ Culture** 134: 277 – 288 (online version <https://doi.org/10.1007/s11240-018-1421-x>)
4. Arora, V., Ghosh, M.K., Singh, P. and **Gangopadhyay, G. 2018**. Light regulation of nitrate reductase gene expression and enzyme activity in the leaves of mulberry. **Indian Journal of Biochemistry and Biophysics** 55: 62-66.
5. Debnath, A.J., **Gangopadhyay, G**., Basu, D. and Sikdar, S.R. **2018**. An efficient protocol for *in vitro* organogenesis of *Sesamum indicum* L. using cotyledon as explants. **3 Biotech** 8:146 ( <https://doi.org/10.1007/s13205-018-1173-7> )
6. Arora, V., Ghosh, M.K., Pal, S. and Gangopadhyay, G. 2017. Allele specific CAPS marker development and characterization of chalcone synthase gene in Indian mulberry (*Morus* spp., family Moraceae). PLOS ONE June 22, 2017 <https://doi.org/10.1371/journal.pone.0179189>
7. Arora, V., Sultana, M., Kumar, V. and Gangopadhyay, G. 2017. Isolation and characterization of BADH2 gene from *in vitro* propagated *Pandanus amaryllifolius* Roxb. Plant Cell Tissue and Organ Culture (online version DOI 10.1007/s11240-017-1209-4).
8. Prasad, R. and Gangopadhyay, G. 2014. Selection of prospective parents among Indian and exotic Sesame (Sesamum indicum L.) for Marker Assisted Breeding. Indian Journal of Genetics and Plant Breeding 74(2): 197-204.
9. Prasad, R., Mukherjee, K.K. and Gangopadhyay, G. 2013. Image analysis based on seed phenomics in Sesame. Plant Breeding and Seed Science 68: 119-136. (DOI: 10.2478/v10129-011-0085-z)
10. Roy, S.K., Gangopadhyay, G. and Mukherjee, K.K. 2010. Is stem twinning form of *Basella alba* L. a naturally occurring variant? Current Science 98 (10): 1370 -1375.
11. Gangopadhyay, G., Roy, S.K., Basu Gangopadhyay, S. and Mukherjee, K.K. 2009. *Agrobacterium*-mediated genetic transformation of pineapple var. Queen using a novel encapsulation-based antibiotic selection technique. Plant Cell Tissue and Organ Culture 97: 295-302 (Online version DOI 10.1007/s11240-009-9528-8).
12. Roy, S.K., Gangopadhyay, G., Ghose, K., Dey, S., Basu, D. and Mukherjee, K.K. 2008. A cDNA-AFLP approach to look for differentially expressed gene fragments in dioecious pointed gourd (*Trichosanthes dioica* Roxb.) for understanding sex expression. Current Science 94 (3): 381 - 385.
13. Gangopadhyay, G., Roy, S. K., Ghose, K., Poddar, R., Bandyopadhyay, T., Basu, D. and Mukherjee, K.K. 2007. Sex detection of *Carica papaya* and *Cycas circinalis* in pre flowering stage by ISSR and RAPD. Current Science 92(4): 524-526.
14. Dey, S., Ghose, K., Gangopadhyay, G. and Basu, D. 2007. Assessment of genomic diversity of wild and cultivated tomato through Resistance Gene Analogue Polymorphism and I2 homologues. Euphytica 154:219-230 (Online version DOI10.1007/s10681-006-9290-5).
15. Gangopadhyay, G., Bandyopadhyay, T., Poddar, R., Basu Gangopadhyay, S. and Mukherjee, K.K. 2005. Encapsulation of pineapple micro shoots in alginate beads for temporary storage. Current Science 88(6): 972-977.
16. Gangopadhyay, G., Bandyopadhyay, T., Modak, B.K., Wongpornchai, S. and Mukherjee, K.K. 2004. Micropropagation of Indian pandan (*Pandanus amaryllifolius* Roxb.), a rich source of 2-acetyl-1-pyrroline. Current Science 87(11): 1589-1592.
17. Bandyopadhyay, T., Gangopadhyay, G., Poddar, R. and Mukherjee, K.K. 2004. Trichomes: their diversity, distribution and density in acclimatization of teak (*Tectona grandis* L.) plants grown *in vitro*. Plant Cell Tissue & Organ Culture 78: 113-121.
18. Gangopadhyay, G., Bandyopadhyay, T., Basu Gangopadhyay, S. and Mukherjee, K.K. 2004. *Luffa* sponge – a unique matrix for tissue culture of *Philodendron*. Current Science 86(2): 315-319.
19. Ramalakshmi Dutta, Y., Gangopadhyay, G., Das, S., Dutta, B.K. and Mukherjee, K.K. 2003/4. Esterase as a marker to study the genetic fidelity of micropropagated banana. Biologia Plantarum 47(3): 421-424.
20. Gangopadhyay, G., Basu Gangopadhyay, S., Poddar, R., Gupta, S. and Mukherjee, K.K. 2003. Micropropagation of *Tectona grandis*: assessment of genetic fidelity. Biologia Plantarum 46(3): 459-461.
21. Gangopadhyay, G., Das, S. and Mukherjee, K.K. 2002. Speciation in *Chenopodium* in West Bengal, India. Genetic Resources and Crop Evolution 49: 503-510
22. Basu, S., Gangopadhyay, G. and Mukherjee, B.B. 2002. Salt tolerance in rice *in vitro*: Implication of accumulation of Na+, K+ and proline. Plant Cell Tissue & Organ Culture 69(1): 55-64.
23. Gangopadhyay, G., Das, S., Mitra, S.K., Poddar, R., Modak, B.K. and Mukherjee, K.K. 2002. Enhanced rate of multiplication and rooting through the use of coir in aseptic liquid culture media. Plant Cell Tissue & Organ Culture 68(3): 301-310.
24. Gangopadhyay, G., Basu, S. and Gupta, S. 1997. *In vitro* selection and physiological characterization of NaCl- and mannitol – adapted callus lines in *Brassica juncea*. Plant Cell Tissue & Organ culture 50: 161-169.
25. Gangopadhyay, G., Basu, S., Mukherjee, B.B. and Gupta, S. 1997. Effects of salt and osmotic shocks on unadapted and adapted callus lines of tobacco. Plant Cell Tissue & Organ Culture 49: 45-52.
26. Basu, S., Gangopadhyay, G., Mukherjee, B.B. and Gupta, S. 1997. Plant regeneration of salt adapted callus of indica rice (var. Basmati 370) in saline conditions. Plant Cell Tissue & Organ Culture 50: 153-159.
27. Basu, S., Gangopadhyay, G. and Mukherjee, B.B. 1997. Isozymes of peroxidases and esterases as osmotic stress- markers in rice callus cultures. Ind. J. Exptl. Biol. 35: 1359-1364.

13. Detail of patents.

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| --- | --- | --- | --- | --- | --- | --- |
| S.No  | Patent Title  | Name of Applicant(s)  | Patent No.  | Award Date  | Agency/Country  | Status  |
| 1 | Downstream processing in micropropagation | Gangopadhyay, G. et al. | 770/Cal/99 dtd. 09.09.99 |  | India |  |

14. Other publications in referred journal/Books/Reports/Chapters/General articles etc.

1. Gangopadhyay, G. 2016. From tolerance to disease resistance in mulberry: Need for efficient phenomic and molecular selection tools. Journal of Environment and Sociobiology 13(2): 163-168.
2. Laha, S. and Gangopadhyay, G. 2016. SNP based haplotyping towards development of salt tolerant rice. Heritage 3: 153-158.
3. Gangopadhyay, G. 2015. Micro-propagation – Tool for rural entrepreneurship development. In: Proceedings of “International capacity development program on Training of Trainers (TOT) in utilizing Biotechnology for sustainable agriculture for rural youth” – a UNESCO Vocational Training Program (UNEVOC). Pp 74-79.
4. Arora, V., Ghosh, M.K., Ghosh, P.K., Kumar, S.N. and Gangopadhyay, G. 2015. Molecular markers to assess the hybrid nature of an improved mulberry genotype Journal of Plant Science and Research 2(1): 116 (5 pages).
5. Gangopadhyay, G. and Mukherjee, K.K. 2015. Chapter 23: Pineapple. In: *Agrobacterium* protocols, Springer protocols, Methods in Molecular Biology 1224, Volume 2, 3rd Ed. (ISSN 1064-3745, ISBN 978-1-4939-1657-3) Ed. Wang, K., Humana Press, Springer, New York, Heidelberg, Dordrecht, London. Pp. 293-305.
6. Arora, V., Ghosh, M.K., Bindroo, B.B. and Gangopadhyay, G. 2014. Phenomic analyses of indigenous and exotic accessions of Mulberry (*Morus* spp*.*). International Research Journal of Biological Sciences 3 (7): 40-48.
7. Sultana, M., Mukherjee, K.K. and Gangopadhyay, G. 2014. Determination of sex expression in Cycads In: Reproductive Biology of Plants (ISBN 9781482201321) Eds. Ramawat, K.G., Merillon, J-M and Shivanna, K.R., CRC Press, Taylor & Francis Group, USA, Pp. 118-132.
8. Arora, V., Ghosh, M.K. and Gangopadhyay, G. 2014. SSR markers for assessing the hybrid nature of two high yielding Mulberry varieties International Journal of Genetic Engineering and Biotechnology 5 (2): 191-196.
9. Kumar, V., Arora, V., Sultana, M. and Gangopadhyay, G. 2014. Towards deciphering molecular factor behind higher level of ‘Basmati’ fragrance in *Pandanus amaryllifolius* Roxb. a wild monocot. International Journal of Genetic Engineering and Biotechnology 5 (2): 197-200.
10. Sultana, M. and Gangopadhyay, G. 2014. Looking for novel proteins associated with *in vitro* morphogenesis of Pineapple. International Journal of Genetic Engineering and Biotechnology 5 (2): 143-146.
11. Sultana, M. and Gangopadhyay, G. 2014. Looking for isoforms of enzymes related to *in vitro* morphogenesis in *Nicotiana tabacum* L. International Research Journal of Biological Sciences 3 (1): 11-16.
12. Prasad, R. and Gangopadhyay, G. 2013. ‘Precocious’ seed germination in Turkish and Chinese Accessions of Sesame (*Sesamum indicum* L.) in Indian conditions. American-Eurasian Journal of Agricultural & Environmental Sciences 13 (3): 398-401.
13. Arora, V., Ghosh, M.K. and Gangopadhyay, G. 2012\* Development of molecular markers in mulberry. In: Proceedings of UGC sponsored National Seminar on Plant Science Research in Human Welfare (ISBN: 978-93-80673-71-4) (Bidhannagar College, WB) Pp. 110-114. \*(Published in 2013).
14. Prasad, R. and Gangopadhyay, G. 2012. Exploration of genetic diversity of sesame through phenomic and genomic approaches. In: Biodiversity Conservation: Fundamental and Applications (ISBN: 978-93-80663-57-9) (Dum Dum Motijheel College, WB, Ed. Saha, Ghosh, Gangopadhyay, Saha, Singh, Sarker & Das) Pp. 93-96.
15. Roy, S.K., Gangopadhyay, G. and Mukherjee, K.K. 2012. Determination of sex in *Zamia fischeri* Miq., an endangered gymnosperm. International Journal of Biodivesity and Conservation 4(7): 287-293.
16. Gangopadhyay, G. and Basu Gangopadhyay, S. 2012. Bioinformatics in relation to Plant Biotechnology In: Plant Tissue Culture: Totipotency to Transgenic. (Eds. Sharma, H.P., Dogra, J.V.V. and Misra, A. N.), AGROBIOS, India Pp. 419-430.
17. Gangopadhyay, G. and Mukherjee, K.K. 2012. Assessment of Genetic Fidelity of the Tissue Culture Clones In: Plant Tissue Culture: Totipotency to Transgenic. (Eds. Sharma, H.P., Dogra, J.V.V. and Misra, A. N.), AGROBIOS, India Pp. 445-460.
18. Prasad, R. and Gangopadhyay, G. 2011. Phenomic analyses of Indian and exotic accessions of Sesame (*Sesamum indicum* L.). Journal of Plant Breeding and Crop Science 3 (13): 336-352.
19. Gangopadhyay, G. 2011. Sustainable management of plant genetic resources In: Proceedings (ISBN 978-81-922305-6-6) of UGC sponsored National Seminar “Sustainable Resource Management: Myth or Reality” (Uluberia College, WB, Ed. S. Sen) Pp. 35-38.
20. Roy, S.K. and Gangopadhyay, G. 2009. Sex determination in plants: Genetic and Molecular aspects. Advances in Plant Biology (Debidas Bhattacharya Birth Centenary Commemorative Volume) Visva-Bharati (Eds. S. Mandal and S. Bhattacharya). Pp. 416 – 432.
21. Gangopadhyay, G., Roy, S.K. and Mukherjee, K.K. 2009. Plant response to alternative matrices for in vitro root induction African Journal of Biotechnology 8 (13): 2923-2928.
22. Roy, S.K., Gangopadhyay, G., Bandyopadhyay, T., Modak, B.K., Datta, S. and Mukherjee, K.K. 2006. Enhancement of in vitro micro corm production in *Gladiolus* using alternative matrix African Journal of Biotechnology 5(12): 1204-1209.
23. Das, B., Roy, S., Gangopadhyay, G., Poddar, R. and Saha, P. K. 2006. Testa ultra structures, water uptake pattern and seed germination of some medicinally important plants of Fabaceae. J. Bot. Soc. Beng. 60 (1): 50 - 64.
24. Gangopadhyay, G., Roy, S.K. and Mukherjee, K.K. 2005. Plant Biotechnology: New Horizon for Crop Improvement. Proceedings of UGC Sponsored State Level Seminar: emerging Trends in Biotechnology: A Symbiosis with Conventional Technology, organized by Sripat Singh College, Jiaganj, Murshidabad, WB, India, pp. 18 – 27.
25. Bandyopadhyay, T., Gangopadhyay, G., Roy, S.K., Datta, B.K. and Mukherjee, K.K. 2005. *Nypa fruticans* of Sundarban Biosphere Reserve, West Bengal, India – Its genetic diversity and an approach for conservation Phytomorphology 55(1&2): 39-47.
26. Gangopadhyay, G. 2004. Impact of civilization on environment: A positive outlook. Proceedings of UGC Sponsored State Level Seminar: Impact of Civilization on Environment, organized by Jhargram Raj College & WB Govt College Teachers’ Association, held at Jhargram Raj College, Midnapur (W), WB, India, pp. 23-28.
27. Gangopadhyay, G., Bandyopadhyay, T., Datta, S., Basu, D. and Mukherjee, K.K. 2003. *Agrobacterium*-mediated genetic transformation in Indian Spinach (*Beta palonga*) Plant Cell Biotechnology and Molecular Biology 4(3&4): 193-196.
28. Gangopadhyay, G. and Mukherjee, K.K. 2002. Regeneration in *Chenopodium album* L. via organogenesis and somatic embryogenesis Plant Cell Biotechnology and Molecular Biology 3(3&4): 143-146.
29. Datta, S., Gangopadhyay, G., Mitra, S.K. and Mukherjee, K.K. 2002. Somatic embryogenesis in Indian Spinach (*Beta palonga*). Plant Cell Biotechnology and Molecular Biology 3(1&2): 59-64.
30. Gangopadhyay, G., Poddar, R., Mukherjee, K.K. and Gupta, S. 2002. Varietal and species- interrelationship between cultivated and wild *Sesamum* Indian Journal of Plant Genetic Resources 15(1): 23-27.
31. Gangopadhyay, G. and Basu, S. 2000. Proline as osmotic stress marker in *in vitro* system In: Advances in Plant Physiology – vol III (Ed. Hemantaranjan, A.), Scientific Publishers, Jodhpur, India. pp. 283 – 304.
32. Gangopadhyay, G. and Basu, S. 2000. Isozymes and proteins as osmotic stress marker in *in vitro* system. In Advances in Plant Physiology – vol III (Ed. Hemantaranjan, A.), Scientific Publishers, Jodhpur, India. pp. 305 – 320.
33. Basu, S., Gangopadhyay, G., Poddar, R., Gupta, S. and Mukherjee, B.B. 1999. Proline enigma and osmotic stress – tolerance in rice (*Oryza sativa* L.). In: Plant Tissue Culture and Biotechnology – Emerging Trends. (Ed. Kavi Kishor, P.B.) Universities Press, Hyderabad, pp. 275-281.
34. Gangopadhyay, G. and Gupta, S. 1999. Plant micropropagation. In: Handbook on Entrepreneurial Chemical and Agro Technological Vision (Eds. Bhattacharyya, P. K. and Basu, S.) EDBCAT, WB, India, pp. 83-106.
35. Gangopadhyay, G., Poddar, R. and Gupta, S. 1998. Micropropagation of Sesame (*Sesamum indicum* L.) by *in vitro* multiple shoot production from nodal explants. Phytomorphology 48(1): 83-90.
36. Gangopadhyay, G., Basu, S., Mukherjee, B.B. and Gupta, S. 1997. Physiological changes of tobacco callus (*Nicotiana tabacum* L. var. Jayasri) grown under osmotic stress. In: Biotechnological Applications of Plant Tissue and Cell Culture. (Eds. Ravishankar, G.A. and Venkataraman, L.V.). Oxford IBH, New Delhi, pp. 386-392.
37. Basu, S., Gangopadhyay, G., Gupta, S. and Mukherjee, B.B. 1997. Physiological changes of *Oryza sativa* L. callus due to salt stress. In: Biotechnological Applications of Plant Tissue and Cell Culture. (Eds. Ravishankar, G.A. and Venkataraman, L.V.). Oxford IBH, New Delhi, pp. 380-385.
38. Gangopadhyay, G., Basu, S., Mukherjee, B.B. and Gupta, S. 1996. Salinity induced changes on peroxidases in *Nicotiana tabacum* (var. Jayasri) callus cultures. Ind. J. Plant Physiol. 1(4): 247-250.
39. Gangopadhyay, G., Mukherjee, B.B. and Gupta, S. 1996. *In vitro* cloning of *Michelia champaca* L. (Family Magnoliaceae) In: Management of Minor Forest Produce for Sustainability (Eds. Shiva, M.P. and Mathur, R.B.). Oxford IBH, New Delhi, pp. 150-159.
40. Basu, S., Gangopadhyay, G., Gupta, S. and Mukherjee, B.B. 1996. Screening for cross tolerance against related osmotic stress in adapted calli of salt sensitive and tolerant varieties of rice Phytomorphology 46(4): 357-364.
41. Gangopadhyay, G., Basu, S., Mukherjee, B.B. and Gupta, S. 1995. Effects of an ionic and a non-ionic osmotic stresses on *Nicotiana tabacum* L. (var. Jayasri) callus lines. J. Natl. Bot. Soc. 49: 95-101.
42. Basu, S., Gangopadhyay, G., Gupta, S. and Mukherjee, B.B. 1995. Establishment of callus cultures and regeneration of plantlets in three indica varieties of rice (*Oryza sativa* L.) J. Natl. Bot. Soc. 49: 109-114.
43. Gangopadhyay, G., Basu, S., Mukherjee, S.P., Poddar, R., Gupta, S. and Mukherjee, B.B. 1995. Water, salt and freezing stresses: Effect on relative water content, viability and banding patterns of some isozymes in *Brassica juncea* (L) Czern. callus. Ind. J. Plant Physiol. XXXVIII (1): 41-44.

Submissions to GenBank, NCBI database

**(Total 58 as on 15.02.2017)**

1. Sultana, M. and **Gangopadhyay, G. 2015.** Beta palonga isolate EMBOSS\_001 transcription factor WUSCHEL (wus) mRNA, partial cds. **GenBank Accession KT284906**.
2. Sultana, M. and **Gangopadhyay, G. 2015.** Beta palonga isolate EMBOSS\_001 glyceraldehyde-3-phosphate dehydrogenase (GAPDH) mRNA, partial cds. **GenBank Accession KT284907**.
3. Sultana, M. and **Gangopadhyay, G. 2015.** Beta palonga isolate EMBOSS\_001 actin (act) mRNA, partial cds. **GenBank Accession KT284908.**
4. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2014**. Morus alba cultivar GEN 1 chalcone synthase gene, partial cds. **GenBank Accession KM210515**.
5. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2014**. Morus alba cultivar GEN 1 chalcone synthase mRNA, partial cds. **GenBank Accession KM210516**.
6. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2014**. Morus alba cultivar KAJLI OP chalcone synthase mRNA, partial cds. **GenBank Accession KM210517**.
7. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2014**. Morus alba cultivar MI-0008 chalcone synthase mRNA, partial cds. **GenBank Accession KM210518.**
8. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2014**. Morus alba cultivar MI-0008 ppr protein mRNA, partial cds. **GenBank Accession KM210519.**
9. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2014**. Morus alba cultivar KAJLI OP ppr protein mRNA, partial cds. **GenBank Accession KM210520**.
10. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2013**. Morus alba cultivar MI - 0008 clone MUL-1 germplasm specific RAPD marker genomic sequence. **GenBank Accession KF154100**.
11. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2013**. Morus alba cultivar MI-0158 clone MUL-2 germplasm specific RAPD marker genomic sequence. **GenBank Accession KF154101**.
12. Arora,V., Ghosh, M.K. and **Gangopadhyay, G.** **2013**. Morus alba cultivar GEN 1 clone MUL-3 germplasm specific RAPD marker genomic sequence. **GenBank Accession KF154102**.
13. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2013**. Morus alba cultivar MI-0046 clone MUL-4 germplasm specific RAPD marker genomic sequence. **GenBank Accession KF154103**.
14. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2013**. Morus alba cultivar GEN 1 clone MUL-5 germplasm specific RAPD marker genomic sequence. **GenBank Accession KF154104**.
15. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2013**. Morus alba cultivar GEN 1 clone MUL-6 germplasm specific RAPD marker genomic sequence. **GenBank Accession KF154105**.
16. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2013**. Morus alba cultivar MI-0046 clone MUL-7 germplasm specific RAPD marker genomic sequence. **GenBank Accession KF154106**.
17. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2013**. Morus alba cultivar MI-0158 clone MUL-8 germplasm specific RAPD marker genomic sequence. **GenBank Accession KF154107**.
18. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2013**. Morus alba cultivar MI-0046 clone MUL-9 germplasm specific RAPD marker genomic sequence. **GenBank Accession KF154108**.
19. Arora,V., Ghosh, M.K. and **Gangopadhyay, G**. **2013**. Morus alba cultivar GEN 1 clone MUL-10 germplasm specific SCAR marker genomic sequence. **GenBank Accession KF154109**.
20. Prasad, R. and Gangopadhyay, G. 2012. Sesamum indicum clone SI-1 genotype-specific RAPD marker S1 genomic sequence. GenBank Accession JX473842.
21. Prasad, R. and Gangopadhyay, G. 2012. Sesamum indicum clone SI-2 genotype-specific RAPD marker S2 genomic sequence. GenBank Accession JX473843.
22. Prasad, R. and Gangopadhyay, G. 2012. Sesamum indicum clone SI-3 genotype-specific RAPD marker S3 genomic sequence. GenBank Accession JX473844.
23. Prasad, R. and Gangopadhyay, G. 2012. Sesamum prostratum clone SP-1 genotype-specific RAPD marker S4 genomic sequence. GenBank Accession JX473845.
24. Prasad, R. and Gangopadhyay, G. 2012. Sesamum occidentale clone SO-1 genotype-specific RAPD marker S5 genomic sequence. GenBank Accession JX473846.
25. Roy, S.K., Gangopadhyay, G. and Mukherjee, K.K. 2009. *Zamia fischeri* clone ZFM1 male-specific RAPD marker genomic sequence. GenBank Accession GQ141708.
26. Roy, S.K., Gangopadhyay, G. and Mukherjee, K.K. 2009. *Zamia fischeri* clone ZFF1 female-specific RAPD marker genomic sequence. GenBank Accession GQ141709.
27. Roy, S.K., Gangopadhyay, G., Ghose, K., Dey, S., Basu, D. and Mukherjee, K.K. 2006. Understanding sex expression in *Trichosanthes dioica* Roxb. GenBank Accessions EF192055 - EF192076, EF198868 - EF198876 (31 submissions).
28. Gangopadhyay, G., Roy, S.K., Ghose, K., Poddar, R., Bandyopadhyay, T., Basu, D. and Mukherjee, K.K. 2006. *Cycas circinalis* clone CCM1 male-specific RAPD marker genomic sequence. NCBI Accession DQ386640.

15. Present funded project: 1

Project entitled “Development of transgenic pineapple over-expressing AcSERK to combat fungal pathogens” funded by Department of Biotechnology, Govt of West Bengal (Memo No. 43(Sanc) – BT/ST/P/S&T/2G-32/2017 dtd 16.02.2018)

16. Reviewer of the following Journals

1. Indian Journal of Biotechnology
2. The Journal of Agricultural Science, Cambridge
3. Phytomorphology
4. Acta Biologica Cracoviensia ser. Botanica
5. Advances in Applied research
6. Journal of Horticulture and Forestry (Academic Journals)
7. American Journal of Experimental Agriculture (March 2012)
8. Journal of Medicinal Plants Research
9. Journal of Plant Breeding and Crop Science (July 2012)
10. African Journal of Agricultural Research (October 2012)
11. African Journal of Biotechnology (March 2013)
12. African Journal of Agricultural Research (April 2013)
13. International Journal of Biodiversity and Conservation (April 2013)
14. African Journal of Agricultural Research (January 2014)
15. Indian Journal of Biotechnology (March 2014)
16. American Journal of Experimental Agriculture (August 2014)
17. Indian Journal of Biotechnology (November 2014)
18. Journal of Medicinal Plants Research (December 2014)
19. African Journal of Agricultural Research (March 2015)
20. Indian Journal of Biotechnology (March 2015)
21. Journal of Plant Science and Research (April 2015)
22. Journal of Plant Science and Research (September 2015)
23. Plant Cell Biotechnology and Molecular Biology (January 2016)
24. Journal of Cereals and Oilseeds – Academic Journals (February 2016)
25. African Journal of Biotechnology (October 2016)
26. In Vitro Cellular & Developmental Biology – Plant (July 2017)
27. Trends in Phytochemical Research (August 2017)
28. Acta Physiologiae Plantarum (November 2017)
29. BioMed Research International (March 2018)
30. African Journal of Biotechnology (March 2018)
31. The Nucleus (March 2018)
32. Journal of Plant Science and Research (March 2018)
33. African Journal of Agricultural Research (March 2018)
34. The Nucleus (June 2018)
35. PLOS ONE (December 2018)
36. The Nucleus (February 2019)
37. Indian Journal of Genetics and Plant Breeding (February 2019)

17. Editorial board member of journal

Journal of Plant Science and Research (ISSN 2349-2805)

<http://www.opensciencepublications.com/indian-journals1/journal-of-plant-science-and-research/editorial-board>

18. Reviewer of Project Proposal

1. Kerala State Council for Science, Technology and Environment (Young Investigators Programme in Biotechnology) – Name of Project: Development of water stress tolerant banana plantlets through *in vitro* selection (Reference No. 02/YIPB/KBC/2010/CSTE)
2. Kerala Biotechnology Commission – Name of Project: Community Agriculture Resource Center (CARC) (Reference No. 008/KBC/CARC/2012/CSTE) – March 2012
3. Kerala State Council for Science, Technology and Environment - Name of Project: Improvement of *Stevia rebaudiana* by *in vitro* mutagenesis and allele mining (Reference No. 019/SRSLS/2012/CSTE dtd. 26th April 2013) – May 2013.
4. Kerala State Council for Science, Technology and Environment - Name of Project: Hairy root culture of *Gymnema sylvestre* and *Tylophora indica* for enhanced production of pharmaceutical compounds (Reference No. 031/SRSLS/2013/CSTE dtd. 24th January 2014) – February 2014.
5. Kerala State Council for Science, Technology and Environment - Name of Project: “Characterization of key structural genes involved in flavonoid synthesis in Indian Gooseberry (*Emblica officinalis* Gaertn)” (Reference No. 015/SRSLS/2013/CSTE) – April 2014.
6. Kerala State Council for Science, Technology and Environment - Name of Project: “Systematic studies on the bryophytes of Peechi-Vazhani Wildlife Sanctuary in Thrissur district, Kerala” (Reference No. 031/SRSLS/2014/CSTE dtd. 20th March 2015) – April 2015.

