CURRICULUM VITAE

MOHAMMAD FAISAL

PhD (AMU), Former Postdoctoral Fellow (CIB, Madrid, Spain), FLS & FSESR

PERSONAL DETAILS

Associate Professor of Plant Biotechnology
Department of Botany & Microbiology, College of Science, King Saud University
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http://www.webofscience.com/wos/author/record/P-4672-2014

RESEARCH INTERESTS: Plant Biotechnology

My research program currently focuses on several areas of biotechnology/molecular biology in higher plants. We use combination of techniques for in vitro morphogenesis, tissue culture, mass propagation and genetic transformation in plants of economic importance and characterization of plants using molecular markers and flow cytometry. Encapsulation of plant propagules for germplasm conservation, storage and exchange. My research also includes the interaction of nanoparticles and xenobiotics with plants and their effects and mechanism of interaction at cellular and molecular levels.

EDUCATION

BSc (Hons)	(1997)	AMU, Aligarh, India	Botany
MSc	(2000)	AMU, Aligarh, India	Botany (Plant Tissue Culture & Biotechnology)
MPhil	(2002)	AMU, Aligarh India	Botany (Plant Tissue Culture & Biotechnology)
PhD	(2006)	AMU, Aligarh India	Botany (Plant Tissue Culture & Biotechnology)
Postdoc	(2007-09)	AMU, Aligarh India	Plant Tissue Culture & Biotechnology
Postdoc	(2010-11)	CIB, Madrid, Spain	Plant Cell Biotechnology

PhD thesis title: ***Tissue Culture and Plant Regeneration Studies in Tylophora indica & Rauvolfia tetraphylla***

RESEARCH ACTIVTIES/APPOINTMENTS: 16 Years of experiences after PhD

Position	Institutes/University	Dates
Professor	Department of Botany & Microbiology, College of Science, King Saud University (KSU), Saudi Arabia.	2023 – Current
Associate Professor	Department of Botany & Microbiology, College of Science, King Saud University (KSU), Saudi Arabia.	2017 – 2023
Assistant Professor	Department of Botany & Microbiology, College of Science, KSU, Saudi Arabia	2011 – 2017
Post-Doctoral Fellow	Centro de Investigaciones Biológicas, CSIC, Madrid, Spain.	2010 –2011
Young Scientist	Department of Botany, Aligarh Muslim University (AMU), Aligarh, India.	2007 – 2009
Research Fellow	Department of Botany, AMU, Aligarh India.	2001 – 2007

PARTCIPATION IN RESEARCH PROJECTS:

Projects title	Position	Time span
➢ Environmental Biotechnology - Research Group Project (RG-175), Deanship of Scientific Research, King Saud University	Principal Investigator	2020-21

➢ Environmental Biotechnology - Research Group Project (RG-175), Deanship of Scientific Research, King Saud University	Principal Investigator	2018-19
➢ Environmental Biotechnology - Research Group Project (RGP-VPP-175), Deanship of Scientific Research, King Saud University	Principal Investigator	2016-18
➢ Genetic transformation in elite cultivars of tomato for developing disease resistance.	Principal Investigator	2015-17
➢ Development of protocols for in vitro multiplication and germplasm preservation of *Ruta chalepensis*.	Principal Investigator	2015-16
➢ Environmental Biotechnology - Research Group Project (RGP-VPP-175), Deanship of Scientific Research, King Saud University	Co-Investigator	2013-14
➢ Molecular analysis of genetic diversity and *in vitro* approaches for conservation medicinal plants.	Principal Investigator	2007-09

HONOURS, AWARDS AND FELLOWSHIPS:

- **Excellence of Research Award (2023)** by the **ISAHRD** on the occasion of International conference "**Innovative Approaches in Agriculture**, **Horticulture & Allied Sciences**" 29-31 March 2023, SGT University, Chandigarh, India.
- **Fellow (2021), the Linnean Society of London,** London UK
- **Outstanding Scientist Award (2021)** in the International Scientist Awards on Engineering, Science and Medicine, by the **VDGOOD Professional Association.**
- **Appointed-International Evaluator/Panel Expert (2020)** by the Czech Academy of Sciences (CAS), Prague, Czech Republic.
- **Member of the Board of the Examination** to adjudicate the thesis for the award of Degree of Doctor of Philosophy, **Chennai University**, Chennai, India.
- **Fellow, Society for Educational & Scientific Research (SESR)**, India.
- **Plant Biotechnologist Award (2017)** by the **Society for Educational & Scientific Research (SESR)**, India.
- **Best Poster Award,** International Conference on Current Trends in Biosciences (CTBio-2017).
- **Scientist of the Year Award-2015,** National Environmental Science Academy (NESA), New Delhi, India.
- **Post-Doctoral Fellowship (2010-2011), Spanish Ministry of Science and Innovation** to work at the Centro de Investigaciones Biológicas (CIB), CSIC, Madrid, Spain.
- **Visiting Scientist** ,15 Oct. 2008-15 Dec. 2008**, Kangwon National University, Chuncheon, 200-701, South Korea.**
- **Awarded National Scholarship (2008)** by the Govt. of Slovak Republic to learn the Advanced Techniques of Plant Proteomics at the Institute of Genetics and Biotechnology.
- **Junior Scientist of the Year Award-2007** in the field of Plant Biotechnology by the National Environmental Science Academy (NESA), New Delhi, India.
- **Senior Research Fellowship (2004-07)** by the Council of Scientific and Industrial Research (CSIR) , Govt. of India, New Delhi.
- **Best Paper Award (2003)** MAAS, India.

PROFESSIONAL TRAININGS:

- Visited Madrid Spain for training on **Cell & Molecular Biology Techniques, 17-26** January 2017 at Centro de Investigaciones Biológicas, Biological Research Centre (CIB), CSIC, Madrid, Spain.
- **Cell & Molecular Biology Techniques,** 12-19 November 2013, Centro de Investigaciones Biológicas, **Biological Research Centre (CIB), CSIC, Madrid, Spain**

- **CIMAP Winter School – 2006** (CWS-2006): **Recent Techniques in Structural and Functional Genomics,** 15-24 December 2006 at Central Institute of Medicinal & Aromatic Plants, Lucknow, India.
- Short-term training course in **Plant Tissue Culture: Technique to Technology,** 07-18 January 2002 at Tata Energy Research Institute (TERI), New Delhi, India.

PhD THESIS SUPERVISION:

1. Ecological Characteristics and In Vitro Regeneration in *Artemisia monosperma* – A Sand Dune Stabilizing Plant **(2023)**.
2. In vitro regeneration, morphogenesis and assessment of genetic stability using molecular markers and flow cytometry of *Ruta graveolens* **(2021)**.
3. Comparative *de novo* transcriptome analysis of *Ruta graveolens* L. plants to identify genes involved in biosynthesis of flavonoids **(2020)**.

EDITORIAL ACTIVIES/REVIEWER IN REFEREED JOURNALS:

- Editor : Biotechnology Reports, Elsevier Science.
- Associate Editor : Plant Cell, Tissue & Organ Culture, Springer Nature.
- Associate Editor : Journal of Horticultural Science and Biotechnology, Taylor & Francis.
- Academic Editor : Evidence-Based Complementary and Alternative Medicine.
- Editorial Board : Biotechnology and Biotechnological Equipment, Taylor & Francis.
- Editorial Board : Clinical Complementary Medicine and Pharmacology, Elsevier Science
- Editorial Board : Industrial Crops and Products, Elsevier Science.
- Editorial Board: : Austin Journal of Plant Biology, Austin Publications LLC, USA.
- Review Editor : Plant Metabolism and Chemodiversity for Frontiers in Plant Science
- Review Editor : Toxicogenomics for Frontiers in Genetics and Toxicology.
- Reviewer : Plant Cell, Tissue & Organ Culture (PCTOC), Springer Science.
- Reviewer : Biotechnology & Biotechnological Equipment, Taylor & Francis.
- Reviewer : Industrial Crops and Products, Elsevier Science.
- Reviewer : Biologia Plantarum, Springer Science.
- Reviewer : Plant Biotechnology Reports, Springer Science.
- Reviewer : Applied Biochemistry & Biotechnology, Springer Science.
- Reviewer : Annals of Applied Biology, Blackwell Publishing, UK.

MEMBERSHIPS IN PROFESSIONAL BODIES:

- Fellow, the Linnean Society of London, London UK
- Fellow, Society for Educational & Scientific Research, India.
- Member, International Association of Plant Biotechnology (IAPB).
- Member, Society for *In Vitro* Biology, USA.
- Member, Indian Botanical Society.
- Member, National Environmental Science Academy, India.

MEMBERSHIPS IN COMMITTEES/OTHER ACTIVITES:

- Member of **International Evaluator/Panel Expert** (2020), the Czech Academy of Sciences (CAS), Prague, Czech Republic.
- Member of the **Committee of Graduate Students Admission**, Botany & Microbiology Department, King Saud University (2020-Current).
- Member of the **Committee for Academic Accreditation** (BOTANY Program) for PhD and Master Courses, Botany & Microbiology Department, King Saud University (2018-Current).

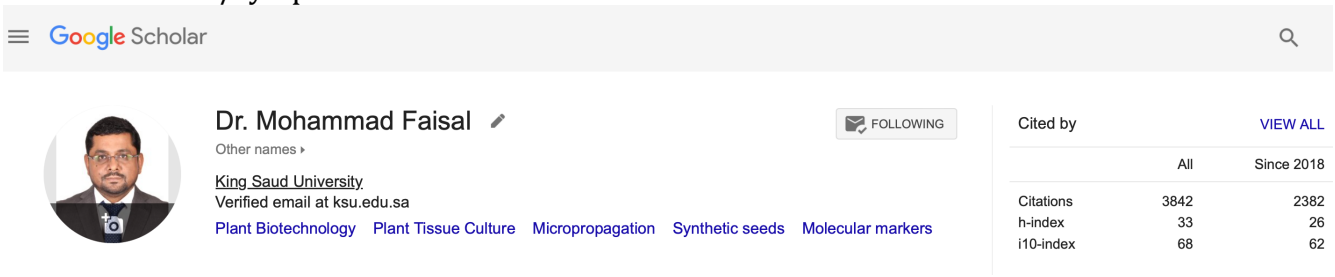
- Member of the **Committee for Academic Accreditation** (BOTANY Program) for Graduate Courses, Botany & Microbiology Department, King Saud University (2018-Current).
- Member of the **Board of the Examination** to adjudicate the thesis for the award of Degree of Doctor of Philosophy, Chennai University, Chennai, India (2020-21).
- Member of the **Board of the Examination** to adjudicate the thesis for the award of Degree of Doctor of Philosophy, Aligarh Muslim University, Aligarh, India (2019-Current).

SOCIAL/COMMUNITY SERVICES:

- Organized a workshop "Tomato Workshop: Disease and Management (2019) in local tomato's farm house at Dulum, Riyadh to interact with students, researcher and local tomato growers.
- Supervised student to participate in Science Olympiad (2014) for a project entitled "Effect of mobile radiation on wheat".
- Lectured and interacted with local people on conservation of medicinal plants through tissue culture at Shada Mountain (Jabal), Saudi Arabia (2014).
- Workshop and interaction with the school children for awareness and conservation of mangroves at Farsan Island, Saudi Arabia (2016).
- Developed methods/protocols for conservation of some rare/endangered plants and published in international journals.
- Working on phytotoxicity of some xenobiotics and the results achieved can be adopted by the environmental protection agencies to safeguard ecological and human health.

PUBLICATIONS:

- Papers published in refereed Journals : **138**
- Book chapters : **07**
- Books edited : **07**
- Books translated : **02**
- Conferences/symposia attended : **37**



MAJOR MEDIA OF RESEARCH PUBLICATIONS:

Name of Journal	Publisher	Impact Factor
1. The Plant Cell	ASPB, USA	12.08
2. Journal of Hazardous Materials	Elsevier Science	14.22
3. Industrial Crops & Products	Elsevier Science	6.44
4. Saudi Journal of Biological Sciences	Elsevier Science	4.05
5. Plants	MDPI	4.65
6. Agronomy	MDPI	3.94
7. South African Journal of Botany	Elsevier Science	3.11
8. Horticulturae	MDPI	2.92
9. Int. J. Biol. Macromolecules	Elsevier Science	8.05
10. Plant Cell, Tissue & Organ Culture (PCTOC)	Springer Nature	2.76
11. Journal of Biomolecular Structure Dynamics	Taylor & Francis	5.23
12. Journal of Plant Growth Regulation	Springer Nature	4.64

13. Horticulture, Environment, and Biotechnology	Springer Nature	2.13
14. Journal of Horticultural Science & Biotechnology	Taylor & Francis	1.91
15. Protein and Peptides Letters	Bentham Science	1.92
16. Agroforestry System	Springer Nature	2.41
17. Biologia Plantarum	Springer Nature	1.12
18. Journal of Environmental Sciences	Elsevier Science	6.79
19. Biological Research	Biomed Central	7.63
20. Rendiconti Lincei. Scienze Fisiche e Naturali	Springer Nature	1.81
21. Biotechnology Biotechnological Equipment	Taylor & Francis	1.76
22. J. Plant Biochemistry and Biotechnology	Springer Nature	1.52
23. Physiological and Molecular Plant Pathology	Elsevier Science	2.74
24. Environmental Toxicology and Chemistry	Wiley	4.21
25. Acta Physiologiae Plantarum	Springer Nature	2.73
26. Applied Biochemistry and Biotechnology	Springer Nature	3.09
27. Molecules	MDPI	4.92
28. Plant Biotechnology Reports	Springer Nature	2.49
29. Annals of Applied Biology	Blackwell Publishing	2.76
30. In Vitro Cell. Dev. Biol. Plant	Springer Nature	2.34

PUBLICATIOS IN ISI/REFEREED JOURNALS: 138

1. Saquib Q., Schwaiger S., Alilou M., Ahmed S., Siddiqui M.A., Ahmad J., **Faisal M**., Abdel-Salam E.M., Wahab R., Al-Rehaily A.J., et al. **(2023)** Marine Natural Compound (Neviotin A) Displays Anticancer Efficacy by Triggering Transcriptomic Alterations and Cell Death in MCF-7 Cells. *Molecules*. 28(17):6289.
2. M., M., Dey, A., **Faisal, M**. Alatar A.A., Singh R.K., Shekhawat M.S. **(2023)** In vitro Tuberization using Silicon Nanoparticles and short-term cold Storage of mini-tubers of *Dioscorea pentaphylla* L. *BioNanoSci.* (2023). https://doi.org/10.1007/s12668-023-01185-z
3. Raj M.C., Manokari M., Dey A. **Faisal M**., Alatar A.A., Singh R.K., Shekhawat M.S. (2023) Improvements in morphometric and structural traits of *Vitex trifolia* L. to exogenous application of nano-silicon in vitro. South African Journal of Botany 160: 613-621
4. Rajput, D.S., Rathore, T.S., Ansari, S.A., **Faisal M**., Alatar A., Abdel-Salam E.M., Shahzad A. **(2023)** Biochemical changes in embryogenic and non-embryogenic callus of *Bambusa nutans* Wall. during somatic embryogenesis. Plant Cell Tiss Organ Cult. https://doi.org/10.1007/s11240-023-02559-7
5. Hatshan M.R., Saquib Q., Siddiqui M.A., **Faisal M.**, Ahmad J., Al-Khedhairy A.A., Shaik M.R., Khan M., Wahab R., De Matteis V., et al. (2023) Effectiveness of Nonfunctionalized Graphene Oxide Nanolayers as Nanomedicine against Colon, Cervical, and Breast Cancer Cells. *International Journal of Molecular Sciences*. 24(11):9141
6. Manokari, M., Dey, A., **Faisal, M**. Alatar A.A., Singh R.K., Shekhawat M.S. **(2023)** Silicon Nanoparticles (SiNPs) Positively Affect Morpho-Structural Differentiation in Micropropagated Plantlets of *Santalum album* L. Silicon. https://doi.org/10.1007/s12633-023-02558-5
7. Manokari M., Raj M.C., Dey A. **Faisal M.,** Alatar A.A., Singh R.K., Arumugam N. Shekhawat M.S. **(2023)** Development of stress tolerance in micropropagated plantlets of *Dioscorea pentaphylla* L. using seismic stress. *Plant Cell Tiss Organ Cult* (2023). https://doi.org/10.1007/s11240-023-02549-9

8. Alatar, A.A., Qahtan, A.A., Abdel-Salam, E.M**., Faisal, M.,** El-Sheikh, M.A. (2023) Development of an Efficient and Rapid Micropropagation Protocol for In Vitro Multiplication of *Maerua crassifolia* Forssk. Forests 2023, 14, 1160. https://doi.org/10.3390/f14061160
9. Manokari M., Raj M.C., Dey A. **Faisal M.,** Alatar A.A., Joshee N., Shekhawat M.S. **(2023)** Improvements in Morpho-Anatomical Traits of Adventitious Roots of *Hedyotis biflora* (L.) Lam. using Silicon Nanoparticles. **Silicon** https://doi.org/10.1007/s12633-023-02484-6
10. Manokari M., Jayaprakash K., Raj M.C., Dey A. **Faisal M.,** Alatar A.A., Joshee N., Shekhawat M.S. **(2023)** In vitro micro-morphometric growth modulations induced by N6 cytokinins (Meta-Topolin and 6-benzylaminopurine) in *Ceropegia juncea* Roxb. - A rare medicinal climber. **South African Journal of Botany** 157: 656-666.
11. Manokari M., Raj M.C., Dey A. **Faisal M.,** Alatar A.A., Singh R.K., Shekhawat M.S. **(2023)** Silicon Nanoparticles Moderated Morphometric Deficiencies by Improving Micro-Morpho-Structural Traits in *Thunbergia erecta* (Benth.) T. Andersonbiochemical profile and micro-morphology of *Gaillardia pulchella* Foug cv. 'Torch Yellow'. **Silicon** (2023) https://doi.org/10.1007/s12633-023-02451-1
12. Manokari M., Raj M.C., Dey A. **Faisal M.,** Alatar A.A., Joshee N., Shekhawat M.S. **(2023)** Silver nanoparticles improved morphogenesis, biochemical profile and micro-morphology of *Gaillardia pulchella* Foug cv. 'Torch Yellow'. **Plant Cell Tissue & Organ Culture** (2023). https://doi.org/10.1007/s11240-023-02502-w
13. Manokari M., Cokulraj M., Dey A., **Faisal M.,** Alatar A.A., Joshee N., Shekhawat M.S. **(2023)** Structural alterations of *Cymbopogon citratus* (DC.) Stapf leaves and roots caused by silicon nanoparticles during *in vitro* propagation. **Industrial Crops & Products** 197: 116648.
14. **Faisal M.,** Faizan M., Tonny S.H., Rajput V.D., Minkina T., Alatar A.A., Pathirana R. **(2023)** Strigolactone-Mediated Mitigation of Negative Effects of Salinity Stress in *Solanum lycopersicum* through Reducing the Oxidative Damage. Sustainability 2023, 15, 5805.
15. Badhepuri M.K., M., Manokari M., Cokulraj M., Jogam P., Dey A., **Faisal M.,** Alatar A.A., Joshi N., Singisala N.R., Shekhawat M.S. **(2023)** Meta-Topolin enhanced direct shoot organogenesis and regeneration from leaf explants of Coleus forskohlii (Willd.) Briq. **Industrial Crops and Products** 197: 116584.
16. Cokulraj M., Manokari M., Arumugam N., Dey A., **Faisal M.,** Alatar A.A., Alok A., Shekhawat M.S. **(2023)** Silicon Nanoparticles Mediated In vitro Flowering and Study of Pollen Viability in Vitex negundo L. **Silicon.** https://doi.org/10.1007/s12633-023-02397-4
17. Manokari M., Badhepuri M.K., Cokulraj M., Dey A., **Faisal M.,** Alatar A.A., Alok A., Jogam P., Shekhawat M.S. **(2023)** Seismic stress-mediated improvements in morphometry, foliar anatomy and biochemistry of in vitro grown plants of *Gardenia jasminoides* Ellis. **The Journal of Horticultural Science and Biotechnology** DOI: 10.1080/14620316.2023.2179548
18. **Faisal, M.,** Qahtan, A.A., Alatar, A.A. **(2023)** Thidiazuron Induced In Vitro Plant Regeneration, Phenolic Contents, Antioxidant Potential, GC-MS Profiles and Nuclear Genome Stability of *Plectranthus amboinicus* (Lour.) Spreng. **Horticulturae** 9: 277.
19. Jayaprakash, K., Manokari M., Cokulraj M., Dey A., **Faisal M.,** Alatar A.A., Joshi N., Shekhawat M. S. **(2023)** Improved organogenesis and micro-structural traits in micropropagated plantlets of *Caralluma umbellata* Haw. in response to Meta-Topolin. **Plant Cell, Tissue and Organ Culture (PCTOC)** (2023) https://doi.org/10.1007/s11240-023-02447-0
20. Faraz, A., Faizan, M., D. Rajput, V., Minkina, T., Hayat, S., **Faisal, M.;** Alatar, A.A., Abdel-Salam, E.M. **(2023)** CuO Nanoparticle-Mediated Seed Priming Improves Physio-Biochemical and Enzymatic Activities of *Brassica juncea*. **Plants** 12: 803.
21. Manokari M., Cokulraj M., Dey A., **Faisal M.,** Alatar A.A., Alok A., Shekhawat M. S. **(2023)** Micro-morpho-anatomical changes in leaf structure of plantlets during in vitro propagation

(micropropagation) of *Gardenia jasminoides* J. Ellis **Vegetos** (2023). https://doi.org/10.1007/s42535-023-00577-6

22. Manokari M., Cokulraj M., Badhepuri M.K., Dey A., **Faisal M.,** Alatar A.A., Singh R.K., Shekhawat M. S. **(2023)** Microstructural and histochemical modifications in leaves at successive stages of in vitro development of the terrestrial orchid *Spathoglottis plicata* Blume. **Horticulture, Environment, and Biotechnology** https://doi.org/10.1007/s13580-022-00485-9
23. Manokari M., Cokulraj M., **Faisal M.,** Alatar A.A., Alok A., Dey A., Shekhawat M. S. **(2023)** Polyethylene-glycol modulated foliar anatomical and histochemical traits in *Coccoloba uvifera* (L.) L.: A salt and drought tolerant tree species. **South African Journal of Botany 153: 28-36**
24. Manokari M., Cokulraj M., Dey A., **Faisal M.,** Alatar A.A., Alok A., Shekhawat M. S. **(2023)** Micro-morpho-anatomical transitions at various stages of in vitro development of *Crinum malabaricum* Lekhak and Yadav: A critically endangered medicinal plant. **Plant Biology** 25-142-151.
25. **Faisal, M.,** Seob, P.K., Kang, K.W., Sivanesan, I. **(2022)** In Vitro Propagation of *Cremastra appendiculata* var. variabilis by Asymbiotic Seed Germination. **Horticulturae** 8: 926.
26. Qahtan A.A.; **Faisal, M.,** Alatar A.A., Abdel-Salam E.M. **(2022)** Callus-Mediated High-Frequency Plant Regeneration, Phytochemical Profiling, Antioxidant Activity and Genetic Stability in *Ruta chalepensis* L. **Plants** 2022, 11, 1614.
27. Manokari M., Badhepuri M.K., Cokulraj M., Rajput B.S., Dey A., **Faisal M.,** Alatar A.A., Alok A., Shekhawat M. S. **(2022)** High-throughput in vitro propagation and evaluation of foliar micro-morpho-anatomical stability in *Musa acuminata* cv. 'Grand Nain' using 6-benzoyladenine (BOA) in the nutrient medium. **Scientia Horticulturae** 304, 111334.
28. **Faisal M.**, Alatar A.A. **(2022)** Establishment of an Efficient In Vitro Propagation Method for a Sustainable Supply of *Plectranthus amboinicus* (Lour.) and Genetic Homogeneity Using Flow Cytometry and SPAR Markers. **Horticulturae** 8: 693.
29. Ahmad S., Al-Shaghdali K., Rehman S., Khan M.Y., Rafi Z., **Faisal M.,** Alatar A.A., Tahir I.K., Khan S., Ahmmad S., Shahab U. **(2022)** Nonenzymatic Glycosylation of Isolated Human Immunoglobulin-G by D-Ribose. **Cell Biochemistry and Functions** 40: 526-534.
30. Ahmad, N.; **Faisal, M.,** Ahmad, A., Alatar, A.A., Qahtan, A.A., Alok, A. **(2022)** Thidiazuron Induced In Vitro Clonal Propagation of *Lagerstroemia speciosa* (L.) Pers.—An Important Avenue Tree. **Horticulturae** 8: 359.
31. Manokari M., Priyadharshini S., Cokulraj M., Dey A., **Faisal M.,** Alatar A.A., Alok A., Shekhawat M. S. **(2022)** Exogenous implications of silver nitrate on direct and indirect somatic embryogenesis and germination of cold stored synseeds of Vanilla planifolia Jacks. ex Andrews. **South African Journal of Botany** 150: 129-138.
32. Manokari M., Priyadharshini S., Cokulraj M., Dey A., **Faisal M.,** Alatar A.A., Alok A., Shekhawat M. S. **(2022)** Amelioration of Morpho-structural and Physiological Disorders in Micropropagation of *Aloe vera* L. by Use of an Aromatic Cytokinin 6-(3-Hydroxybenzylamino) Purine. **Journal of Plant Growth Regulation** https://doi.org/10.1007/s00344-022-10672-8.
33. Ahmad, N., Fatima, N., **Faisal, M.,** Alatar, A.A., Pathirana, R. **(2022)** Photosynthetic Parameters and Oxidative Stress during Acclimation of Crepe-Myrtle (*Lagerstroemia speciosa* (L.) Pers.) in a *meta*-Topolin-Based Micropropagation System and Genetic Fidelity of Regenerated Plants. **Plants** 11: 1163.
34. Manokari M., Priyadharshini S., Cokulraj M., Jayaprakash K., Dey A., **Faisal M.,** Alatar A.A., Alok A., Shekhawat M. S. **(2022)** Polyethylene glycol mediated improved shoot proliferation, foliar morpho-anatomy, and rooting of micropropagated shoots of *Spathoglottis plicata* Blume. **South African Journal of Botany** 146: 897-904.

35. Manokari M., Priyadharshini S., Cokulraj M., Dey A., **Faisal M.,** Alatar A.A., Alok A., Shekhawat M. S. **(2022)** Assessment of cell wall histochemistry of velamentous epiphytic roots in adaptive response of micropropagated plantlets of *Vanda tessellata* (Roxb.) Hook. ex G. Don. **Plant Cell, Tissue and Organ Culture (PCTOC)** 149:685–696.
36. Manokari M., Badhepuric M.K., Cokulraj M., Sandhyad D., Deye A., Kumar V, **Faisal M.,** Alatar A.A., Singh, R.K., Shekhawat M. S. **(2022)** Validation of meta Topolin in organogenesis, improved morpho-physio- chemical responses, and clonal fidelity analysis in *Dioscorea pentaphylla* L. - an underutilized yam species. **South African Journal of Botany** 145: 284-292.
37. Ahmad, A.; Ahmad, N., Anis, M., Faisal, M., Alatar, A.A., Abdel-Salam, E.M., Meena, R.P., Sivanesan, I. **(2022)** Biotechnological Advances in Pharmacognosy and In Vitro Manipulation of *Pterocarpus marsupium* Roxb. **Plants** 11: 247.
38. Qahtan A.A. **Faisal M.,** Alaltar A.A., and Abdel-Salam E.M. **(2021)** High-frequency Plant Regeneration, Genetic Uniformity, and Flow Cytometric Analysis of *Regenerants in Ruta chalepensis* L. **Plants 2021, 10, 2820. https://doi.org/10.3390/plants10122820**
39. Al-Guwaiz S.M., Alaltar A.A., El-Sheikh M.A., Al-Gehni G.A., **Faisal M.,** Qahtan A.A. and Abdel-Salam E.M. **(2021)** Role of Mangrove Rehabilitation and Protection Plans on Carbon Storage in Yanbu Industrial City, Saudi Arabia: A Case Study. **Sustainability** 2021, 13(23), 13149; https://doi.org/10.3390/su132313149
40. Upadhyay A., Shahzad A., Ahmad Z., **Faisal M.,** and Alatar A.A. **(2021)** High Frequency Direct Organogenesis, Genetic Homogeneity, 2 Chemical Characterization and Leaf Ultra-Structural Study of 3 Regenerants in *Diplocyclos palmatus* (L.) C. Jeffrey. **Agronomy** 11(11), 2164; https://doi.org/10.3390/agronomy11112164
41. Rahman S., Song J., **Faisal M.,** Qahtan A.A., Alatar A.A., Akhter F., Ahmad S. and Hu Bo **(2021)** The Neoepitopes on Methylglyoxal- (MG-) Glycated Fibrinogen Generate Autoimmune Response: Its Role in Diabetes, Atherosclerosis, and Diabetic Atherosclerosis Subjects, Oxidative Medicine and Cellular Longevity, vol. 2021, Article ID 6621568, 17 pages, 2021. https://doi.org/10.1155/2021/6621568.
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BOOK CHAPTERS:

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2. Ali, K., Cherian, T., Fatima S., Saquib, Q., **Faisal M.,** Alatar A.A., Musarrat J. and Al-Khedhairy A.A. (2020) Surface Engineering Techniques Associated with Stability, Biocompatibility, and Toxicity of Nanoparticles (Eds.) Saquib Q. **Faisal M.** Khedhairy A.A. & Alatar A.A., Springer Nature, pp. 75-101.
1. Qahtan A.A., Abdel-Salam E.M., Alatar A.A., Wang Q.C., and **Faisal M. (2019)** An Introduction to Synthetic Seeds: Production, Techniques, and Applications. **In: Synthetic Seeds: Germplasm Regeneration, Preservation and Prospects (Eds.)** Faisal M. and Alatar A.A. Springer Nature, pp. 1-20.

2. Eslam M. Abdel-Salam, Ahmad A. Qahtan, **Mohammad Faisal**, Quaiser Saquib, Abdulrahman A. Alatar and Abdulaziz A. Al-Khedhairy **(2018)** Phytotoxic Assessment of Nickel Oxide (NiO) Nanoparticles in Radish. In: **Phytotoxicity of Nanoparticles** (Eds.) **Faisal M.,** Saquib Q., Alatar A.A., & Khedhairy A.A. Springer Nature, pp. 269-284.
3. Ahmad N., **Faisal M**., Hussain S.A. and Anis M. **(2018)** Regulation of Morphogenesis and Improvement in Shoot Multiplication in Vitex Species Using Thidiazuron. In: **Thidiazuron: From Urea Derivative to Plant Growth Regulator** (Eds.) Ahmad N and **Faisal M.,** Springer Nature, pp. 343-350.
4. Saquib Q. Siddiqui M.A., Ahmad J., Ansari S.M., **Faisal M.**, Wahab R., Al-Khedhairy A.A. and Musarrat J. **(2018)** Nickel Oxide Nanoparticles Induced Transcriptomic Alterations in HEPG2 Cells. In: **Cellular and Molecular Toxicology of Nanoparticles** (Eds.) Saquib Q. **Faisal M.** Khedhairy A.A. & Alatar A.A., Springer Nature, pp. 429-438.
5. Hussain S.A., Ahmad N., Anis M., Alatar A.A. and **Faisal M**., **(2018)** Role of Thidiazuron in Modulation of Shoot Multiplication Rate in Micropropagation of Rauvolfia Species. In: **Thidiazuron: From Urea Derivative to Plant Growth Regulator** (Eds.) Ahmad N and **Faisal M.,** Springer Nature, pp. 429-438.
6. Anis M. Hussain MK, **Faisal M**, Shahzad A, Ahmad N, Siddique I & Khan H **(2008)**. In vitro approaches for plant regeneration and conservation of some potential medicinal plants. **In: Pant Tissue Culture & Molecular Marker** (Eds.) Kumar A, Shekhawat NS & Sopory SK, I.K. International, Pvt. Ltd.- New Delhi-14, 407-419
7. **Faisal M** and Anis M **(2004)** *In vitro* mass propagation and conservation of some endangered medicinal plants. In: D'Souza L., Anuradha M., Nivas S., Hegde S. & Rajendra K (Eds.) **Biotechnology for a Better Future,** *SAC Publications, India,* pp 82 - 91.

BOOKS PUBLISHED

1. **Faisal M.**, Saquib Q., Alatar A.A. & Khedhairy A.A. **(2020)** Cellular and Molecular Toxicology of Heavy Metals. **Springer Nature.**
2. Saquib Q. **Faisal M.** Khedhairy A.A. & Alatar A.A. **(2020)** Green Synthesis of Nanoparticles: Applications and Prospects. **Springer Nature.**
3. **Faisal M.,** & Alatar A.A. **(2019)** Synthetic Seed: Germplasm Regeneration, Preservation & Prospects. **Springer Nature.**
4. **Faisal M.,** Saquib Q., Alatar A.A., Khedhairy A.A. **(2018)** Phytotoxicity of Nanoparticles. **Springer Nature.**
5. Ahmad N. and **Faisal M. (2018)** Thidiazuron: From Urea to Plant Growth Regulators. **Springer Nature.**
6. Saquib Q. **Faisal M.** Khedhairy A.A. & Alatar A.A. **(2018)** Cellular and Molecular Toxicology of Nanoparticles. **Springer Nature.**
7. **Faisal M.,** Anis M. and Alatar A.A. **(2012)** Plant Tissue Culture: An Effective Tool of Biotechnology for Conservation of Medicinal Plants. Lambert Academic Publisher.

WORKSHOP/CONFERENCES/SYMPOSIA PRSENTATION/ATTENDED

1. Online module **"How has the pandemic impacted public scrutiny and confidence in research" 20 January 2023**, Elsevier Researcher Academy.
2. Webinar **on "Electrification and Sustainable Energy Systems to Improve Agriculture and Rural Areas" 18 January 2023**, MDPI.
3. Webinar **on "Use of Genetics and Genomics to Improve the Productivity and Profitability of Smallholder Livestock Farmers" 12 October 2022**, MDPI.
4. International Webinar on "**Root of the Second Green Revolution" 11 October 2022**, Organized by Bioingene Kolkata, India.

5. Research Square Webinar **"Research Integrity: How Preprinting Can Enhance Trust in Research" 22 September 2022**, Research Square.
6. **"Author workshop for early researcher" 20 September 2022**, King Saud University, Saudi Arabia.
7. Workshop **on "Nanostructures for Biomedical Application" 09 February 2022**, Organized by Nano Kain, King Saud University, Saudi Arabia.
8. International Webinar on "**Grass Pea (Lathyrus sativus): Re-domesticating a hardy orphan legume for the 21st century" 29 January 2022**, Organized by Bioingene Kolkata, India.
9. Workshop on **"Cell Culture & Molecular Toxicology Techniques" 19-21 December 2021,** Department of Zoology, King Saud University, Saudi Arabia.
10. International Webinar on "**Climate Smart Agriculture from Multi-Omics Perspective" 17 September 2021**, Organized by Bioingene Kolkata, India.
11. International Webinar Series on Plant Tissue Culture: Current Trends and Future Perspectives **17-19 June 2021**, Organized by Department of Biotechnology, GSFC University, India.
12. International Webinar on "**Enhancing yield in rice employing a systematic marker-assisted gene pyramiding" 19 May 2021**, Organized by Bioingene Kolkata, India.
13. International Webinar on "**Genome editing for improvement of abiotic stress tolerance of rice" April 06, 2021**, Organized by Bioingene Kolkata, India.
14. Conference on **"Scientific Publishing in the International Journals (Practical Applications)**", via zoom on 23 January 2021, by Academics & Researchers Platforms (IFAD), Egypt.
15. International Webinar on **"Breeding for efficient root system for water and nutrient uptake in crops"** Organized by PLANTGENOMIA through virtual mode on 21st February 2021. Organized by Bioingene Kolkata, India.
16. International Webinar on "**Widening the Genetic base of Legumes through Pre-breeding"** Feb 15, **2021**, Organized by Bioingene Kolkata, India.
17. International Webinar on "**Pan Genomes in Plants: Beyond a single reference genome" Feb. 01, 2021**, Organized by Bioingene Kolkata, India.
18. International Webinar on **Production of Androgenic Haploids and Doubled Haploids in Banana** January 15, **2021,** Organized by Bioingene Kolkata, India.
19. Webinar on **Plant microRNA Research** October 27, **2020,** Aligarh Muslim University, Aligarh, India.
20. Webinar **on Skill Development, tie up with Industry** August 26, **2020,** Ghandi Faiz-e-Aam College, Shahjahanpur, India.
21. Webinar on **Food Security, Safety and Sustainability** June 08, **2020**, Ghandi Faiz-e-Aam College, Shahjahanpur, India.
22. **12th Congress on the International Plant Molecular Biology** August 5-10, **2018**. Montpellier, France -Efficient in vitro regeneration and agrobacterium mediated-genetic transformation in tomato.
23. International Conference on **Current Trends in Biosciences (CTBio-2017)** August 21-23, 2017. Kerala, India **-** In vitro multiplication and germplasm conservation of *Ruta chalepensis* and assessment of genetic stability using molecular markers.

24. International Conference on **Current Trends in Biosciences (CTBio-2017)** August 21-23, 2017. Kerala, India **-** Genetic transformation and siRNA mediated aphid resistance in tomato plants.
25. **National Conference on "Monitoring and Management of Drinking Water Quality (MMDWQ)** was held at the Uttarakhand State Council for Science and Technology, Dehradun, Uttarakhand, December 21-23, 2015.
26. **National Symposium on Impact of Plant Tissue Culture on Advances in Plant Biology and XXXIII PTCA (I) Annual Meeting** St. Xevier's College, Ahmedabad (India). 19-21 January, p. 183. - In vitro regeneration and change in total phenolics and antimuicrobial activity in *Vitex negundo*.
27. **SECIVT Novena Reunion, Canary Island, Spain**, April 27-29, 2011, p.65. - Pollen and somatic embryogenesis in *Quercus suber:* searching for common markers and features in two in vitro embryo developmental pathways.
28. **5th International Crop Science Congress & Exhibition. International Convention Centre, Jeju, Korea**, April 13-18, 2008, p.127-128. - Photosynthetic activity, malondialdehyde content and antioxidant enzymes in leaves during ex-vitro establishment of micropropagated *Rauvolfia tetraphylla* plantlets.
29. **National Symposium on Plant Biotechnology.** FRI, Dehradun, Oct., 12-14, 2006. p. 95. - Photosynthetic pigments and antioxidant enzymes in leaves during *ex vitro* establishment of micropropagated *Tylophora indica* plantlets.
30. **Journal of Society for In Vitro Biology.** 41 A 47. SIVB, USA. - Thidiazuron Induced High Frequency Shoot Induction and Plant Regeneration in *Psoralea corylifolia* - an Endangered Medicinal Plant.
31. **National Conference on Medicinal Plants: Resources Applications and Conservation in India**. Jadavpur University, Kolkata, Feb. 11-12, p. 10. - Biotechnological intervention for conservation of biodiversity of some rare and endangered medicinal plants.
32. **IUFRO International Conference on Multipurpose trees in the Tropics: Assessment, Growth and Management**. Arid Forest Research Institute (ICFRE) Jodhpur, Nov. 22-25, p. 282. - Somatic embryogenesis and regeneration of plantlets form nodal explants of *Santalum album* L.
33. **National Symposium on Plant Biology and Biodiversity in Changing Environment**. Hamdard University, New Delhi. Dec. 29-31, p. 40. - *In vitro* propagation of *Psoralea corylifolia* L.
34. **National Symposium on Plant Biodiversity: Role in Sustainable Development** and 25th Annual Meeting of PTCA(I), University of Rajasthan, Jaipur, Feb.17-19, p. 90. - Tissue Culture Studies in *Tylophora indica* (Burm. *f.*) Merrill.
35. **Indian Botanical Conference, MJP Rohilkhnad University, Bareilly,** Oct. 27-29, 2002. - In vitro propagation of a medicinal plants. XXV.
36. **International Symposium on Plant Biodiversity: Conservation and Evaluation. Bose Institute, Kolkata,** Dec. 17-20, 2002. - Conservation of some rare and endangered medicinal plants adopting biotechnological approaches.
37. XXIV **Indian Botanical Conference, Hyderabad,** Nov. 19-21, 2001 - *In vitro* induction of multiple shoots from nodal segment explants of *Rauvolfia tetraphylla* L.-an endangered medicinal plant.