



CURRICULUM VITAE

Dr. M. S. Mohamed Jaabir

M.Sc. (Biochem)., UGC-CSIR-NET., M.Phil (BioTech)., Ph.D.,

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Present Designation:	Associate Professor and Head
Academic:	PG & Research Department of Biotechnology and Microbiology
Teaching Experience	23 + Years
Research Experience	18 + Years (Since PhD in 2005)
Areas of Research	Cancer and Stem Cell Biology.
Administrative:	Co-ordinator, DBT - MSc Biotechnology (2020 onwards) Co-ordinator, DBT STAR COLLEGE SCHEME (2019 onwards) Co-ordinator, UGC-Innovative Program (2013-2018) Co-ordinator, Study In India-MHRD (2017-2019) Co-ordinator, Internal Quality Assurance Cell (2014 – 2020) Co-ordinator, NIRF (2015 - 2019)
Ph.D. guided	Ph.D. Completed – 3 Working for Ph.D. – 4

Recent Collaborative works in Cancer Biology & Invitro Toxicology

Dopamine-conjugated CuS/chitosan nanocomposite for targeted photothermal drug delivery: In vitro cytotoxicity study to establish bio-compatibility

Doxorubicin-Conjugated Platinum Theranostic Nanoparticles Induce Apoptosis via Inhibition of Cell Survival (PI3K/AKT) Signaling Pathway in Human Breast Cancer Cells.

Synthesis, structure, characterization and biological evaluation of 3- substituted 1-pyridin-2-ylimidazo [1,5-a] pyridinebased copper(I)-phosphine complexes for anticancer drug screening.

Anticancer potential of zinc oxide nanoparticles against cervical carcinoma cells synthesized via biogenic route using aqueous extract of Gracilaria edulis.

Synthesis and Surface Passivation of CuInS₂/MnS/ZnS Core-Multishell Nanocrystals, their Optical, Structural and Morphological Characterization, and their Bioimaging Applications.

Investigations on the growth, Structural, Optical, Mechanical and Cytotoxicity Properties of a Semiorganic Single Crystal: Cytosinium Nitrate.

Research Projects / Grants:

Project Approved - Study on the Anti-cancer Prospects of the Coelomic Fluid of Earthworm – SERB (file no CRG/2018/004447); Requested Grant amount Rs. 34.08 Lakhs.

Principal Investigator - A molecular investigation on the onset of Attention Deficit and Hyperactive Disorder (ADHD) in the maternal micronutrient deficient offspring - UGC, NewDelhi; Grant of Rs. 15,87,000/-(2015 to 2018).

Co-Investigator - Microbial aided Vermistabilization of textile industry sludge: A low-cost sustainable technology over conventional systems with potential for decentralization in the textile valley of Tamil Nadu –DST – Waste Management Technology Program (WMT) under Level-1; Proof of Concept / Seeding Project Category. Grant sanctioned – Rs. 10.3 Lakh (2018-2019).

Co-Investigator - Extraction of Water from Air at Zero Energy Expenditure to Mitigate Water and Energy Crisis in India: A Socio-technical perspective to develop ‘ZERO EXTRACT CORPORATES – DST-Water Technology Initiative (WTI); Grant Sanctioned – 25.17 Lakh (2017-2019).

: **Co - Investigator** – Bioremediation of textile effluent polluted soil of Tirupur region through vermistabilization and subsequent evaluation on crop plants – TNSCST sanctioned Rs. 2.69 Lakh(2013-2015).

Schemes / Grants :

Proposed, presented and obtained **DBT – PG Teaching in Biotechnology - SCHEME** to offer MSc Biotechnology programme under grant support (Recurring and Non-Recurring) with a monthly stipend of Rs. 5000/- for those students who qualify through the Nation-wide entrance exam: GAT-B (Graduate Aptitude Test in Biotechnology). **National College is the only College that offers MSc Biotechnology** under this prestigious recognition from the authority of Biotechnology under MHRD, Govt. of India, beside other two, namely, MKU, Madurai and Alagappa University, Karaikudi. The Grant amount and other benefits are yet to be declared by the DBT, New Delhil

Proposed, presented and obtained **DBT - STAR COLLEGE SCHEME** for strengthening of Science Education and Training at Undergraduate level for FIVE departments at National College; suchas Biotechnology, Botany, Chemistry, Physics and Zoology. Grant received - Rs. 105 Lakhs.

- : Proposed, presented and received UGC-Innovative Scheme – to offer 1-year Post Graduate Diploma in Bioprocess Technology Scheme duration – 2013-2018. Grant received - Rs. 60 Lakhs + Salary Grant for 3 Staff (as per actual UGC Scale).
- : Proposed, presented and received UGC – Community Scheme to offer Certificate, Diploma and Advanced Diploma in Welding and Fabrication. Grant sanctioned – 35.2 Lakh (2015-2018)

Publications

Mariappan Murali, Jegaratchagan Latha, Pitchan Arul Prakash, Somasundaram Sangeetha, Balasubramaniam Selvakumaran, **Mohamed Sultan Mohamed Jaabir** (2022). Characterization of [Ru (bpy) 2 (diamine)] 2+ complexes and their DNA binding and cleavage, BSA interaction, cytotoxic, and anticancer mechanistic properties. *Polyhedron*, Vol. 223, 115925.

Sheril Ann Mathew, P Arul Prakash, **MS Mohamed Jaabir**, S Dhanavel, R Manikandan, A Stephen (2021). Dopamine-conjugated CuS/chitosan nanocomposite for targeted photothermal drug delivery: In vitro cytotoxicity study to establish bio-compatibility. *Journal of Drug Delivery Science and Technology*; 61, 102193.

Alkesh Hada, **MS Mohamed Jaabir**, Nisha Singh, Chunoti Changwal, Anil Kumar (2021). Functional genomics approaches for combating the effect of abiotic stresses. *Stress Tolerance in Horticultural Crops*. 119-135.

Puja Patel, Vinita Manimaran Nadar, Devan Umopathy, Selvambigai Manivannan, Rajiu Venkatesan, Velanganni Antony Joseph Arokiyam, Srinivasan Pappu, Pitchan Arul Prakash, **Mohamed Sultan Mohamed Jabir**, Balazs Gulya s, Parasuraman Padmanabhan, * Subramanian Tamil Selvan,* and Ponnuchamy Kumar (2020). Doxorubicin–Conjugated Platinum Theranostic Nanoparticles Induce Apoptosis via Inhibition of Cell Survival (PI3K/AKT) Signaling Pathway in Human Breast Cancer Cells. *ACS Applied Nano Materials* <https://dx.doi.org/10.1021/acsanm.0c02521>

Pathaw L, Khamrang T, Selvakumaran B, Murali M, Arul Prakash P, **Mohamed Jaabir MS**, Velusamy M, (2020). Synthesis, structure, characterization and biological evaluation of 3-substituted 1-pyridin-2-ylimidazo [1,5-a] pyridinebased copper(I)–phosphine complexes for anticancer drug screening. *Appl Organomet Chem*. 2020; e6025. <https://doi.org/10.1002/aoc.6025>. (Impact Factor: 3.581)

Mohamed Asik R., Gowdhami B., **Mohamed Jaabir M.S.**, Archunan G., Suganthya N., (2019). Anticancer potential of zinc oxide nanoparticles against cervical carcinoma cells synthesized via biogenic route using aqueous extract of *Gracilaria edulis*, *Materials Science & Engineering C* 103, 109840. (Impact Factor: 5.88)

Mohd Haseeb, M.S. Khan, Abu baker, Mohamed Imran M, **Mohamed Jaabir M.S.** (2020). Cytotoxic and Antibacterial Activity Evaluation of MDR Bacteria mediated Synthesized Silver nanoparticles. *Biosc. Biotech.Res.Comm.* 13(1), 139-145.

Mohd Haseeb, Mohd Sajid Khan, Abu baker, Imran Khan, Iram Wahid, **M.S. Mohamed Jaabir** (2019). Anticancer and Antibacterial Potential of MDR *S.aureus* Mediated Synthesized Silver Nanoparticles, *Biosci. Biotech. Res. Comm.* 12(1): 26-35.

Alkesh Hada, Veda Krishnan, **M. S. Mohamed Jaabir**, Archana Kumari, Monica Jolly, Shelly Praveen, Archana Sachdev (2018). Improved *Agrobacterium tumefaciens* - mediated transformation of soybean [*Glycine max* (L.) Merr.] following optimization of culture conditions and mechanical techniques. *In Vitro Cellular & Developmental Biology – Plant.* 54(6), pp 672– 688. (Impact Factor: 1.814)

V. Renuga, C. Neela Mohan, **M.S. Mohamed Jaabir**, Pitchan Arul Prakash, and M. Navaneethan (2018). Synthesis and Surface Passivation of CuInS₂/MnS/ZnS Core-Multishell Nanocrystals, their Optical, Structural and Morphological Characterization, and their Bioimaging Applications. *Industrial and Engineering Chemistry Research. Ind. Eng. Chem. Res.*, 2018, 57 (46), pp 15703–15721. (Impact Factor: 3.71)

Sundararaj Sankaramanivel, Muhammad Yasar Molgakar, Pitchan Arul Prakash, **M.S. Mohamed Jaabir**, Subramanian Gurunathan (2017). Stem Cells and Metallothionein - A Review, *Int J Cur Res Rev*, Vol 9(13), 54-61.

Mansoor Hussain, Vinoth Madhavan, **Mohamed Jaabir M.S.**, (2017). Hypoxia Induces Mitochondrial Swelling and Invasive Potential of Cultured Cells. *Biomedical & Pharmacology Journal* Vol. 10(1), 367-372.

P. Jaikumar, T. Balakrishnan, **M. S. Mohamed Jaabir**, S. Sakthivel (2017). Investigations on the growth, Structural, Optical, Mechanical and Cytotoxicity Properties of a Semiorganic Single Crystal: Cytosinium Nitrate, *Int J Cur Res Rev.* 9(4), 8-14.

Mohamed Jaabir M.S., Ramu S., Shabeer N., Shantkriti S. and Senthil Kumar S. (2014). Preliminary evaluation of the larvicidal efficacy of coelomic fluid of *Eudrilus euginiae* on *Anopheles* mosquito, *International Journal of Pharmaceutical Science Invention*, Vol. 3(8) 20-27.

S.Senthil Kumar, T. Muruganandham and **M.S. Mohamed Jaabir** (2014). Decolourization of Azo dyes in a two-stage process using novel isolate and advanced oxidation with Hydrogen peroxide/HRP system. *Int. J. Curr. Microbiol. App. Sci* (2014) 3(1): 514-522.

Senthil Kumar S., **Mohamed Jaabir** (2013). Biological treatment of textile wastewater and its re-use in irrigation: Encouraging water efficiency and sustainable development. *Journal of Water Resources and Ocean Science* 2013; 2(5): 133-140.

S. Senthil Kumar, T.Muruganandham, V.Kathiravan, R. Ravikumar and **M.S. Mohamed Jaabir**. (2013). Rapid decolourization of Disperse Red F3B by *Enterococcus faecalis* and its Phytotoxic Evaluation. *Int.J.Curr.Microbiol.App.Sci* (2013) 2(10): 52-67

Kirubakaran, S.Venkataramana, **M. S. Mohamed Jaabir**. (2013). Effect of Ethrel and Glyphosate on the ripening of Sugar Cane. *International Journal of ChemTech Research.* Vol.5, No.4, pp 1927-1938.

Anand K.V., **Mohamed Jaabir, M.S.**, Philip A. Thomas., Geraldine, P. (2012). Protective role of chrysin against oxidative stress in D-galactose induced aging in an experimental rat model" *Geriatrics and Gerontology International*, 12(4) 741-750.

Mohamed Jaabir M.S., Shamsheerali L., Yasar MD.M., Senthil Kumar S. (2011). Evaluation of the cell-free coelomic fluid of the earthworm *eudrilus euginiae* to induce apoptosis in SiHa cell line, *Journal of Pharmacy Research*. 4(10), 3417- 3420.

Mohamed Jaabir, M.S., Naseeruddin, S., Shabeer, N., and Senthil Kumar, S. (2011). Antimicrobial activity of the ethanolic extract of the leaves of *Cissus quadrangularis* and its phytochemical analysis by GC-MS. *Journal of Theoretical and Experimental Biology*, 7: 99- 108.

Mohamed Jaabir, M.S., Rosario, J.F., Senthil Kumar, S., and Geraldine, P. (2010). Maternal micronutrient restriction alters skeletal muscle mitochondrial DNA damage per se predisposes the offspring to insulin resistance in later life. *Biosciences, Biotechnology Research Asia*, 7: 189-198.

Senthil Kumar, S., Soban Akram, S., Fareed Ahmed, T.S., and **Mohamed Jaabir, M.S.** (2010). Phytochemical analysis and antimicrobial activity of the ethanolic extract of *Acorus calamus* rhizome. *Oriental Journal of Chemistry*, 26: 223-227.

Senthil Kumar, S., Shariq afsar, T., Mohamed Yasar, M., Mansoor Hussain, A., and **Mohamed Jaabir M.S.** (2010). A Study on the Fungal antagonism by chitinolytic bacterial isolates from prawn culture farms of Ramanathapuram District, Tamil Nadu. *Journal of Pure and Applied Microbiology*, 4: 429-432.

Veeramani, A., Senthil Kumar, S., **Mohamed Jaabir, M. S.**, Sivagandhi, C., Marimuthu, R., Ravikumar, R. (2010). *Eudrilus euginiae* as a putative candidate for Textile industry effluent polluted soil bioremediation. *Current World Environment* 5: 131-136.

Mohamed Jaabir, M.S., Vigneshwaran, R., Md. Ehtisham Ul Hassan, T., Senthil Kumar, S. (2010). Study on the antimicrobial activity of ethanolic extract of the fruits of *Solanum torvum* and its phytochemical analysis by GC-MS. *Biomedical and Pharmacology Journal*, 2: 117-121.

Mohamed Jaabir, M.S., Rosario, J.F., Senthil Kumar, S., Geraldine, P. (2009). Maternal dietary micronutrient restriction during preconception, conception and post natal life predispose the offspring to insulin resistance and hypertension in adult life. *Biomedical and Pharmacology Journal*, 2: 239-248.

Mohamed Jaabir, M.S., Mansoor Hussain, A., Shariq Afsar, T., Senthil Kumar, S. (2009). Study on the apoptotic properties of methanolic extracts of *Peltophorum pterocarpum*, *Cassia auriculata*, *Cassia alata* and *Lamprachaenium microcephalum*. *Biomedical & Pharmacology Journal*, 2: 381- 385.

Senthil Kumar, S., **Mohamed Jaabir, M.S.**, Krishna Moorthy, S., Manikandan, R., Ravikumar, R. (2007). Decolorization of Textile Dyes by soil isolates from a textile industry. *JARJ* 4: 20-24.



Jaabir Mohamed

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ORCID : <http://ORCID.org/0000-0002-4880-9939>

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PATENT FILED (PATENT APPLICATION NUMBER IS 860/CHE/2010 A)

Indian Applicant Files Patent Application for Cold Facile Method - a Novel Method for Collecting Coelomic Fluid from Earthworm Belonging to the Phylum Annelida. *The patent file and publication number is 860/CHE/2010 A. The international classification number is A01K.*

Educational Qualifications:

Examination passed	Year	Name of the Institution	Percentage of marks / Grade
Ph.D., Biochemistry	2010	Dept. of Animal Science, Bharathidasan University, Trichy, TN.	Commended
M.Phil., Biotechnology	2007	Periyar University, Salem, TN	I Class
UGC- CSIR NET	2003	Qualified UGC-CSIR National Eligibility Test (NET) held on 28.12.2003; Roll No. 312487.	
M.Sc., Biochemistry	1998	MIET Arts College, , Bharathidasan University, Trichy, TN.	77.9 % University First Rank
B.Sc., Zoology	1996	The New College, Chennai, University of Madras, Chennai.	66.4%
XII	1992	Bharath Senior Secondary School, Chennai [CBSE]	82.2 %
X	1990	Bharath Senior Secondary School, Chennai [CBSE]	66.4 %

INTERNATIONAL FELLOWSHIPS RECEIVED FOR ATTENDING CONFERENCES IN INDIA AND ABROAD/ COUNTRIES VISITED

1. Bangkok, Thailand (2010)

Recipient of IBRO (International Brain Research Organization-Asia-Pacific Regional Committee) fellowship for attending the IBRO-APRC Associate School of Neuroscience held in Bangkok in Jan 27-31, 2010 and to present my research paper

titled” Does Maternal Dietary Micronutrient Deficiency Modulate Free Radicals - Scavenging Enzyme levels and Per se alters the offspring Behaviour?” in the 14th TNS Conference, held during February, 1-2, 2010 at Bangkok, Thailand.

2. Kolkata, India (2009)

Recipient of IBRO (International Brain Research Organization Asia-Pacific Regional Committee) fellowship for attending the School of Neuroscience in Kolkata, India held between 29th December and 8th January, 2009, organized by the Indian Institute of Chemical Biology, Kolkata to undergo training in Frontier areas of Brain Research and also to present my Research activities.

3. Nizwa and Muscat, Oman

To meet the Vice-Chancellor and other delegates of Nizwa University, Nizwa, Sultanane of Oman; June 2007, to propose collaborative academic exchange programmes.

BOOK CHAPTER

Hada, A., **Jaabir, M.S.M.**, Velmurugan, S., Changwal, C., Kumar, A. (2022). Molecular Genetics of Biotic Stress Management for Crop Improvement. In: Kumar, A. (eds) Microbial Biocontrol: Sustainable Agriculture and Phytopathogen Management. Springer, Cham. https://doi.org/10.1007/978-3-030-87512-1_14.

Ahmad, I., Pusam, Y., Sivakamavalli, J., James, A., Saravanan, C., **Jaabir, M.** (2022). Molecular Cloning and CRISPR Techniques in Fish Lectin Research. In: Elumalai, P., Vaseeharan, B., Lakshmi, S. (eds) Aquatic Lectins. Springer, Singapore. https://doi.org/10.1007/978-981-19-0432-5_17

Akshaya Radhakrishnan, Kiyun Park, Ihn-Sil Kwak, **Mohamed Jaabir**, Jeyachandran Sivakamavalli . Classification of lectins (2022). Lectins: Innate immune defense and Therapeutics. Springer Singapore.

Akshaya Radhakrishnan, **Mohamed Jaabir**, Sivakamavalli Jeyachandran, K Thrini, A Vijaya Anand, A Murugesan. Nanocelluloses for Removal of Organic Dyes from Wastewater (2022). Handbook of Nanocelluloses: Classification, Properties, Fabrication, and Emerging Applications. Springer Publications.

Pusam, Y., Jaabir, M., Jeyachandran, S. (2021). Molecular Basis of Lectin–Carbohydrate Interaction. In: Elumalai, P., Lakshmi, S. (eds) Lectins. Springer, Singapore. https://doi.org/10.1007/978-981-16-7462-4_4

Prachi Vibhute, M.S., **Jaabir, M.**, Sangeetha Bharath, S., Sivakamavalli, J. (2021). Overview of Lectins. In: Elumalai, P., Lakshmi, S. (eds) Lectins. Springer, Singapore. https://doi.org/10.1007/978-981-16-7462-4_1

Prachi Vibhute, N. Pushpa, R.Manikandan, Periyannan Velu, **Mohamed Jaabir**, Sivakamavalli Jeyachandran*. Advances of Nanocellulose in Biomedical Applications. (2021). Handbook of Nanocelluloses. Springer Publications.

PRS Yoganathan, K. Tharini, A.Vijayanand, A. Murugaesan, **Mohamed Jaabir**, Sivakamavalli Jeyachandran*. Nanocellulose Toxicological and Environmental Impacts. (2022). Handbook of Nanocelluloses. Springer Publications.

Akshaya R, **Mohamed Jaabir**, Sivakamavalli Jeyachandran*. Nanocellulose for Removal of Dyes and Wastewater. (2021). Handbook of Nanocelluloses. Springer

Publications.

Senthil Kumar S, Venkatesan S, Balaji TS, Yuvraj A and **Mohamed Jaabir** MS. (2010). Decolorization of Reactive Blue using a novel isolate – *Bacillus firmus* SK20. *Current Scenario in Microbial Biotechnology*, 349-355.

Sequences of bacterial 16S rRNA gene submitted at NCBI -27

Workshops Convened

No. of workshops for School Biology Teachers on the modern areas of Biotechnology under the newly revised curriculum of Tamil Nadu Board - 03

No. of Workshops convened and acted as resource person on Animal Cell Culture Techniques – 21

No. of Workshops convened and acted as resource person on Fermentor Operations – 36

Resource Person & Workshop Trainer in Animal Cell Culture Techniques and Fermentor Operations

Consultant in Cell Culture Facility Establishment, In-vitro Toxicity Studies and Stem Cell Culture Techniques

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