

Curriculum Vitae

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PROFESSIONAL EXPERIENCE

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|---|----------------|
| Postdoctoral Fellow Arizona State University, Tempe, AZ, USA | 2022 - present |
| Postdoctoral Fellow Mayo Clinic, Jacksonville, FL, USA | 2021– 2022 |
| Research Assistant Council of Scientific and Industrial research (CSIR)-Indian Institute of Chemical Technology (IICT), Hyderabad, Telangana, India | 2020–2021 |

EDUCATION

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| PhD CSIR-IICT, Hyderabad, India Chemical Biology Department <i>Thesis Title: "Towards development of receptor-targeted carbon nanospheres and lipid-based therapeutics against brain and pancreatic cancer"</i> Advisor: Rajkumar Banerjee, PhD | 4/2019 |
| MSc Andhra University, Visakhapatnam, AP | 4/2011 |
| BSc Andhra University, Visakhapatnam, AP | 4/2009 |

Expertise in

- Multi-step synthesis, purification & spectral characterizations of organic molecules in general cationic amphiphilic moieties
- Peptide synthesis and lipo-peptides
- Interpretation of IR, UV-Vis, NMR, Mass spectra and MALDI
- Formulations like liposomes, micelle, carbon nanospheres
- Isolation and maintenance of mouse Pancreatic acini cells and Dendritic cells
- Cell proliferation and cell toxicity assay, gel electrophoresis, Western blot
- RNA and DNA extraction, PCR
- Flow cytometry, Confocal
- Mice handling, breeding, Oral, intraperitoneal and intravenous injections
- *In-vivo* imaging, Cryo-sectioning
- Establishing subcutaneous melanoma, orthotopic colon and brain tumors
- Inducing pancreatitis and handling conditional transgenic mice

PUBLICATIONS – Google Scholar:

<https://scholar.google.com/citations?user=IUWI7g4AAAJ&hl=en&oi=ao>

JOURNAL ARTICLES (08)

*Corresponding

a) Research Assistant - CSIR-IICT: 2

- 1) Jinka, S., Rachamalla, H.K., Bhattacharyya, T., Sridharan, K., **Madhan Mohan Chandra Sekhar Jaggarapu.**, Yakati, V. and Banerjee, R., 2021. Glucocorticoid receptor-targeted liposomal delivery system for delivering small molecule ESC8 and anti-miR-Hsp90 gene construct to combat colon cancer. *Biomedical Materials*, 16(2), p.024105.

- 2) Sridharan, K., Rathore, B., Yousuf, M., Reddy Rachamalla, H.K., Jinka, S., **Madhan Mohan Chandra Sekhar Jaggarapu.**, and Banerjee, R., 2020. Self-Assembling Derivative of Hydrocortisone as Glucocorticoid Receptor- Targeted Nanotherapeutics for Synergistic, Combination therapy against colorectal tumor. *Molecular Pharmaceutics*, 18(3), pp.1208-1228.

b) Ph.D.- CSIR-IICT: 6

- 1) **Madhan Mohan Chandra Sekhar Jaggarapu.**,* Rachamalla, H.K., Nimmu, N.V. and Banerjee, R.,* 2020. NGRKC16-lipopeptide assisted liposomal-withaferin delivery for efficient killing of CD13 receptor-expressing pancreatic cancer and angiogenic endothelial cells. *Journal of Drug Delivery Science and Technology*, p.101798.
- 2) Saha, S., Yakati, V., Shankar, G., **Madhan Mohan Chandra Sekhar Jaggarapu.**, Moku, G., Madhusudana, K., Banerjee, R., Ramkrishna, S., Srinivas, R. and Chaudhuri, A.,* 2020. Amphetamine decorated cationic lipid nanoparticles cross the blood–brain barrier: therapeutic promise for combating glioblastoma. *Journal of Materials Chemistry B*, 8(19), pp.4318-4330.
- 3) Elechalawar, C.K., Bhattacharya, D., Ahmed, M.T., Gora, H., Sridharan, K., Chaturbedy, P., Sinha, S.H., **Madhan Mohan Chandra Sekhar Jaggarapu.**, Narayan, K.P., Chakravarty, S. and Eswaramoorthy, M., Kundu, TK., Banerjee, R.,* 2019. Dual targeting of folate receptor-expressing glioma tumor-associated macrophages and epithelial cells in the brain using a carbon nanosphere–cationic folate nanoconjugate. *Nanoscale Advances*, 1(9), pp.3555-3567.
- 4) Rachamalla, H.K., Mondal, S.K., Deshpande, S.S., Sridharan, K., Javaji, K., **Madhan Mohan Chandra Sekhar Jaggarapu.**, Jinka, S., Bollu, V., Misra, S. and Banerjee, R.,* 2019. Efficient anti-tumor nano-lipoplexes with unsaturated or saturated lipid induce differential genotoxic effects in mice. *Nanotoxicology*, 13(9), pp.1161-1175.
- 5) Rathore, B., **Madhan Mohan Chandra Sekhar Jaggarapu.**, Ganguly, A., Rachamalla, H.K.R. and Banerjee, R.,* 2016. Cationic lipid-conjugated hydrocortisone as selective antitumor agent. *European Journal of Medicinal Chemistry*, 108, pp.309-321.
- 6) Rachamalla, H.K., Bhattacharya, S., Ahmad, A., Sridharan, K., Madamsetty, V.S., Mondal, S.K., Wang, E., Dutta, S.K., Jan, B.L., Jinka, S. and **Madhan Mohan Chandra Sekhar Jaggarapu.**, and Banerjee, R., 2021. Enriched pharmacokinetic behavior and antitumor efficacy of thymoquinone by liposomal delivery. *Nanomedicine*, 16(8), pp.641-656.

PATENTS (01)

- 1) **Madhan Mohan Chandra Sekhar Jaggarapu**, Muthuswamy Eswaramoorthy, Tapas K. Kundu, Rajkumar Banerjee, Neuropsychotic drug based-glucose nanospheric bioconjugate for effective orthotopic glioma treatment. (Indian patent accepted and USA patent is in process)

CONFERENCE

- Presented a poster entitled “Dual targeting of folate receptor-expressing glioma tumor-associated macrophages and epithelial cells in the brain using a carbon nanosphere–cationic folate nanoconjugate” in ICBS-2019, Nov 2-4, 8th annual conference held at Indian Institute of Chemical Technology, Hyderabad, India
- Participated in international conference on Advances in Chemical Biology and Biologics (ICACB-2019), Feb 28 - Mar 2, in CSIR- Indian Institute of Chemical Technology, Hyderabad, India
- Participated in Indo - US Bilateral symposium on Nanotechnology & Regulatory Science (February 21-22, 2018) Hyderabad, India
- Presented a poster entitled “Cationic lipid-conjugated hydrocortisone as selective antitumor agent” in ISCBDD-2016 conference held at Kolkata, India
- Participated in International symposium on International Conference on Chemical Biology (ICCB-2014), February 6-8, 2014 in CSIR- Indian Institute of Chemical Technology, Hyderabad, India

MENTORSHIP

| Name and Affiliation | Tenure | Current position |
|-------------------------------|-----------|-------------------|
| Tejaswi Somarowthu, CSIR-IICT | 2017-2018 | Project Assistant |

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| Harshita, CSIR-IICT | 6 months | |
| Anwasha Chakraborty, CSIR-IICT | 6 months | |
| Jackson Wolfe, Mayo Clinic | 3 months | Graduation |

HONORS & AWARDS

- Qualified CSIR-UGC NET for lectureship in Universities / colleges with All India Ranking 48 (2013)
- Awarded Junior and Senior Research Fellowship by Council of Scientific and Industrial Research, Govt. of India, New Delhi, India (2014-2019)