

BIODATA

Name: Dr. Chhedil Lal Gupta

Designation: Scientist-C (Bioinformatics)

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Academic Qualifications:

Degrees	Subjects	Institute/ University	Academic Year	Achievements
Ph.D.	Bioinformatics	Integral University, Lucknow	2017	<ul style="list-style-type: none">INSPIRE FellowshipNewton Bhabha Indo-UK Exchange Fellowship
M.Sc.	Bioinformatics	Integral University, Lucknow	2011	<ul style="list-style-type: none">1st Rank in Class2nd Rank in University
B.Sc.	Zoology, Botany, Chemistry	Dr. Ram Manohar Lohia Avadh University, Faizabad	2008	<ul style="list-style-type: none">First class

Academic/Research experience:

- Computational Biologist (Full Specialist Rank) at University of California San Francisco, USA (2021-2023; ~2 years)
- Postdoctoral Fellow at Volcani Institute, ARO, Israel (2019-2021; ~3 years)
- Postdoctoral Fellow at University College London, UK (2017-2018; 1 year).

Specialization/Areas of Interest:

- Bioinformatics
- High-throughput sequencing data analysis,
- Multi-omics data integrative analysis
- Molecular modelling and computer aided drug design

Publications:

Published journal articles: First author – 10; Co-author – 14

Book Chapter – 1

Google Scholar: <https://scholar.google.com/citations?user=6Y15oSYAAAAJ&hl=en>

- Moshe, M., **Gupta, C. L.**, Sela, N., Minz, D., Banin, E., Frenkel, O., & Cytryn, E. (2023). Comparative genomics of *Bacillus cereus* sensu lato spp. biocontrol strains in correlation to in-vitro phenotypes and plant pathogen antagonistic capacity. *Frontiers in Microbiology*, 14, 996287. (<https://doi.org/10.3389/fmicb.2023.996287>)
- **Gupta, C.L.**, Avidov, R., Kattusamy, K., Saadi, I., Varma, V.S., Blum, S.E., Zhu, Y-G., Zhou, X-Y., Su, J-Q., Laor, Y., Cytryn, E. (2021). Spatial and temporal dynamics of microbiomes and resistomes in broiler litter

stockpiles. *Computational and Structural Biotechnology Journal*, 19, 6201-6211. (<https://doi.org/10.1016/j.csbj.2021.11.020>).

- **Gupta, C.L.**, Blum, S.E., Kattusamy, K., Daniel, T., Druyan, S., Shapira, R., Krifucks, O., Zhu, Y-G., Zhou, X-Y, Su, J-Q, Cytryn, E. (2021). Longitudinal study on the effects of growth promoting and therapeutic antibiotics on the dynamics of chicken cloacal and litter microbiomes and resistomes. *Microbiome*, 9, 178. (<https://doi.org/10.1186/s40168-021-01136-4>).
- Marano, R., **Gupta C.L.**, Cozer, T., Jurkevitch, E., Cytryn, E. (2021). The hidden resistome: enrichment reveals presence of clinically relevant antibiotic resistance determinants in treated wastewater irrigated soils. *Environmental Science & Technology*, 55, 10, 6814–6827. (<https://doi.org/10.1021/acs.est.1c00612>)
- **Gupta, C. L.**, Tiwari, R. K., & Cytryn, E. (2020). Platforms for elucidating antibiotic resistance in single genomes and complex metagenomes. *Environment International*, 138, 105667. (<https://doi.org/10.1016/j.envint.2020.105667>).
- Solanki, M. K., Wang, Z., Wang, F. Y., Li, C. N., **Gupta, C. L.**, Singh, R. K., ... & Li, Y. R. (2020). Assessment of Diazotrophic Proteobacteria in Sugarcane Rhizosphere When Intercropped With Legumes (Peanut and Soybean) in the Field. *Frontiers in Microbiology*, 11, 1814. (<https://doi.org/10.3389/fmicb.2020.01814>).
- Grisar-Granovsky, S., Kumar Nag, J., Zakar, L., Rudina, T., **Gupta, C. L.**, Maoz, M., ... & Bar-Shavit, R. (2020). PAR1&2 driven placenta EVT invasion act via LRP5/6 as coreceptors. *The FASEB Journal*. (<https://doi.org/10.1096/fj.202000306R>).
- Tiwari, R. K., Singh, S., **Gupta, C. L.**, & Bajpai, P. (2020). Microglial TLR9: Plausible Novel Target for Therapeutic Regime Against Glioblastoma Multiforme. *Cellular and Molecular Neurobiology*, 1-3. (<https://doi.org/10.1007/s10571-020-00925-z>).
- Tiwari, R. K., **Gupta, C. L.**, & Bajpai, P. (2020). Impelling TLR9: Road to perspective vaccine for visceral leishmaniasis. *Drug Development Research*. (<https://doi.org/10.1002/ddr.21662>)
- Tiwari, R. K., Singh, S., **Gupta, C. L.**, Pandey, P., Singh, V. K., Sayyed, U., ... & Bajpai, P. (2020). Repolarization of glioblastoma macrophage cells using non-agonistic Dectin-1 ligand encapsulating TLR-9 agonist: plausible role in regenerative medicine against brain tumor. *International Journal of Neuroscience*, 1-8. (<https://doi.org/10.1080/00207454.2020.1750393>)
- Perin, N., Rep, V., Sović, I., Juričić, Š., Selgrad, D., Klobučar, M., Pržulj, N., **Gupta, C.L.**, Malod-Dognin, N., Pavelić, S.K., & Hranjec, M. (2020). Antiproliferative activity and mode of action analysis of novel amino and amido substituted phenantrene and naphtho [2, 1-b] thiophene derivatives. *European Journal of Medicinal Chemistry*, 185, 111833. (<https://doi.org/10.1016/j.ejmech.2019.111833>)
- **Gupta, C. L.**, Babu Khan, M., Ampasala, D. R., Akhtar, S., Dwivedi, U. N., & Bajpai, P. (2019). Pharmacophore-based virtual screening approach for identification of potent natural modulatory compounds of human Toll-like receptor 7. *Journal of Biomolecular Structure and Dynamics*, 37(18), 4721-4736. (<https://doi.org/10.1080/07391102.2018.1559098>)
- Gaur, N., Kumar, K., **Gupta, C. L.**, & Saxena, J. K. (2019). Molecular characterization of recombinant arginase of *Leishmania donovani*. *Protein expression and purification*, 159, 1-9. (<https://doi.org/10.1016/j.pep.2019.02.018>)
- Sood, R., Kumar, N., Bhatia, S., Chanu, K. V., **Gupta, C. L.**, Pateriya, A. K., ... & Singh, V. P. (2018). Neuraminidase inhibitors susceptibility profiles of highly pathogenic influenza A (H5N1) viruses isolated from avian species in India (2006–2015). *Antiviral research*, 158, 143-146. (<https://doi.org/10.1016/j.antiviral.2018.08.007>)

- Nag, J. K., Kancharla, A., Maoz, M., Turm, H., Agranovich, D., **Gupta, C. L.**, ... & Bar-Shavit, R. (2017). Low-density lipoprotein receptor-related protein 6 is a novel coreceptor of protease-activated receptor-2 in the dynamics of cancer-associated β -catenin stabilization. *Oncotarget*, 8(24), 38650. (doi: 10.18632/oncotarget.16246)
- Ali, J., K Mishra, R., **Gupta, C.L.**, C Sharma, D., Bajpai, P., & Pathak, N. (2017). An in silico Approach Towards Crop Improvement by ACC Synthase Inhibition Declining Ethylene Production. *Current Enzyme Inhibition*, 13(1), 11-19. (doi:[10.2174/1573408012666160210231607](https://doi.org/10.2174/1573408012666160210231607))
- **Gupta, C. L.**, Akhtar, S., Sayyed, U., Pathak, N., & Bajpai, P. (2016). In silico analysis of human Toll-like receptor 7 ligand binding domain. *Biotechnology and Applied Biochemistry*, 63(3), 441-450. (DOI: [10.1002/bab.1377](https://doi.org/10.1002/bab.1377))
- **Gupta, C. L.**, Akhtar, S., Kumar, N., Ali, J., Pathak, N., & Bajpai, P. (2016). In silico elucidation and inhibition studies of selected phytoligands against mitogen-activated protein kinases of protozoan parasites. *Interdisciplinary Sciences: Computational Life Sciences*, 8(1), 41-52. (DOI [10.1007/s12539-015-0269-6](https://doi.org/10.1007/s12539-015-0269-6))
- Nag, J. K., Chahar, D., Shrivastava, N., **Gupta, C. L.**, Bajpai, P., Chandra, D., & Misra-Bhattacharya, S. (2016). Functional attributes of evolutionary conserved Arg45 of Wolbachia (*Brugia malayi*) translation initiation factor-1. *Future Microbiology*, 11(2), 195-214. (<https://doi.org/10.2217/fmb.15.135>)
- **Gupta, C. L.**, Akhtar, S., Waye, A., Pandey, N. R., Pathak, N., & Bajpai, P. (2015). Cross talk between *Leishmania donovani* CpG DNA and Toll-like receptor 9: an immunoinformatics approach. *Biochemical and Biophysical Research Communications*, 459(3), 424-429. (<https://doi.org/10.1016/j.bbrc.2015.02.121>)
- **Gupta, C. L.**, Akhtar, S., & Bajpai, P. (2014). In silico protein modeling: possibilities and limitations. *EXCLI journal*, 13, 513. (<https://www.excli.de/index.php/excli/article/view/791>)
- Nag, J. K., Shrivastava, N., Tiwari, M., **Gupta, C.L.**, Bajpai, P., Chahar, D., & Misra-Bhattacharya, S. (2014). Wolbachia translation initiation factor-1 is copiously expressed by the adult, microfilariae and infective larvae of *Brugia malayi* and competitively inhibited by tetracycline. *Acta tropica*, 138, 51-59. (<https://doi.org/10.1016/j.actatropica.2014.04.033>)
- **Gupta, C. L.**, Khan, M. K. A., Khan, M. F., & Tiwari, A. K. (2013). Homology modeling of LmxMPK4 of *Leishmania mexicana* and virtual screening of potent inhibitors against it. *Interdisciplinary Sciences: Computational Life Sciences*, 5(2), 136-144. (DOI: [10.1007/s12539-013-0164-y](https://doi.org/10.1007/s12539-013-0164-y))
- **Gupta, C. L.**, Akhtar, S., Bajpai, P., Kandpal, K. N., Desai, G. S., & Tiwari, A. K. (2013). Computational modeling and validation studies of 3-D structure of neuraminidase protein of H1N1 influenza A virus and subsequent in silico elucidation of piceid analogues as its potent inhibitors. *EXCLI journal*, 12, 215. (<https://www.excli.de/index.php/excli/article/view/1143>)

Book chapters

- **Gupta, C. L.**, Tiwari, R. K., Pathak, N., & Bajpai, P. (2018). Endosomal Toll-like Receptors: Rheostats of Inflammation and Diseases. *Frontiers in Clinical Drug Research-Anti-Allergy Agents*, 3, 194. (Edited by Prof. Atta-ur-Rahman, Bentham Science Publishers, ISBN: 978-1-68108-338-4)

Awards and Achievements:

- NMDC Championship program by National microbiome data collaborative, USA (2023)
- ARO Postdoctoral Fellowship - India and China fellowship program at Volcani Institute, Israel

(2020).

- Excellent Research Paper Award (\$300 prize) from Interdisciplinary sciences: computational life sciences Journal (2017).
- Newton Bhabha PhD Placement Fellowship by DST, India and British Council, U.K. (2016).
- INSPIRE Fellowship by DST, India (2012-2017).
- Studentship Award sponsored by DBT-BTIS, New Delhi (2011).
- University Gold Medal – 1st rank in M.Sc. Bioinformatics (2011).
- University Silver Medal – 2nd rank at University (2011).