



Arindam Dey

Research Scientist | Immunological Intellect



Through diligence and determination, I attained my goal of becoming a scientist in 2020. During my doctoral and post-doctoral training, I gained substantial practical knowledge in immunology as well as project management skills. Over the past five years, I have contributed to several European projects with topics ranging from oncology to inflammatory diseases, with a focus on Immunometabolism and drug delivery. Now I intend to utilize my skills and expertise to contribute to projects dedicated to pre-clinical/clinical outcomes.

Languages | English (Full Professional), Bengali and Hindi (Native)

Nationality | Indian

PROFESSIONAL WORK AND PROJECT WORK

- 2021–present: Post-doctoral researcher at Institute for Advanced Biosciences, France
 - Developing mRNA vaccine against COVID-19 using cationic lipid nanoparticles.
 - Evaluating the effect of positive charge on cationic lipid nanoparticles on antigen presentation using a co-culture system of dendritic cells and T cells.
- 2016–2020: Ph.D. at Institute for Advanced Biosciences, UGA, France
- Thesis title: “**Study of the effects of nanoparticles on the immune system**”; Supervisor: Dr Patrice Marche
- NEWDEAL project**: New siRNA nano therapy for inflammatory bowel diseases, targeting JAK1.
- NANOGLIO project** : Nanotechnology-based immunotherapy for glioblastoma.
 - Immunotoxicological analysis of different nanomaterials involved in Ph.D. projects (amphiphilic dendrimers, cationic and neutral lipid nanoparticles, gold nanoparticles) on various human and mice cell lines and primary immune cells.
 - Co-culture of dendritic cells with T cells to evaluate the effect of nanoparticles on Antigen presentation.
 - Delivery of therapeutic RNA to primary immune cells using lipid nanoparticles and dendrimers as non-viral vectors.
- 2016: Master thesis at Institute for Advanced Biosciences, France
- Thesis title: “**Study of antigen presenting cell functions after exposure to nanoparticles**” ; Supervisor: Dr Patrice Marche
 - Immunotoxicological effect of gold nanoparticles and neutral lipid nanoparticles on the redox, metabolic, and cytokine profile of macrophage cell line (J774.1A).

ACADEMIC INFORMATION

- Université Grenoble Alpes (UGA), Grenoble, France
2016–2020: **Ph.D. in Immunology**
2016: **Master’s in Science Technology and Health (BioMed)**
- Università Degli Studi di Torino, Torino, Italy
2015–2016: **Master’s in Science in Molecular Biotechnology**
- KIIT School of Biotechnology, Bhubaneswar, India
2011–2016: **Biotechnology Dual Degree (B. Tech and M. Tech)**

PROFESSIONAL SKILLS

- Primary mouse and human immune cell isolation and culturing techniques**
- Certification of Level A1 for animal experimentation
- Multiparametric **Flow cytometry** (up to 12 parameters) (Used LSRII, FACSAria Cell Sorter, Accuri C6 and BD FACSCanto II)
- Molecular biology techniques (qPCR, Western blot)
- Confocal Microscopy
- Plate based assay (**ELISA**, Griess assay, LDH assay, MTT) and Cytometric Bead Array
- Seahorse XF Analyser for real-time metabolic analysis

COMPUTER SKILLS

- Image processing software: ImageJ, Icy, Adobe illustrator
- Basics of R programming
- Flow cytometry analysis: BD FACSDiva , FCS express
- Biostatistics : Graph Pad prism
- MS Office

COMMUNICATION AND MANAGEMENT SKILLS

- Scientific writing, bibliographic research, and critical analysis of articles
- Strategic and logical planning, execution, and analysis of experiments and results
- Project coordination support within a EU-funded H2020 programme between academic and industry partners
- Supervision of three master’s students
- Autonomous as well as collaborative

ACHIEVEMENTS

- NEWDEAL: Horizon 2020 research and innovation programme – PhD fellowship 2016 –2020
- IDEX Mobility Scholarship to Barcelona, Spain-2018
- Erasmus Mundus Bio health Scholarship- 2015

CONTACT DETAILS

- 8 B Chemin Duhamel, La Tronche, 38700, France
- Email : arindamdey8@gmail.com
- Phone : +33767290726
- Web site : [Arindam | Immunologist](https://arindam.immunologist.com)

PUBLICATIONS

- **A. K. Dey**, A. Nougarede, F. Clement, C. Fournier, E. J. Marche, M. Escudé, D. Jary, F.P. Navarro, and P. N. Marche. 2021. 'Tuning the immunostimulation properties of cationic lipid nanocarriers for nucleic acid delivery', Under Review Preprint Available.
- F. Clément, N. Adrien, C. Stéphanie, K. Frédérique, **A.K. Dey**, O. Patricia, N. Fabrice, P.N. Marche, S. Eric, G. Xavier, **Therapeutic siRNA targeting JAK/STAT signalling pathway up-regulation in inflammatory bowel diseases**, Under Review
- Hubert, V., I. Hristovska, S. Karpati, S. Benkeder, **A. K. Dey**, C. Dumot, C. Amaz, N. Chounlamountri, C. Watrin, C. J. Christophe, F. Chauveau, E. Brun, P. N. Marche, F. Lerouge, S. Parola, Y. Berthezène, T. Vorup-Jensen, O. Pascual and M. Wiart. 2021. 'Multimodal imaging with NanoGd reveals spatiotemporal features of neuroinflammation after experimental stroke', Advanced Science, In Production.
- **A. K. Dey**, A. Gonon, E. I. Pecheur, M. Pezet, C. Villiers, and P. N. Marche. 2021. 'Impact of gold nanoparticles on the functions of macrophages and dendritic cells', Cells, 10.
- Chen, J., A. Ellert-Miklaszewska, S. Garofalo, **A. K. Dey**, J. Tang, Y. Jiang, F. Clement, P. N. Marche, X. Liu, B. Kaminska, A. Santoni, C. Limatola, J. J. Rossi, J. Zhou, and L. Peng. 2021. 'Synthesis and use of an amphiphilic dendrimer for siRNA delivery into primary immune cells', Nat Protoc, 16: 327–51.
- Karpati, S., V. Hubert, I. Hristovska, F. Lerouge, F. Chaput, Y. Bretonniere, C. Andraud, A. Banyasz, G. Micouin, M. Monteil, M. Lecouvey, M. Mercey-Ressejac, **A. K. Dey**, P. N. Marche, M. Lindgren, O. Pascual, M. Wiart, and S. Parola. 2021. 'Hybrid multimodal contrast agent for multiscale in vivo investigation of neuroinflammation', Nanoscale, 13: 3767–81.
- **A. K. Dey**, Abhirup Dasgupta, Vijay Kumar, Aakriti Tyagi, and Anita Kamra Verma. 2015. 'Evaluation of the of antibacterial efficacy of polyvinylpyrrolidone (PVP) and tri-sodium citrate (TSC) silver nanoparticles', International Nano Letters, 5: 223–30.

CONFERENCES AND MEETINGS ATTENDED

- Poster presentation at 15th World Immune Regulation Meeting (WIRM) 2021, Virtual platform
- Poster presentation at 34th Conference of European Macrophage and Dendritic Cell Society (EMDS) – 2021, Virtual platform
- Oral presentation at MRS Spring Meeting – 2021, Virtual platform
- Poster presentation at NANOPOSTER – 2021, 10th Virtual Nanotechnology Poster Conference
- Oral presentations at NEWDEAL consortium meetings at different partner countries every 6 month
- Oral presentation at NANOGlio consortium meeting – 2019, Rome, Italy
- Poster presentation at SFNano-C’Nano joint meeting – 2019, Dijon, France

REFERENCES

Dr. Patrice Marche

Research Director of INSERM
Institute for Advanced Biosciences
Grenoble, France
patrice.marche@univ-grenoble-alpes.fr
+33 (0) 476549495

Dr. Zuzana Macek Jilkova

Researcher
Institute for Advanced Biosciences
Grenoble, France
zmacekjilkova@chu-grenoble.fr
+33 (0) 476549452

Dr. Fabrice Navarro

Head of Sustainable Development -
Water, Energy, Environment of CEA
CEA-Leti, Grenoble, France
fabrice.navarro@cea.fr
+33 (0) 174601898