

Ameya Dravid

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Education and training

Year	University	Position	Field
2017-Current	Indian Institute of Science	Graduate Research Scholar	Bioengineering
2013-17	Vellore Institute of Technology, Vellore	Bachelors of Technology	Biotechnology

Publications

Lead author publications

1. Resolvin D1-loaded nanoliposomes promote M2 macrophage polarization and are effective in the treatment of Osteoarthritis, **Ameya A. Dravid**, Kaamini Dhanabalan, Smriti Agarwal, Rachit Agarwal, **Bioengineering and Translational Medicine (Accepted), 2021**
2. Use of RvD1-carriers for the treatment of obesity aggravated OA, **Ameya A. Dravid**, Kaamini M. Dhanabalan, Soumyadeep Naskar, Smriti Agarwal, Rachit Agarwal, (manuscript under preparation), 2021
3. Gene therapy as a potential tool for treating neuroblastoma—a focused review, Meghana Kumar, **Ameya A. Dravid**, Aviral Kumar, Dwaipayan Sen, **Cancer Gene Therapy, 2016**

Collaborative publications

1. Intra-articular injection of rapamycin microparticles prevent senescence and effectively treat Osteoarthritis, Kaamini M. Dhanabalan, **Ameya A. Dravid**, Smriti Agarwal, Ramanath K Sharath, Ashok Kumar Padmanabhan, **Biomaterials (submitted, under review), 2021**
2. Cationic inhalable particles for enhanced drug delivery to M. tuberculosis infected macrophages, Pallavi Raj Sharma, **Ameya Atul Dravid**, Yeswanth Chakravarthy Kalapala, Vishal K Gupta, Sharumathi Jeyasankar, Avijit Goswami, Rachit Agarwal, **Materials Science and Engineering C (submitted, under review), 2021**
3. Database of transcription factors in lung cancer (DBTFLC): A novel resource for exploring transcription factors associated with lung cancer, Thabitha Amalraj, **Ameya A Dravid**, Riya Tripathi, S Sajitha Lulu, **Journal of Cellular Biochemistry, 2017/8**

Provisional patents filed

	Title	Patent office	Date of filing	Inventors	Application number
1.	Cationic polymeric microparticles and drug delivery for the treatment of Tuberculosis infection	India	17-09-21	Pallavi Raj Sharma, Ameya Dravid , Rachit Agarwal	202141042181
2.	Vehicle encapsulated specialized pro-resolution mediators (SPMs), methods and applications thereof	India	09-09-21	Ameya Dravid , Kaamini MD, Smriti Agarwal, Rachit Agarwal	202141040859

Teaching experience

Course	Adviser	Role	Platform	Semester
1. Drug Delivery: Principles and Engineering (course overview)	Dr. Rachit Agarwal	TA*	NPTEL	Fall semester, 2018+ Fall semester, 2020
2. Mathematical Methods for Bioengineers	Prof. Narendra Dixit	TA*	BSSE, IISc	Winter semester, 2020
3. Digital Epidemiology	Prof. Vijay Chandru	TA*	BSSE, IISc	Fall Semester, 2020

*TA=Teaching assistant

Other awards and achievements

Awarding agency	Year	Particulars
1. American Chemical Society	2020	ACS editor's pick award for best paper
2. Indian Institute of Science	2019	Senior Research Fellowship
3. Graduate Aptitude Test in Engineering (GATE)	2017	All India Rank (AIR)-2 in GATE - Biotechnology

Conference presentations

Name	Year	Title	Category
1. BSSE Annual Research Symposium	2020	Resolvin nanocarriers for treatment of Osteoarthritis	Oral presentation
2. BioTERM, IIT Kanpur	2019	Use of Resolvin nanocarriers for treatment of Osteoarthritis	Poster
3. BSSE Annual Research Symposium	2019	Resolvin nano-carriers for treatment of osteoarthritis	Poster

Technical skills (selected)

- Particle synthesis:** Liposome synthesis, Preparation of crystalline formulations, others (PLGA microparticles, alginate microparticles etc.)
- Molecular biology:** Polymerase chain reaction, agarose gel electrophoresis
- Primary cell culture:** Extensive experience with mouse bone marrow-derived macrophages, Bovine articular cartilage, Human primary chondrocytes. Handled cell lines like C28/I2 (chondrocytes), HeLa (epithelial), 3T3-L1 (preadipocyte), RAW (macrophage), etc.
- Animal handling:** Injections (intraperitoneal, intravenous, subcutaneous, intraarticular), surgery, von frey physiological pain testing
- Histology:** Immunohistochemistry, staining, tissue processing and sectioning, scoring of stained tissue
- Imaging:** Live animal imaging, brightfield imaging of stained tissues, fluorescence imaging of stained cells and tissues, microCT of mice joints

Other extracurricular activities (selected)

Title	Role	Year
1. BSSE Annual Research Symposium	Organizer	2021

2.	IISc Annual Open Day	Organizer	2020
3.	BSSE Annual Research Symposium	Volunteer	2019,2020