Leena Sapra

Research Scholar

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EDUCATIONAL TRAINING

2018-Present Ph.D. (Biotechnology), All India Institute of Medical Sciences (AIIMS), New-

Delhi India.

2015-2017 *M.Sc.* Biotechnology, AIIMS, New-Delhi India.

2011-2015 *B.Sc.* (Biochemistry), **Delhi University**, New Delhi-India.

PhD THESIS DETAILS

PhD Thesis Title: Establish the role of "Breg-Treg-Th17" cell axis in probiotics mediated modulation of bone health

Supervisor: Dr. Rupesh K. Srivastava

Associate Professor

Translational Immunology, Osteo-immunology & Immunoporosis Lab (TIOIL)

Department of Biotechnology

All India Institute of Medical Sciences (AIIMS)

New Delhi, India-110029

Supervisor Contact Details: rupesh_srivastava13@yahoo.co.in & rupeshk@aiims.edu

KEY TECHNICAL SKILLS

- Handling of mice, blood isolation via retro-orbital and submandibular route, drug dosing.
- Development of post-menopausal osteoporotic mice model (Ovx).
- Development of Acute Respiratory Distress Syndrome mice (ARDS) model
- Immune cell isolation from bone marrow, spleen, lymph nodes and gastrointestinal tract (GUT) mainly Peyer's patches, small intestine and large intestine and validation via Flow Cytometry.
- Establish and optimized in vitro & in vivo models.
- Cell cultures (Leydig cells, testicular macrophages, Tregs, Th17, Bregs, Th9, Macrophages) under ex vivo conditions.
- Western blotting, ELISA, Immunofluorescence Imaging, FLOW CYTOMETRY.
- Isolation of primary osteoblasts and osteoclasts cells from the bone marrow cells.
- Basic knowledge of HPLC, FTIR, SEM, Micro CT and Mass Spectrometry.

- Potential of carrying out projects independently. Interactive presentation skills.

AWARDS

S.No.	PRIZE / AWARD	DATE & VENUE	ORGANIZER
1.	Second Critic Prize, Sustainable	17th October 2022, 2nd	AIIMS
	Developmental Goals (SDG)	Annual Research Day	
		Celebration	
2.	Third Prize for Poster	17 th October 2022, 2 nd	AIIMS
	presentation	Annual Research Day	
		Celebration	
3.	Dr. Arun Fotedar Memorial: Best	1st October 2022.	AIIMS
	Published Work, AIIMSONIAN		
	Award		
4.	"G. P. Talwar Young Scientist	December 2021	47th-Indian Immunology
1.	Award"	Becchiber 2021	Society Annual Conference,
	Tivata		India
5.	BILL & MELINDA GATES	2021	American Society of
	FOUNDATION TRAVEL		Microbiology (ASM) and
	AWARD		the Federation for
			European Microbiological
			Societies (FESEM)
6.	First prize Oral presentation	12 th to 16 th October 2019,	IUIS-IIS-FIMSA,
		Jaipur	International conference on
			Basic and Advanced
			Immunology
7.	First prize poster presentation	26th March 2019,	AIIMS
		1st Annual Research	
		Day	
8.	Senior Research Fellowship	2021-Present	CSIR
	(SRF), CSIR		
9.	Junior Research Fellowship	2018-2020	CSIR
	(JRF), CSIR		
10.	Graduate Aptitude Test in	2016	MHRD, India
	Engineering (GATE)	2011	¥166 2377
11.	National Eligibility Test	2016	UGC-CSIR
	(NET-JRF)		

PUBLICATIONS (Research: 06; Review: 08 & Book Chapters: 05)

S.No.	Title	Journal	Authors	Vol.	Year
1.	High Salt Diet Impairs Male Fertility in Mice via Modulating the Skeletal Homeostasis	Reproductive Sciences (IF: 3.3)	Saugandhika, S., Sapra, L., Kumari, K. and Srivastava, R.K.,	14	2023
1.	Cissus quadrangularis (Hadjod) Inhibits RANKL- Induced Osteoclastogenesis and Augments Bone Health in an Estrogen-Deficient Preclinical Model of Osteoporosis Via Modulating the Host Osteoimmune System https://doi.org/10.3390/cells1 2020216	Cells (MDPI) (IF: 7.7)	Azam, Z.; Sapra, L.; Baghel, K.; Sinha, N.; Gupta, R.K.; Soni, V.; Saini, C.; Mishra, P.K.; Rupesh K. Srivastava*	12	2023
2.	Osteometabolism: Metabolic Alterations in Bone Pathologies https://doi.org/10.3390/cells1 1233943	Cells (MDPI) (IF: 7.7)	Rupesh K. Srivastava*, Leena Sapra, and Pradyumna K. Mishra	23	2022
3.	Crocin attenuates osteoclastogenesis and enhances bone health by skewing the immunoporotic "Treg-Th17" cell axis in post- menopausal osteoporotic mice model 100302, 10.1016/j.phyplu.2022.10030 2	Phytomedicin e Plus (IF: 6.6)	Zafar Azam, Leena Sapra, Asha Bhardwaj, Sumedha Yadav, Pradyumna Kumar Mishra, Prashant Shukla, Versha Sharma and Rupesh K. Srivastava*.	3	2022
4.	Bifidobacterium longum ameliorates ovariectomy- induced bone loss via enhancing anti- osteoclastogenic and immunomodulatory potential of regulatory B cells (Bregs) 10.3389/fimmu.2022.875788	Frontiers in Immunology (IF: 8.8)	Leena Sapra, Niti Shokeen, Konica Porwal, Chaman Saini, Asha Bhardwaj, Mary Mathew, Pradyumna Kumar Mishra, Naibedya Chattopadhyay, Hamid Yousf Dar, Bhupendra Verma and Rupesh K. Srivastava*.	10	2022
5.	IL-21 plays an important role in modulating "Th17-Treg" cell axis in leprosy Type 1 reactions. https://doi.org/10.1016/j.cyto. 2022.155821.	Cytokine (IF: 4.0)	Chaman Saini*, Leena Sapra, Asha Bhardwaj, Mohd. Tarique, Alpana Sharma, Neena Khanna, V. Ramesh, Poonam Puri, Rupesh K. Srivastava*.	152	2022

6.	Long-term implications of COVID-19 on bone health: pathophysiology and therapeutics. https://doi.org/10.1007/s0001 1-022-01616-9	Inflammation Research (IF: 7.0)	Leena Sapra, Chaman Saini, Bhavuk Garg, Ranjan Gupta, Bhupendra Verma, Pradyumna K. Mishra & Rupesh K. Srivastava*.	9	2022
7.	The Rising Era of "Immunoporosis": Role of Immune System in the Pathophysiology of Osteoporosis. doi.org/10.2147/JIR.S351918	Journal of Inflammation Research (IF: 6.92)	Srivastava RK*, Sapra L.	15	2022
8.	"Osteomicrobiology": The Nexus between Bone and Bugs. doi: 10.3389/fmicb.2021.812466	Frontiers in Microbiology (IF: 6)	Bhardwaj A, Sapra L , Tiwari A, Mishra PK, Sharma S and Srivastava RK*.	12	2022
9.	Regulatory B cells (Bregs) inhibit osteoclastogenesis and play a potential role in ameliorating ovariectomy induced bone loss 10.3389/fimmu.2021.691081	Frontiers in Immunology (IF: 8.8)	Leena Sapra, Asha Bhardwaj, Pradyumna K. Mishra, Bhavuk K. Garg, Bhupendra Verma, Gyan C. Mishra and Rupesh K. Srivastava*.	12	2021
10.	Lactobacillus rhamnosus attenuates bone loss and maintains bone health by skewing Treg-Th17 cell balance in Ovx mice. https://doi.org/10.1038/s415 98-020-80536-2	Scientific reports (IF: 5.8)	Sapra, Leena, Hamid Y. Dar, Asha Bhardwaj, Amit Pandey, Surbhi Kumari, Zaffar Azam, Vishu Upmanyu and Rupesh K. Srivastava*	11	2021
11.	"Immunoporosis": Immunology of Osteoporosis 10.1007/s40011-021-01238-x	Proceedings of the National Academy of Sciences, India Section B: Biological Sciences (invited)	Sapra, L., Azam, Z., Rani, L., Saini, C., Bhardwaj, A., Shokeen, N & Srivastava, R. K.	-	2021
12.	COVID-19: Immunology, Immunopathogenesis and Potential Therapies. https://doi.org/10.1080/08830 185.2021.1883600	International Reviews of Immunology (IF: 5.5)	Asha Bhardwaj, Leena Sapra, Chaman Saini, Zaffar Azam, Pradyumna K. Mishra, Bhupendra Verma, Gyan C. Mishra and Rupesh K. Srivastava*.	-	2021
13.	Phytotherapy for treatment of cytokine storm in COVID-19. 5, 51-75, 10.52586/4924	Frontiers in Bioscience (IF: 4)	Leena Sapra, Asha Bhardwaj, Zaffar Azam, Deekhsha	26	2021

			Madhry, Bhupendra Verma, Sumit Rathore, Rupesh K. Srivastava*		
14.	Phytoconstituents as novel osteo-protective agents: Implications in bone health. 1;25:1259-1296	Frontiers in Bioscience (IF: 4)	Zaffar Azam, Vikas Pandey, Navita Gupta, Leena Sapra , Hamid Y. Dar, Niti Shokeen, Asha Bhardwaj, Ayaan Ahmad, Vandana Soni, Rupesh K. Srivastava*.	25	2020

MEMBERSHIPS

❖ Life Member-Indian Immunology Society (IIS), New Delhi, India.

Referees:

Referee 1 (PhD Supervisor):

Dr. Rupesh Kumar Srivastava Associate Professor Department of Biotechnology AIIMS, New Delhi-110029, India rupesh_srivastava13@yahoo.co.in

Referee 2 (Co-Guide):

Dr. Pradyumna Kumar Mishra

Fulbright-Nehru Fellow, AIMF Fellow (DBT-Wellcome Trust & AAS), FAMS $\bf Scientist\mbox{-}F\mbox{-}B$

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