# ASHWINI VASUDEVAN

## PROFILE INFO

A talented and enthusiastic PhD student, working as a Senior research fellow (SRF) at the Institute of Liver and Biliary Sciences (ILBS) under ICMR fellowship (ITR- Innovation and Translational Research category). Skilled in tissue engineering based scaffold fabrication, primary liver cells isolation organoid and spheroid culture. Holding a strong graduation record in the specialized sectors of biotechnology and medical nanotechnology.

## CONTACT INFO


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https://twitter.com/Ash_wineee


## MY SKILLS

- Cell culture handling & maintenance Isolation of Primary Liver cells and culture
- Organoid culture
- 3D printing
- Electrospinning
- Nanoparticle synthesis
- Small animal handling
- Small animal Blood and organ collection
- Small animal Ex-vivo perfusion
- Small animal surgeries
- Western Blot
- Immunohistochemistry
- Immunofluorescence and confocal imaging
- RNA & DNA Extraction,PCR, RTPCR
- Plasmid isolation and Protein Purification

## EDUCATION HISTORY

**Master of Technology** 2018-2020
**Medical Nanotechnology**

SASTRA deemed to be University, Thanjavur.
Cumulative Grade Point Average (CGPA)-7.5

**Bachelor of Technology** 2014-2018
**Biotechnology Specialization in Cancer Biotechnology**

B. S. Abdur Rahman Crescent Institute of Science and Technology,
Vandalur, Chennai.
Cumulative Grade Point Average (CGPA)-8.88

**Sri Vishwa Vidyalaya Mat Hr. sec. school, Chennai,**
**Higher Secondary School** 2014
Higher secondary examination percentage- 86.9%

**Sri Vishwa Vidyalaya Mat Hr. sec. school, Chennai,**
**Secondary School** 2012
Secondary school leaving certificate examination percentage- 92.6%

## WORK EXPERIENCE

**Senior Research Fellow**

**09' 2022- Present**

ICMR funded project ,ITR category (Innovation and Translational Research).

ILBS,New Delhi.

**Junior Research Fellow**
**2020- 2022**

DST - ASEAN funded project

Institute of Liver and Biliary Sciences (ILBS),New Delhi.

## ACHIEVEMENTS

- Selected for ICMR-SRF fellowship (2022) under the Innovation and translational research (ITR) category
- Summer research fellowship at "ICMR-National Institute of Immunohematology (Department of Hematogenetics)" by Indian Academy of science during the months of May-July 2019 under the guidance of Dr. Malay Mukherjee.
- Qualified GATE BT 2018 Examination

## PROJECTS

- Currently working on ICMR-funded project, '**To prepare ECM based Electrospun scaffolds for liver regeneration in acute injury models'** at the liver physiology lab, ILBS.
- Worked as JRF and completed a DST funded project entitled **"Development of Nanoengineered Liver Scaffold: A Novel Device for Ex-vivo Drug ScreeningApplications"** in ILBS.
- Worked on developing **liver-on-chip microfluidic devices with primary hepatocyte spheroids** in ILBS.
- Worked on a project entitled "**Radiation-induced fibrosis and epigenetic modifications involved in it"** during my Master's dissertation in Radiation Biology Laboratory at SASTRA.
- Summer Internship project on **"Screening Techniques for Thalassemia" at the National Institute of Immunohematology, Mumbai**
- Worked on a project entitled **"Isolation and Purification of Lectin from Pisum Sataivum and Vigna angularis"** during my Bachelor's dissertation at the Life science Research Laboratory, Crescent University, Chennai.
- Performed **"Purification of Flag-FOXP3 plasmid"** in Life science Research Laboratory at Crescent university, Chennai.

## PUBLICATIONS

1. 'Evolution of Electrospinning in Liver Tissue Engineering' **Vasudevan, A.,** Tripathi, D. M., Sundarrajan, S., Venugopal, J. R., Ramakrishna, S., & Kaur, S. (2022). Evolution of Electrospinning in Liver Tissue Engineering. Biomimetics, 7(4), 149.https://doi.org/10.3390/biomimetics7040149. I.F (3.74) **Citations= 6**

2.Kaur S, Kaur I, Rawal P, Tripathi DM, **Vasudevan A**. Non-matrigel scaffolds for organoid cultures. Cancer Lett. 2021;504:58-66.

http://dx.doi.org/10.1016/j.canlet.2021.01.025. I.F (9.7) **Citations= 29**

3.Primary Hepatocyte Isolation and Cultures: Technical Aspects, Challenges and Advancements. Kaur I , **Vasudevan A,** Kaur S, Rawal P, Tripathi DM, January 2023, Bioengineering10(2):131. 10.3390/bioengineering10020131. I.F (5) **Citations=**

4. Chemically Modified Dipeptide Based Hydrogel Supports Three-Dimensional Growth and Functions of Primary Hepatocytes. S Biswas, **Vasudevan A,** N Yadav, P Rawal, I Kaur, Tripathi DM, Kaur S. August 2022. ACS Applied Bio Materials. DOI: 10.1021/acsabm.2c00526. I.F (3.25) **Citations= 2**

**5.** Mangifera indica and Mangifera zeylanica: Perspectives on medicinal properties, therapeutic applications and potential uses as anticancer epigenetic drugs. February 2022. DOI: 10.3892/ije.2022.10
I Selvakumar, **Vasudevan A,** P Nirmal. I.F (4.86) **Citations= 2**

**6.Ashwin V,** Nilotpal M and et al., **Liver Extracellular matrix-based Nanofiber scaffolds for the culture of primary hepatocytes and drug screening'** (Under Revision ACS Biomaterial science and engineering)

## CONFERENCE PRESENTATIONS

- Research work selected under the **'BAJPAI SAHA student award category' for paper presentation** under the title 'Fabrication of Extracellular matrix-based nano scaffolds to support functional hepatocytes' **Ashwini Vasudevan**, Indu Sharma, Impreet Kaur, Sourabh Ghosh, Jayram Reddy, Subramanian Sundarrajan, Seeram Ramakrishna, Dinesh M Tripathi, Savneet Kaur. at the 'International SBOAI Biomaterial Conference **BIOREMEDI, Dec 2022- AT IIT-Guwahati.**

- Research work presented **as poster** at the European Association for the Study of the Liver **(EASL)** Under the title ' Liver Matrix-based Electrospun Nano scaffolds for Improved Viability and Functionality of Primary hepatocytes in Culture' **Ashwini Vasudevan**, Indu Sharma, Impreet Kaur, Sourabh Ghosh, Jayram Reddy, Seeram Ramakrishna, Shiv K Sarin, Dinesh M Tripathi, Savneet Kaur. **EASL, London, June, 2022**

- Research work selected **for the Young Investigator category,** at the European Association for the Study of the Liver **(EASL)** Under the title 'Skin-decellularized matrix-derived microgels accelerate 3D cultures of functional primary hepatocyte spheroids in vitro' **EASL, Vienna, Austria, 2023**

## REFERENCES

**Dr Savneet Kaur**
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Molecular and cellular medicine department,
Institute of Liver and Biliary Sciences
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**Dr. Neesar Ahmed**
Assistant Professor (sr. Gr.),
Department of Biotechnology, B.S.Abdur Rehman Institute of Scienceand Technology,
Vandalur, Chennai
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