Faculty Profile of Dr. S. Velayuthaprabhu

Dr. S. Velayuthaprabhu
Assistant Professor
Department of Biotechnology

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Research Area

- Reproductive Immunology
- Molecular Pathology
- Cell signaling

Education & Career

Education

Ph. D.
Subject : Biochemistry
Institution :Bharathidasan University
Affiliated University : Bharathidasan University
Year of Award : 2009

M. Sc.,
Subject: Biochemistry
Institution : MIET Arts College
Affiliated University : Bharathidasan University
Year of Award : 2001

Career

At Bharathiar University
Assistant Professor : 2016 to Till Date

Past Experience

1. **CSIR-Research Associate (CSIR-RA) (2013-2016)**
   Bharathidasan University.
2. **Guest-Lecturer (2012-2013)**
   Bharathidasan University
3. **Post Doctoral Fellow (2011-2012)**
   School of Medical Sciences, Chung Gung University, TAIWAN
4. **Post Doctoral Fellow (2010-2011)**
   Institute of Medical Science, Taipei Medical University, TAIWAN.
5. **CSIR- SRF (2008-2010)**
   Bharathidasan University
6. **Visiting Scientist(2008-2008)**
   Tokai University, School of Medicine, Tokyo, JAPAN
7. **Research Scholar(2003-2008)**
   Bharathidasan University

Awards

Travel Grants

Funding agency : DST and CSIR.
Name of conference : 4th Asian congress on Autoimmunity.
Paper presented(Oral/Poster) : Paper presentation.
Title of paper : Placental pathogenesis in pregnancy failure complicated by anticardiolipin antibodies.
Country : Singapore.
Date of Award : Sep. 11–13, 2009.

Academic Awards

- **INTERNATIONAL**
- **NATIONAL**

Award : MIF Fellow
Awarding agency : Matsumae International Foundation (MIF).
Purpose of award : Visiting Scientist.
Country : Japan.
Date of Award : May - Oct., 2008.

Award : Research Associate
Awarding agency : Council of Scientific & Industrial Research (CSIR).
Country : India.
Date of Award : 2013 – 2016.

Award : Senior Research Fellow
Awarding agency : Council of Scientific & Industrial Research (CSIR).
Country : India.
Date of Award : 2008 – 2010.

Membership

Professional Bodies

Organization :American Society for Reproductive immunology (ASRI), USA.
Type of Membership :Annual
Period :Since 2013

Organization : Society for Reproductive Biology and comparative Endocrinology (SRBCE), India.
Type of Membership :Annual
Period : Since 2002

Academic Bodies

Organization :Bharathiar University, Coimbatore, Tamil Nadu
Type of Membership :Member, Board of Studies in Biotechnology
Period :Since 2016

Organization :Bharathiar University, Coimbatore, Tamil Nadu
Type of Membership :University Representative, School of Distance Education Examination,
Period :Since 2016

Organization :Bharathiar University, Coimbatore, Tamil Nadu
Type of Membership :Member, Doctoral Committee Meeting
Period :Since 2016

Organization :Thiruvalluvar university, Vellore, Tamil Nadu
Type of Membership :Member, Question paper Setting
Period :Since 2016

Organization :Periyar University, Salem, Tamil Nadu
Type of Membership :Question paper Setter, Examiner for PG paper valuation
Period :Since 2016

Organization :Kamaraj University, Madurai, Tamil Nadu
Type of Membership :Member, Question paper Setting
Period :Since 2016

Organization :Bharathidasn University, Tiruchirappalli, Tamil Nadu
Type of Membership :Question paper Setter, Examiner for PG paper valuation
Period :Since 2016

Organization :Karunya institute of technology and science, Coimbatore, Tamil Nadu
Type of Membership :Member, Question paper Setting
Period :Since 2016

Organization :Tamilnadu Agricultural University, Coimbatore, Tamil Nadu
Type of Membership :Member in external expert for Mphil thesis evaluation for Biotechnology
Period :Since 2016

Organization : Karpagam Academy of Higher Education, Coimbatore, Tamil Nadu
Type of Membership :Question paper Setter, External Examiner for PG Practical and viva voce exam
Period :Since 2016

Visits

Country Visited : Singapore**.**
Duration of Visit : 3 days
Month and Year : September 11-13, 2009
Purpose of Visit : To attend 4th Asian Congress on Autoimmunity.

Country Visited : Taiwan.
Duration of Visit : 2 years
Month and Year :2010 - 2012
Purpose of Visit :Postdoc.

Country Visited : Japan.
Duration of Visit : 6 Months
Month and Year : May – Oct, 2008
Purpose of Visit : Visiting Scientist.

Collaborators

Others

Projects

Funded Projects(National level)

- Ongoing
- Completed-2

1.Tissue factor (TF)-mediated regulation of adhesion molecules and apoptosis of trophoblast in antiphospholipid syndrome (aps).

Principle Investigator:Dr. S. Velayuthaprabhu.
Funding Agency : SERB, India
Amount : 37.49 Lakhs.
Duration : 2018-2021

2.Production of chikungunya virus-like particles in nicotianabenthamiana transgenic plants for development of commercial diagnostic kit.

Principle Investigator:Dr. S. Velayuthaprabhu.
Funding Agency : RUSA 2.0 BEICH
Amount : 7 Lakhs.
Duration : 2019

Consultancy Projects

- Ongoing
- Completed

Research Guidance

- Post Doc.
- Ph.D.
- M.Phil.
- M.Sc.

Ongoing

Title

Name

Completed

Title

Name

Ongoing

Name of the candidate : Mallikarjun Gundappa (JRF - RUSA 2.0 BEICH)
Title of the Dissertation : Expression of adhesion molecules and tissue factor activation in trophoblast dysfunction and regulation.

Name of the candidate : Paranitharan N. (CSIR NET-JRF)
Title of the Dissertation : Association of Tissue factor and PAR2 axis in cervical cancer progression in women.

Name of the candidate : Priya M.
Title of the Dissertation : Role of Tissue Factor (TF) in Placental function.

Completed

Sample Data.

Ongoing

Sample Data.

Completed

Sample Data.

Ongoing

Name of the candidate : K Santhosh Kumar (2021 - 2023)
Title of the Dissertation :

Name of the candidate : Shivangi Kataria (2021 - 2023)
Title of the Dissertation :

Name of the candidate : Samyuktha J (2021 - 2023)
Title of the Dissertation :

Name of the candidate : Madhumitha T (2021 - 2023)
Title of the Dissertation :

Name of the candidate : Pradeepa S (2021 - 2023)
Title of the Dissertation :

Name of the candidate : Sneha Matheswaran (2021 - 2023)
Title of the Dissertation :

Name of the candidate : Nandana S Krishnan (2021 - 2023)
Title of the Dissertation :

Name of the candidate : Michael Antony Austin D (2022 - 2024)
Title of the Dissertation :

Name of the candidate : Swathi K (2022 - 2024)
Title of the Dissertation :

Name of the candidate : Keerthika T (2022 - 2024)
Title of the Dissertation :

Name of the candidate : Varshini P V (2022 - 2024)
Title of the Dissertation :

Name of the candidate : Samisha P (2022 - 2024)
Title of the Dissertation :

Name of the candidate : Gayathri J (2022 - 2024)
Title of the Dissertation :

Completed

Name of the candidate : Amrin A (2020 - 2022)
Title of the Dissertation : Tissue factor expression and their role in

integrin-α1 regulation in HTR-8/SVneo trophoblast cells with respect to invasion

Name of the candidate : Pavithra C (2020 - 2022)
Title of the Dissertation : Tissue factor and tissue factor-mediated Integrinβ3 (ITGβ3) regulation in Human trophoblast cell lines

Name of the candidate : Ramesh M (2020 - 2022) TNSCST Student Project (Award No: BS-331)
Title of the Dissertation : Detection of Tissue Factor expression in Endometrial Cancer: as a potential Biomarker for Endometrial Cancer detection

Name of the candidate : Dinesh Kumar R (2020 - 2022)
Title of the Dissertation : Role of TF-FVIIA Complex in Triple Negative Breast Cancer Progression and Migration

Name of the candidate : Pradnya Dehadrai (2020 - 2022)
Title of the Dissertation : TF-FVIIa complex in cellular apoptosis: an alternative pathway for cellular homeostasis in HTR-8/SVneo cell line

Name of the candidate : Bharath Kumar G (2019 - 2021)
Title of the Dissertation : Analysis of Tissue Factor and its influence in Integrin α1, α2 & β1 expression in Lung Cancer

Name of the candidate : Rahul Prasath M (2019 - 2021)
Title of the Dissertation : Tissue Factor (TF) and TF- mediated Integrins expression in HeLa cell line

Name of the candidate : Deepika R (2018 - 2020)
Title of the Dissertation : Role of tissue factor in cell proliferation and apoptosis in HeLa cell line

Name of the candidate : Aiswarya Rajan K (2018 - 2020)
Title of the Dissertation : Role of Tissue Factor in cell proliferation and apoptosis in HeLa cell line

Name of the candidate : Anish Fathima B (2018 - 2020)
Title of the Dissertation : Tissue Factor and Factor-VIIa complex on Trophoblast invasion in HTR-8/SVneo cells

Name of the candidate : Vishnu Prabhu A (2018 - 2020)
Title of the Dissertation : Identification of Toll Like Receptor and Tissue Factor in HTR-8/SVneo cells

Name of the candidate : Priya M (2017 - 2019) External : ICGEB, New Delhi
Title of the Dissertation : Genetic Transformation of maize (*Zea mays L.*) by particle bombardment using Shoot Apical Meristem

Name of the candidate : Indhumathi P (2017 - 2019) External : JNU, New Delhi
Title of the Dissertation : Molecular cloning, expression and purification of phosphatase protein from *Entamoeba histolytica*

Name of the candidate : Gayathri G (2017 - 2019) External : ICGEB, New Delhi
Title of the Dissertation : Genetic Transformation in two rice varieties (*Oryza Sativa L.*) by particle bombardment utilizing seed callus

Name of the candidate : Sriee Viswarubihiny A.S (2016 - 2018)
Title of the Dissertation : Optimization and screening for anticancer activity of piperidine based compounds by *in-vitro* analysis.

Name of the candidate : Gayathri T (2016 - 2018)
Title of the Dissertation : Optimization and screening for anticancer activity of piperidine based compounds on HeLa cell line.

Research Publication

- International
- National
- Patents
- Conferences
- Books / Chapters
- Database

1. Evaluation of anticardiolipin antibodies and antiphosphatidylserine antibodies in women with recurrent abortion.
   S. Velayuthaprabhu and G. Archunan.

Indian Journal of Medical Sciences, 59: 347-352, (2005).

2. Placental thrombosis in experimental anticardiolipin antibodies-mediated intrauterine fetal death.
   S. Velayuthaprabhu, G. Archunan and K. Balakrishnan.
   American Journal of Reproductive Immunology, 57: 270-276, (2007).

3. Antihyperlipidemic effect of gymnemamontanum: a study on lipid profile and fattyacid composition in experimental diabetes.
   KM Ramkumar, RSVijayakumar, P Ponmanickam, **S. Velayuthaprabhu,** G. Archunan, P Rajaguru.
   *Basic clinical pharmacology and Toxicolog*y, 103: 538–545, (2008).

4. Protective effect of gymnemamontanum against renal damage in experimental diabetic rats.
   KM Ramkumar, P Ponmanickam, **S. Velayuthaprabhu,** G. Archunan, P Rajaguru.
   Food and Chemical Toxicology. 47: 2516-2521, (2009).

5. Biochemical evaluation in human saliva with special reference to ovulation detection.
   S. Alagendran, G. Archunan, **S. Velayuthaprabhu**, B. Enrique-A Orozco, RG Guzman.
   *Indian Journal of Dental Resear*ch, 21: 165-8, (2010).

6. A unique preliminary study on fetal resorption and placental apoptosis in mice with passive immunization of anti-phosphatidylethanolamine antibodies and anti-factor XII antibodies.
   S. Velayuthaprabhu, H Matsubayashi, T Sugi, M Nakamura, Y Ohnishi, T Ogura, H Hirata, Y Fujita, H Tsukamoto,TTomiyama, G. Archunan.
   American Journal of Reproductive Immunology, 66: 373-384. (2011).

7. Expression of apoptosis in placenta of experimental antiphospholipid syndrome (APS) mouse.
   S Velayuthaprabhu, H Matsubayashi, T Sugi, M Nakamura, Y Ohnishi, T Ogura, G Archunan.
   American Journal of Reproductive Immunology, 69(5):486-94 (2013).

8. Chemical characterization of volatiles cue in women saliva.
   S. Alagendran, M. Samuthirapandi, S. Velayuthaprabhu, G. Archunan, G Fernandez, R G Guzman, P Servarino Perez.
   *European Journal of Biomedical and Pharmaceutical Science*s, 3(4): 371-376.

(2016).

9. Gas chromatographic monitoring and quantification of the estrus-specific pheromone compounds in female murrah buffalo urine.
   S. Muniasamy, **S Velayuthaprabhu**, G.Archunan.
   Journal of Agriculture and Veterinary Science.9(6): 52-59. (2016).

10. Beta-2 GPI induced tissue factor and placental apoptosis for the pathophysiology of pregnancy loss in antiphospholipid syndrome.
    S.Velayuthaprabhu, H Matsubayashi, G. Archunan.
    International Journal of Research in Medical Sciences. 4(8): 3109 - 3113. (2016).

11. Relationship between fetal loss and serum gonadal hormones level in experimental antiphospholipid syndrome mouse.
    S. Velayuthaprabhu, A Chinnathambi, Sulaiman Ali Alharbi, H Matsubayashi, G.Archunan.
    Indian Journal of Clinical Biochemistry, 32 (3): 347 - 352. (2017).

12. Protective effect of terminaliacatappa leaves and terminaliachebula fruits on the enzymatic and non-enzymatic anti-oxidant levels in the doxorubicin induced toxicity rats.
    P.Punniyakotti, RL.Rengarajan, **S.Velayuthaprabhu**, K. Vijayakumar, R. Manikandan,A. VijayaAnand.
    *Pharmacognosy Journa*l. 11(2):346-349. (2019).

13. In vitro Anti-oxidant Activity of Various Extracts of Terminalia catappa leaves and Terminalia chebula fruits.
    Punniyakotti P, Vijaya Anand A, Subarani S, **S. Velayuthaprabhu**.
    Journal of Biological and Chemical Research. 36 (1): 151-156. (2019).

14. Role of vitamin D3 on apoptosis and inflammatory-associated gene in colorectal cancer: an *in vitro* approach.
    EV. Jisha, **S.Velayuthaprabhu**, RL.Rengarajan, M. Arun, A. VijayaAnand, Fahad A. Al-Misned, Hamed A. El-Serehy
    Journal of King Saud University – Science. 32 (6): 786-2789. (2020).

15. Anti-diabetic and hypolipidemic effects of *cinnamon cassia* bark extracts: an *in vitro*, *in vivo*, and *in silico* approach.
    K. Vijayakumar, B. Prasanna, R. L. Rengarajan, A. Rathinam, **S.**

Velayuthaprabhu, A. VijayaAnand.
Archives of Physiology and Biochemistry, (2020).

16. Acute toxicity and dose fixation of the ethanolic leaf extract of *psidiumguajava*.
R. Manikandan,A. VijayaAnand**,** RL.Rengarajan, **S.Velayuthaprabhu**, V. Bharathi.
*Journal of Natural Remedie*s. 21(4-S2):61-65. (2020).

17. Sars-cov-2 / covid-19 pandemic – an update.
S. Ramya, T. Sangeetha, F. Zareena, Y. M. Iqbal, T. Ruchi, KP. Megha, J. Dhama, R. Chandra, M. Yashpal Singh, K. Dhama, R. Sah, W.Chaicumpa, **S. Velayuthaprabhu**, A. VijayaAnand.
Journal of Experimental Biology and Agricultural Sciences. 8 (Spl-1-SARS-CoV-2): S219-S245. (2020).

18. Medicinal plants, phytochemicals, and herbs to combat viral pathogens including sars-cov-2.
A. VijayaAnandB. Balamuralikrishnan, M. Kaviya, K. Bharathi,A. Parithathvi, M. Arun, N. Senthilkumar, **S. Velayuthaprabhu**, M. Saradhadevi, NA. Al-Dhabi, MV. Arasu, MI.Yatoo, R. Tiwari, K. Dhama.
Molecules. 26(6):1775. (2021)

19. Acute toxicity studies and protective effects of *cinnamon cassia* bark extract in streptozotocin-induced diabetic rats.
K. Vijayakumar, RL. Rengarajan, S. Suganthy, B. Prasanna, **S. Velayuthaprabhu**,M. Shenbagam, A. VijayaAnand.
Drug and Chemical Toxicology. (2021).

20. Microbiological evaluation and antibiotic susceptibility pattern of bacterial isolates associated with some contaminated edible fruits and vegetables.
G. Mallikarjun, C. Prabhurajeshwar, Sarfaraz Ahmed, H.M. Navya, M. Vijayasarathy, **S. Velayuthaprabhu.**
Indian Journal of Agricultural Research. A-5681, (2021).

21. A literature survey on the biomarkers of cardiovascular disease.
R. Pavithra, T. Sangeetha, **S. Velayuthaprabhu**, A. VijayaAnand.
International Journal of Academic Medicine. 7. 141-149. (2021).

22. Therapeutic effects of vitamin D and cancer: An overview.
Jisha EV, Balasubramanian B, **Velayuthaprabhu S,** Rengarajan RL, Arun M, Vijaya Anand A, Thirunavukkarasu V, Murugesh E, Manikandan P (2021)

Food Frontiers. doi.org/10.1002/fft2.97(2021)

23. Bradykinin, as a Reprogramming Factor, Induces Transdifferentiation of Brain Astrocytes into Neuron-like Cells.
song-Hai Lee, Pei-Shan Liu, Su-Jane Wang, Ming-Ming Tsai, **Velayuthaprabhu Shanmugam** and Hsi-Lung Hsieh
Biomedicines. (2021)

24. A review on the pharmacological properties of Evolvulus alsinoides (Linn).
Bharathi Kathirvel, Syed I. Kalibulla, **Velayuthaprabhu Shanmugam** and Vijaya A. Arumugam,
Journal of Indian System of Medicine. 9:153-60. (2021)

25. Characterization and phytoconstituents of Petroselinum crispum (Mill) and Coriandrum sativum (Linn) and their impacts on inflammation - An in vitro analysis against human adenocarcinoma cells with molecular docking.
Sangeetha Thangavelu, Balamuralikrishnan Balasubramanian, Sampathkumar Palanisamy, **Velayuthaprabhu Shanmugam**, Senthilkumar Natchiappane, Syed Ibrahim Kalibullaf, Baskaran Rathinasamyg, Vijaya Anand Arumugam and Hsi-Lung Hsieh
South African Journal of Botany. 146: 776 -788.(2022)

26. Expression of tissue factor and TF-mediated integrin regulation in HTR-8/SVneo trophoblast cells
Mallikarjun Gundappa, Vijaya Anand Arumugam, Hsi-Lung Hsieh, Balamuralikrishnan Balasubramanian, **Velayuthaprabhu Shanmugam**
Journal of Reproductive Immunology. 150.(2022)

27. Cardio-protective effects of terminalia catappa leaves and terminalia chebula fruit extract in doxorubicin-induced cardiomyopathy in rats
Ramasamy Manikandan, Balamuralikrishnan Balasubramanian, Panneerselvam Punniyakotti, Arumugam Vijaya Anand, Arun Meyyazhagan, **Shanmugam Velayuthaprabhu**, Rengasamy Lakshminarayanan Rengarajan, Utthapon Issara & Wen-Chao Liu
Biomarkers. 27. 488-495. (2022)

28. Efficiency of Coriandrum sativum (Linn.) and Petroselinum crispum (Mill.) in Enhancing Iron Absorption: An In Silico and In Vitro Approach.
T. Sangeetha, K. Syed Ibrahim, S. Deepa, B. Balamuralikrishnan, M. Arun, **S. Velayuthaprabhu**, K. M. Saradhadevi, A. Vijaya Anand
Evidence-Based Complementary and Alternative Medicine.(2022)

29. Brain Protective Effect of Resveratrol via Ameliorating Interleukin-1β-Induced MMP-9-Mediated Disruption of ZO-1 Arranged Integrity
    Tsai, Ming-Ming, Jiun-Liang Chen, Tsong-Hai Lee, Hsiuming Liu, **Velayuthaprabhu Shanmugam**, and Hsi-Lung Hsieh
    *Biomedicines***.** (2022)

30. Pluripotent Stem Cells – Potential Uses in the Pharmaceutical Field
    A. Ireen Femeela, A. Revathy, **S. Velayuthaprabhu**, A. Vijaya Anand1, P. Sampathkumar and S. Balakumar
    International Journal of Human Genetics. 22. 164-172.(2022)

1. 4th Asian Congress on Autoimmunity, 11-13th Sep. 2009, SINGAPORE,
   Placental pathogenesis in pregnancy failure complicated by anticardiolipin antibodies - Velayuthaprabhu, Matsubayashi & Archunan

2. National symposium on current trends in Biotechnology, 22nd February 2007,
   St, Michael College of Engineering, Kalayarkoil, Tamil Nadu, INDIA.
   Molecular pathogenesis for autoimmune regulating fetal demise: an experimental approach - Velayuthaprabhu, Nithya and Archunan

3. National symposium on Frontiers in Biotechnology, 8-9th February 2007, Bharathiar University, Tamil Nadu, INDIA
   Efficacy of beta2 GPI and CL complex in the induction of experimental Antiphospholipid syndrome - Velayuthaprabhu

4. National Symposium on Reproductive Biology and Comparative Endocrinology, 7-9th January 2002,
   Bharathiadasan University, INDIA,
   Hormonal and Biochemical analysis of blood samples in Dysfunctional Uterine Bleeding cases - Velayuthaprabhu & Archunan

5. National Conference on Frontiers in Biotechnology, July 21-23, 2003,
   JJ College of Arts and Science, Pudukkottai
   INDIA, Prevalence and assessment of antiphospholipid antibodies in recurrent Spontaneous abortion - Velayuthaprabhu & Archunan

1. Autoimmune antiphospholipid antibody syndrome in pregnancy complications.
   S. Velayuthaprabhu, G. Archunan.
   Disease and theranostics: Biotechnology.
   Studium Press LLC, USA. Pp.487 – 508, (2014).
   ISBN: 1-62699-015-8.

2. Bioactive compounds of guava (*psidiumguajava* l.).
   A.VijayaAnand, **S. Velayuthaprabhu,** RL. Rengarajan, P. Sampathkumar, R. Radhakrishnan.
   Bioactive compounds in underutilized fruits and nuts Reference: Series in Phytochemistry.
   Springer, Cham. (2020).
   ISBN: 978-3-030-06120-3.

3. The role of microbes in the food industry.
   KM. Saradhadevi, **S.Velayuthaprabhu**, P. Arjun, G. Mallikarjun, M. Ravi.
   Beneficial and non-beneficial microbial biodiversity.
   Cambridge Scholars Publishing. (2020).
   ISBN (13): 978-1-5275-4818-3.

4. Perspectives of Metals and Metal Oxide Nanoparticles for Antimicrobial Consequence – An Overview
   R. L. Rengarajan, A. Rathinam, N. Suganthy, B. Balamuralikrishnan, A. Vijaya Anand & **S.Velayuthaprabhu**
   Emerging Nanomaterials for Advanced Technologies
   Springer, Cham. 397–418 (2022).
   ISBN (13): 978-3-030-80371-1.

5. Neuroendocrinology of Fishes.
   Swetha M. Menon, Kruthi Ashok Kumar, Manikandan Ramasamy, Vijaya Anand Arumugam, Rengasamy Lakshminarayanan Rengarajan, Balamuralikrishnan Balasubramanian, Wen-Chao Liu & **S.Velayuthaprabhu**
   Aquaculture Science and Engineering.
   Springer, Singapore. pp 209–234(2022).
   ISBN (13): 978-981-19-0817-0.

6. The Different and Basic Functions of Organ Systems of Fishes.
   Kruthi Ashok Kumar, Swetha M. Menon, Manikandan Ramasamy, Ponmanickam Ponnirul, Balamuralikrishnan Balasubramanian, Wen-Chao Liu, Vijaya Anand Arumugam & **Velayuthaprabhu Shanmugam**

Aquaculture Science and Engineering.
Springer, Singapore. pp 255–274(2022).
ISBN (13): 978-981-19-0817-0.

Alumini Reflections: