LIST OF PUBLICATIONS

Research Index Profiles
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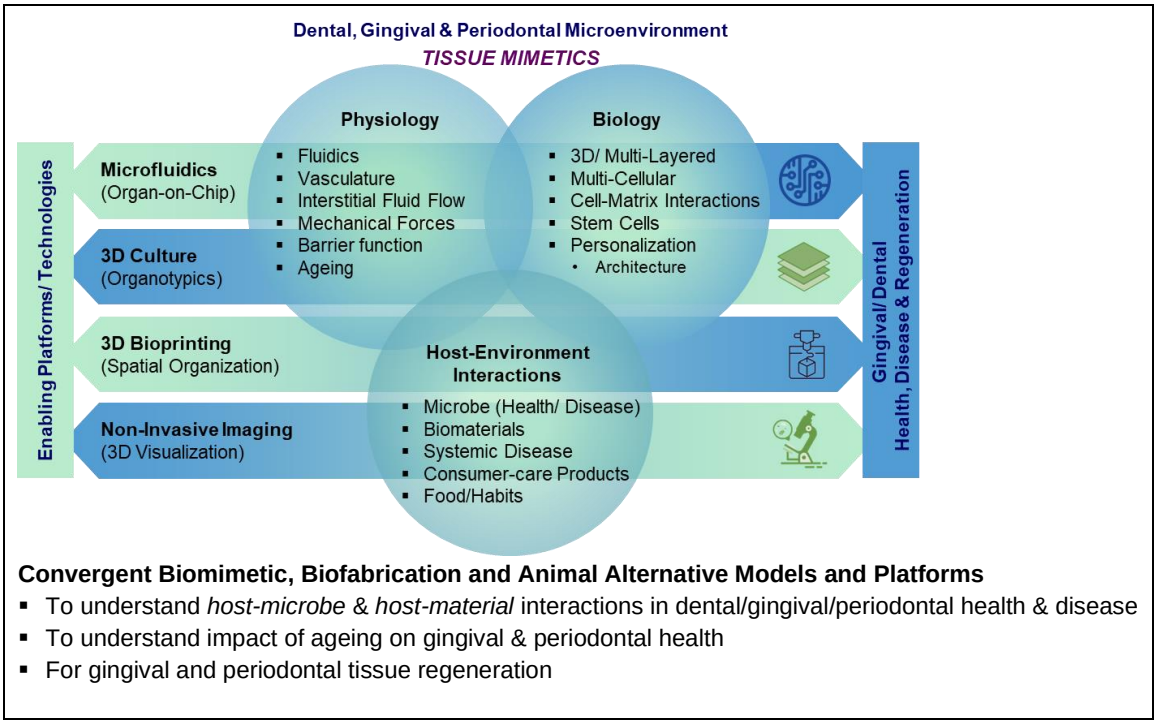
RESEARCH FOCUS



Convergent Biomimetic, Biofabrication and Animal Alternative Models and Platforms

- To understand *host-microbe* & *host-material* interactions in dental/gingival/periodontal health & disease
- To understand impact of ageing on gingival & periodontal health
- For gingival and periodontal tissue regeneration

PUBLICATIONS (Based on Research Area)

(*Corresponding Author)

Domains

OoC : organ-on-chip, lab-on-chip, microfluidics, microfabrication
3DP : 3D printing, bioprinting
HM : Host-Material/ Host-Microbe interactions in dental/oral/periodontal research
TE : tissue engineering, tissue regeneration, biofabrication, 3D culture, tissue-in-dish, disease-in-dish
SC : stem cells
Ang : angiogenesis
DENT : oral pathology, forensic odontology, clinical dentistry-related

Manuscript details	Domain
1. Muniraj G, Tan RHS, Dai Y, Wu R, Alberti M, ***Sriram G**. **Microphysiological Modeling of Gingival Tissues and Host-Material Interactions Using Gingiva-on-Chip**. Advanced Healthcare Materials 2023; e2301472.	OoC, HM, TE
2. Mishra A, Kai R, Atkuru S, Dai Y, Piccinini F, Preshaw PM, ***Sriram G**. **Fluid flow-induced modulation of viability and osteodifferentiation of periodontal ligament stem cell spheroids-on-chip**. Biomater Sci 2023.	OoC, SC, TE
3. Makkar H, Lim CT, Tan KS, **Sriram G***. ***Modeling periodontal host-microbe interactions using vascularized gingival connective tissue equivalents***. ***Biofabrication*** 2023, 15(4), 045008.	HM, TE
4. Makkar H, Zhou Y, Tan KS, Lim CT, ***Sriram G**. **Modeling Crevicular Fluid Flow and Host-Oral Microbiome Interactions in a Gingival Crevice-on-Chip**. Adv Healthc Mater. 2023 Jan;12(6):e2202376.	OoC, HM, TE
5. Dhillon IK*, Hong CHL*, Hu S, Sim YF, Goh BKC, Duggal MS, ***Sriram G**. **Accuracy of the American Association of Endodontists diagnostic criteria for assessing pulp health in primary teeth**. Clin Oral Invest 2023 Epub ahead of print	DENT
6. Chew RJJ, Goh CE, ***Sriram G***, Preshaw PM, Tan KS*. **Microbial biomarkers as a predictor of periodontal treatment response: A systematic review**. J Periodontal Res. 2023 Epub ahead of print	DENT, HM

7.	Neupane YR, Handral HK, Alkaff SA, Chng WH, Venkatesan G, Huang C, Lee CK, Wang JW, ***Sriram G***, Dienzo RA, Lu WF. **Cell-derived nanovesicles from mesenchymal stem cells as extracellular vesicle-mimetics in wound healing**. Acta Pharmaceutica Sinica B. 2022	SC, TE
8.	Hu S, Muniraj G, Mishra A, Hong K, Lum JL, Hong CHL, Rosa V, ***Sriram G****. **Characterization of silver diamine fluoride cytotoxicity using microfluidic tooth-on-a-chip and gingival equivalents**. Dent Mater. 2022;38(8):1385-1394.	OoC, HM,TE
9.	Makkar H, Atkuru S, Tang YL, Sethi T, Lim CT, Tan KS, ***Sriram G****. **Differential immune responses of 3D gingival and periodontal connective tissue equivalents to microbial colonization**. J Tissue Eng. 2022;29; 13:20417314221111650.	HM, TE
10.	Rosa V, ***Sriram G***, McDonald N, Cavalcanti BN. **A critical analysis of research methods and biological experimental models to study pulp regeneration**. Int Endod J. 2022;55 Suppl 2:446-455.	HM, OoC, TE
11.	Handral HK, Natu VP, Cao T, Fuh JYH, ***Sriram G****, Lu WF*. **Emerging trends and prospects of electroconductive bioinks for cell-laden and functional 3D bioprinting**. Bio-Design Manufacturing 2022; 5(2), 396-411	3DP, TE
12.	*Lee M, Kannan S, Muniraj M, Rosa V, Lu WF, Fuh JYH,* ***Sriram G****, Cao T**. **Two-photon fluorescence microscopy and applications in angiogenesis and related molecular events**. Tissue Eng Part B 2022; 28 (4), 926-937	Ang, TE
13.	*Muthusamy S, Kannan S, Lee M, Sanjairaj V, Lu WF, Fuh JYH,* ***Sriram G****, Cao T**. **3D bioprinting and microscale organization of vascularized tissue constructs using collagen-based bioink**. Biotechnol Bioeng. 2021 Aug;118(8):3150-3163.	3DP, TE, Ang
14.	*Kannan S, Lee M, Muthusamy S, Blasiak A,* ***Sriram G****, Cao T**. **Peripheral sensory neurons promote angiogenesis in neurovascular models derived from hESCs**. Stem Cell Res 2021; 52:102231.	SC
15.	*Handral HK, Ashajyothi C,* ***Sriram G****, Kelmani CR, Dubey N, Cao T.* **Cytotoxicity and genotoxicity of metal oxide nanoparticles in human pluripotent stem cell-derived fibroblasts**. Coatings 2021; 11,107.	SC
16.	*Atkuru S, Muniraj G, Sudhaharan T, Chiam KH, Wright GD,* ***Sriram G****. **Cellular ageing of oral fibroblasts differentially modulates extracellular matrix organization**. *J Periodontal Res* 2021; 56:108-120.	TE
17.	***Sriram G****, Handral HK, Gan SU, Islam I, Rufaihah AJ, Cao T*. **Fabrication of vascularized tissue constructs under chemically defined culture conditions.** *Biofabrication* 2020; 12(4):045015.	TE, Ang, SC
18.	***Sriram G****, Sudhaharan T, Wright GD*. **Multiphoton microscopy for noninvasive and label-free imaging of human skin and oral mucosa equivalents**. *Methods Mol Biol* 2020; 2150:195-212.	TE
19.	*Vijayavenkataraman S*, Kannan S, Cao T, Fuh JYH,* ***Sriram G****, Lu WF**. **3D-Printed PCL/PPy Conductive Scaffolds as Three-Dimensional Porous Nerve Guide Conduits (NGCs) for Peripheral Nerve Injury Repair**. *Front Bioeng Biotechnol* 2019, 7:266.	3DP, TE
20.	***Sriram G****, Bigliardi PL, Bigliardi-Qi M*. **Full-thickness human skin equivalent models of atopic dermatitis**. *Methods Mol Biol* 2019;1879:367-383.	TE
21.	***Sriram G****, Alberti M*, Dancik Y, Wu B, Wu R, Zhaou F, Ramasamy S, Bigliardi P*, Bigliardi-Qi M*, Wang ZP**. **Full thickness human skin-on-chip with enhanced epidermal morphogenesis and barrier function**. *Materials Today* 2018, 21(4), 326-40.	OoC, TE
22.	*Vijayavenkataraman S*, Zhang S, Thaharah S,* ***Sriram G****, Lu WF, Fuh JYH**. **Electrohydrodynamic Jet 3D Printed Nerve Guide Conduits (NGCs) for peripheral Nerve Injury Repair.** *Polymers* 2018, 10(7),753.	3DP, TE
23.	*Dancik Y*,* ***Sriram G****, Rout B, Yu Z, Bigliardi-Qi M, Bigliardi PL**. **Physical and compositional analysis of differently cultured 3D human skin equivalents by confocal Raman spectroscopy**. *Analyst* 2018, 143, 1065-76. (Equal contribution)	TE
24.	*Leong C, Bigliardi PL,* ***Sriram G****, Veonice B, Connolly JE, Bigliardi-Qi M**. **Physiological Doses of Red Light Induce IL-4 Release in Cocultures between Human Keratinocytes and Immune Cells**. *PhotoChem PhotoBiol* 2018, 94(1), 150-157.	TE
25.	*Alberti M, Dancik Y*,* ***Sriram G****, Wu B, Teo YL, Feng Z, Bigliardi-Qi M, Wu RQ, Wang ZP*, Bigliardi PL**. **Multi-chamber microfluidic platform for high precision skin permeation testing**. *Lab-on-Chip* 2017, 17, 1625-1634. (Equal contribution)	OoC, TE
26.	*Zhu Q, Li M, Yan C, Lu Q, Wei S, Gao R, Yu M, Zou Y,* ***Sriram G****, Tong HJ, Hunziker W, Seneviratne CJ, Gong Z, Olsen BR, Cao T**. **Directed differentiation of Human Embryonic Stem Cells to Neural Crest Stem Cells, Functional Peripheral Neurons, and Corneal Keratocytes**. *Biotechnol J* 2017, 12, 1700067.	TE, SC
27.	*Wu Y,* ***Sriram G****, Fawzy AS, Fuh JYH*, Rosa V, Cao T*, Wong YS*. **Fabrication and evaluation of electrohydrodynamic jet 3D printed polycaprolactone/ chitosan cell carriers using human embryonic stem cell-derived fibroblasts**. *J Biomater Appl* 2016, 31(2):181-92.	3DP, TE

28. *Toh PPC, Bigliardi-Qi M*, Yap AMY,* ***Sriram G****, Stelmashenko O, Bigliardi PL**. **Expression of peropsin in human skin is related to phototransduction of violet light in keratinocytes**. *Exp Dermatol* 2016;25(12):1002-1005.	TE
29. ***Sriram G****, Dykas MM, Ramasamy S, Poddar K, Krishnan-Kutty V, Patra A, Venkatesan T, Bigliardi MQ, Bigliardi PL*. **Reconstructing human skin equivalents on fibrin-based dermal matrix**. *Mater Today* 2016; 19(3):178-179. (*Cover page featured article*)	TE
30. ***Sriram G*****, Cao T**. "**Human pluripotent stem cell derived vascular cells - *in vitro* model for angiogenesis and drug discovery**" in Stem cells: From Drug to Drug Discovery, Edited by Haider KH, De Gruyter Open Ltd.	SC, TE
31. *Handral HK,* ***Sriram G****, Cao T**. "**Stem cells: A potential source for high throughput screening in toxicology**". In *Stem Cells in Toxicology and Medicine*, Edited by Sahu C. Saura, John Wiley & Sons, Chichester, UK.	SC, TE
32. *Islam I*,* ***Sriram G****, Li MM, Zou Y, LI L, Handral HK, Rosa V, Cao T*. ***In vitro*** **Osteogenic Potential of Green Fluorescent Protein Labelled Human Embryonic Stem Cell-derived Osteoprogenitors**. *Stem Cells Int* 2016; 2016:1659275.	SC, TE
33. ***Sriram G****, Natu VP, Islam I, Seneviratne CJ, Tan KS, Cao T**. **Innate immune response of human embryonic stem cell derived-fibroblasts and mesenchymal stem cells to periodontopathogens**. *Stem Cells Int* 2016; 2016:8905365.	SC, TE
34. *Handral HK, Tong HJ, Islam I,* ***Sriram G****, Rosa V, Cao T**. **Pluripotent stem cells: an *in vitro* model for nanotoxicity assessments**. *J Appl Toxicol* 2016;36(10):1250-8.	SC, TE
35. ***Sriram G****, Bigliardi PL, Bigliardi-Qi M**. **Fibroblast heterogeneity and its implications for engineering skin substitutes in vitro**. *Eur J Cell Biol* 2015;94 (11),483-512.	TE
36. ***Sriram G****, Tan JY, Islam I, Rufaihah AJ, Cao T**. **Efficient differentiation of human embryonic stem cells to arterial and venous endothelial cells under feeder- and serum-free conditions**. *Stem Cell Res Ther* 2015; 6:261.	SC, TE
37. *Saminathan A,* ***Sriram G****, Vinoth JK, Cao T, Meikle MC**. **Engineering the periodontal ligament in hyaluronan–gelatin–type I collagen constructs: upregulation of apoptosis and alterations in gene expression by cyclic compressive strain**. *Tissue Eng Part A* 2015;21(3-4):518-529.	SC, TE
38. *Jaitley S,* ***Gopu S****, Rajasekharan ST, Sivapathasundaram B*. **Immunohistochemical analysis of Langerhans cells in chronic gingivitis using anti-CD1a antibody**. *Dent Res J (Isfahan)* 2014;11(2):173-179.	DENT
39. *Tan JY,* ***Sriram G****, Rufaihah AJ, Neoh KG, Cao T**. **Efficient derivation of lateral plate and paraxial mesoderm subtypes from human embryonic stem cells through GSKi-mediated differentiation**. *Stem Cells Dev* 2013; 22(13):1893-1906.	SC, TE, Ang
40. *Donald PM, George R,* ***Sriram G****, Kavitha B, Sivapathasundharam B*. **Hormonal changes in exfoliated normal buccal mucosal cells**. *J Cytol* 2013;30(4):252-6.	DENT
41. *Jaitley S,* ***Gopu S****, Rajasekharan ST, Sivapathasundaram B*. **Immunohistochemical analysis of Langerhans cells in chronic gingivitis using anti-CD1a antibody**. *Dent Res J (Isfahan)* 2014;11(2):173-179.	DENT
42. *Donald PM, George R,* ***Sriram G****, Kavitha B, Sivapathasundharam B*. **Hormonal changes in exfoliated normal buccal mucosal cells**. *J Cytol* 2013;30(4):252-6.	DENT
43. *Reddy DS*, Sivapathasundharam B, Saraswathi TR,* ***Sriram G***. **Evaluation of mast cells, eosinophils, blood capillaries in oral lichen planus and oral lichenoid mucositis**. *Indian J Dent Res* 2012;23(5):695-6.	DENT
44. *Nayak S*, Kavitha B,* ***Sriram G****, Saraswathi TR, Sivapathasundharam B, Dorothy AL*. **Comparative study of Candida by conventional and CHROMagar method in non-denture and denture wearers by oral rinse technique**. *Indian J Dent Res* 2012;23(4):490-7.	DENT
45. *Sathyakumar M*,* ***Sriram G****, Saraswathi T, Sivapathasundharam B*. **Immunohistochemical evaluation of mast cells and vascular endothelial proliferation in oral precancerous lesion-leukoplakia**. *J Oral Maxillofac Pathol* 2012;16(3):343-8.	DENT
46. *Reddy VS*,* ***Sriram G****, Saraswathi TR, Sivapathasundharam B*. **Isolation of epithelial cells from tooth brush and gender identification by amplification of SRY gene**. *J Forensic Dent Sci* 2011;3(1):27-32.	DENT
47. *Sabarinath B*,* ***Sriram G****, Saraswathi TR, Sivapathasundharam B*. **Immunohistochemical evaluation of mast cells and vascular endothelial proliferation in oral submucous fibrosis**. *Indian J Dent Res* 2011;22(1):116-121.	DENT
48. *Sharma B,* ***Sriram G****, Saraswathi TR, Sivapathasundharam B**. **Immunohistochemical evaluation of mast cells and angiogenesis in oral squamous cell carcinoma**. *Indian J Dent Res* 2010;21(2):260-265.	DENT

49. *George R,* ***Sriram G****, Saraswathi T, Sivapathasundharam B**. **Isolation of epithelial cells from acrylic removable dentures and gender identification by amplification of SRY gene using real time PCR**. *J Forensic Dent Sci* 2010;2(1):32-36.	DENT
50. *Manjunath K*, Saraswathi TR,* ***Sriram G****, Sivapathasundharam B, Porchelvam S*. **Reliability of automated biometrics in the analysis of enamel rod end patterns**. *J Forensic Dent Sci* 2009;1(1):32-36.	DENT
51. *Sivapathasundharam B*, Saraswathi TR, Manjunath K,* ***Sriram G***. **Rhinosporidiosis of parotid duct**. *Indian J Dent Res* 2009 Jul-Sep;20(3):388-9.	DENT
52. *Nag S*, Manjunath K,* ***Sriram G****, Sivapathasundharam B*. **Know this field (Mucous membrane pemphigoid)**. *J Oral Maxillofac Pathol* 2009;13(1); 9.	DENT
53. ***Sriram G*****, Shetty RP*. **Odontogenic tumours: a study of 250 cases in an Indian teaching hospital**. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2008, 105 (6);e14-e21.	DENT
54. *Manjunath K,* ***Sriram G****, Saraswathi TR, Sivapathasundharam B**. **Enamel rod end patterns: a preliminary study using acetate peel technique and automated biometrics**. ***J Forensic Odontol*** 2008;1:33-36.	DENT
55. *Kavitha B*,* ***Sriram G****, Saraswathi TR, Sivapathasundharam B*. **Know this field (Tumors with squamous islands)**. *J Oral Maxillofac Pathol* 2008;12 (2):60.	DENT
56. ***Sriram G****, *Saraswathi TR, Sivapathasundharam B*. **Know this field (Pleomorphic adenoma)**. *J Oral Maxillofac Pathol* 2008;12(1):22.	DENT
57. *Pritam Panja,* ***Sriram G****, Sivapathasundharam B**. **Comparison of three different methods of tissue processing**. *J Oral Maxillofac Pathol* 2007; 11(1):14-16.	DENT
58. *Rajkumar K*, Saraswathi TR,* ***Sriram G****, Sivapathasundharam B, Einstein A*. **Know this field (Giant cell (osteoclast) rich Osteosarcoma)**. *J Oral Maxillofac Pathol* 2007;11(2):51.	DENT
59. *Sivakumar G*,* ***Sriram G****, Kavitha B, Sachdeva LT, Sivapathasundharam B*. **Know this field (Orthokeratinized odontogenic cyst vs odontogenic keratocyst**. *J Oral Maxillofac Pathol* 2007;11(1):10.	DENT
60. ***Sriram G*****. **Tuberculous ulcer of tongue with oral complications of oral antituberculous therapy**. *Indian J Dent Res* 2006;17(4):202.	DENT
61. *Lavanya S,* ***Sriram G****, Sivapathasundharam B**. **Cytomorphometric analysis of palatal mucosal cells in reverse smoking**. ***J Oral Maxillofac Pathol*** 2006;10:69-75.	DENT