

# Anthal I P M Smits

## List of Publications by Year in descending order

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Version: 2024-02-01

49  
papers

1,673  
citations

304368

22  
h-index

301761

39  
g-index

56  
all docs

56  
docs citations

56  
times ranked

1663  
citing authors

#	ARTICLE	IF	CITATIONS
1	In situ heart valve tissue engineering using a bioresorbable elastomeric implant – From material design to 12 months follow-up in sheep. <i>Biomaterials</i> , 2017, 125, 101-117.	5.7	231
2	Biomaterial-driven in situ cardiovascular tissue engineering – a multi-disciplinary perspective. <i>Npj Regenerative Medicine</i> , 2017, 2, 18.	2.5	181
3	Tissue engineering of heart valves: advances and current challenges. <i>Expert Review of Medical Devices</i> , 2009, 6, 259-275.	1.4	126
4	Early in-situ cellularization of a supramolecular vascular graft is modified by synthetic stromal cell-derived factor-1 $\beta$ derived peptides. <i>Biomaterials</i> , 2016, 76, 187-195.	5.7	95
5	<i>In Situ</i> Tissue Engineering of Functional Small-Diameter Blood Vessels by Host Circulating Cells Only. <i>Tissue Engineering - Part A</i> , 2015, 21, 2583-2594.	1.6	92
6	Macrophage-Driven Biomaterial Degradation Depends on Scaffold Microarchitecture. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 87.	2.0	89
7	Modulation of macrophage phenotype and protein secretion via heparin-IL-4 functionalized supramolecular elastomers. <i>Acta Biomaterialia</i> , 2018, 71, 247-260.	4.1	65
8	Differential Response of Endothelial and Endothelial Colony Forming Cells on Electrospun Scaffolds with Distinct Microfiber Diameters. <i>Biomacromolecules</i> , 2014, 15, 821-829.	2.6	49
9	Decoupling the Effect of Shear Stress and Stretch on Tissue Growth and Remodeling in a Vascular Graft. <i>Tissue Engineering - Part C: Methods</i> , 2018, 24, 418-429.	1.1	48
10	Development of Non-Cell Adhesive Vascular Grafts Using Supramolecular Building Blocks. <i>Macromolecular Bioscience</i> , 2016, 16, 350-362.	2.1	47
11	Can We Grow Valves Inside the Heart? Perspective on Material-based In Situ Heart Valve Tissue Engineering. <i>Frontiers in Cardiovascular Medicine</i> , 2018, 5, 54.	1.1	45
12	Hemodynamic loads distinctively impact the secretory profile of biomaterial-activated macrophages – implications for <i>in situ</i> vascular tissue engineering. <i>Biomaterials Science</i> , 2020, 8, 132-147.	2.6	45
13	Layer-specific cell differentiation in bi-layered vascular grafts under flow perfusion. <i>Biofabrication</i> , 2020, 12, 015009.	3.7	43
14	Tissue engineering meets immunoengineering: Prospective on personalized in situ tissue engineering strategies. <i>Current Opinion in Biomedical Engineering</i> , 2018, 6, 17-26.	1.8	41
15	<i>In Situ</i> Remodeling Overrides Bioinspired Scaffold Architecture of Supramolecular Elastomeric Tissue-Engineered Heart Valves. <i>JACC Basic To Translational Science</i> , 2020, 5, 1187-1206.	1.9	38
16	Synergistic protein secretion by mesenchymal stromal cells seeded in 3D scaffolds and circulating leukocytes in physiological flow. <i>Biomaterials</i> , 2014, 35, 9100-9113.	5.7	36
17	Shear flow affects selective monocyte recruitment into MCP-1 loaded scaffolds. <i>Journal of Cellular and Molecular Medicine</i> , 2014, 18, 2176-2188.	1.6	35
18	Differential Leaflet Remodeling of Bone Marrow Cell Pre-Seeded Versus Nonseeded Bioresorbable Transcatheter Pulmonary Valve Replacements. <i>JACC Basic To Translational Science</i> , 2020, 5, 15-31.	1.9	32

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19	Ex vivo culture platform for assessment of cartilage repair treatment strategies. ALTEX: Alternatives To Animal Experimentation, 2017, 34, 267-277.	0.9	30
20	Immuno-regenerative biomaterials for in situ cardiovascular tissue engineering â€” Do patient characteristics warrant precision engineering?. Advanced Drug Delivery Reviews, 2021, 178, 113960.	6.6	29
21	The degradation and performance of electrospun supramolecular vascular scaffolds examined upon in vitro enzymatic exposure. Acta Biomaterialia, 2019, 92, 48-59.	4.1	25
22	Cyclic Strain Affects Macrophage Cytokine Secretion and Extracellular Matrix Turnover in Electrospun Scaffolds. Tissue Engineering - Part A, 2019, 25, 1310-1325.	1.6	25
23	Host Response and Neo-Tissue Development during Resorption of a Fast Degrading Supramolecular Electrospun Arterial Scaffold. Bioengineering, 2018, 5, 61.	1.6	24
24	Human In Vitro Model Mimicking Materialâ€”Driven Vascular Regeneration Reveals How Cyclic Stretch and Shear Stress Differentially Modulate Inflammation and Matrix Deposition. Advanced Biology, 2020, 4, e1900249.	3.0	23
25	A Mesofluidics-Based Test Platform for Systematic Development of Scaffolds for<i>In Situ</i> Cardiovascular Tissue Engineering. Tissue Engineering - Part C: Methods, 2012, 18, 475-485.	1.1	20
26	Sheep-Specific Immunohistochemical Panel for the Evaluation of Regenerative and Inflammatory Processes in Tissue-Engineered Heart Valves. Frontiers in Cardiovascular Medicine, 2018, 5, 105.	1.1	20
27	Inflammatory and regenerative processes in bioresorbable synthetic pulmonary valves up to two years in sheepâ€”Spatiotemporal insights augmented by Raman microspectroscopy. Acta Biomaterialia, 2021, 135, 243-259.	4.1	18
28	Optimization of Anti-kinking Designs for Vascular Grafts Based on Supramolecular Materials. Frontiers in Materials, 2020, 7, .	1.2	14
29	Probing Single-Cell Macrophage Polarization and Heterogeneity Using Thermo-Reversible Hydrogels in Droplet-Based Microfluidics. Frontiers in Bioengineering and Biotechnology, 2021, 9, 715408.	2.0	12
30	<i>In Situ</i> Tissue Engineering: Seducing the Body to Regenerate. Tissue Engineering - Part A, 2016, 22, 1061-1062.	1.6	11
31	Inconsistency in Graft Outcome of Bilayered Bioresorbable Supramolecular Arterial Scaffolds in Rats. Tissue Engineering - Part A, 2020, 27, 894-904.	1.6	11
32	Distinct Effects of Heparin and Interleukinâ€”4 Functionalization on Macrophage Polarization and In Situ Arterial Tissue Regeneration Using Resorbable Supramolecular Vascular Grafts in Rats. Advanced Healthcare Materials, 2021, 10, e2101103.	3.9	11
33	Then and now: hypes and hopes of regenerative medicine. Trends in Biotechnology, 2013, 31, 121-123.	4.9	10
34	Animal studies for the evaluation of in situ tissue-engineered vascular grafts â€” a systematic review, evidence map, and meta-analysis. Npj Regenerative Medicine, 2022, 7, 17.	2.5	10
35	Transcatheter-Delivered Expandable Bioresorbable Polymeric Graft With Stenting Capacity Induces Vascular Regeneration. JACC Basic To Translational Science, 2020, 5, 1095-1110.	1.9	8
36	A Multi-Cue Bioreactor to Evaluate the Inflammatory and Regenerative Capacity of Biomaterials under Flow and Stretch. Journal of Visualized Experiments, 2020, , .	0.2	6

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37	Imparting Immunomodulatory Activity to Scaffolds via Biotin-Avidin Interactions. ACS Biomaterials Science and Engineering, 2021, 7, 5611-5621.	2.6	5
38	Marker-Independent Monitoring of in vitro and in vivo Degradation of Supramolecular Polymers Applied in Cardiovascular in situ Tissue Engineering. Frontiers in Cardiovascular Medicine, 2022, 9, .	1.1	5
39	Donor Heterogeneity in the Human Macrophage Response to a Biomaterial Under Hyperglycemia <i>In Vitro</i>. Tissue Engineering - Part C: Methods, 2022, 28, 440-456.	1.1	4
40	Tissue-engineered heart valves. , 2019, , 123-176.		3
41	Elastin in Vascular Grafts. , 2019, , 1-32.		3
42	Vascular Tissue Engineering: Pathological Considerations, Mechanisms, and Translational Implications. , 2020, , 95-134.		2
43	Elastin in Vascular Grafts. , 2020, , 379-410.		2
44	Mechanisms of Calcification in Materials for Valvular and Vascular In Situ Tissue Engineering. European Journal of Vascular and Endovascular Surgery, 2022, 63, e44-e45.	0.8	1
45	Inflammatory and Regenerative Processes in Bioresorbable Synthetic Pulmonary Valves Up to 2 Years in Sheep: A Spatiotemporal Insights Augmented by Raman Microspectroscopy. SSRN Electronic Journal, 0, , .	0.4	0
46	Modulating the Inflammatory Response for In Situ Tissue Engineering - The Role of MCP-1. , 2012, , .		0
47	3D Engineered Micro-Tissue Models to Study Cardiovascular (Patho)biology and Regeneration. , 2012, , .		0
48	Il-4 functionalized 2D and 3D structures based on supramolecular interactions for in-situ vascular regeneration. Frontiers in Bioengineering and Biotechnology, 0, 4, .	2.0	0
49	The Degradation and Performance of Electrospun Supramolecular Vascular Scaffolds Examined Upon <i>In Vitro</i> Enzymatic Exposure. SSRN Electronic Journal, 0, , .	0.4	0