Materials List for:

Scaling of Engineered Vascular Grafts Using 3D Printed Guides and the Ring Stacking Method

Cameron B. Pinnock[1], Zhengfan Xu[1], Mai T. Lam[1,2]

[1]Department of Biomedical Engineering, Wayne State University

[2]Cardiovascular Research Institute, Wayne State University

Correspondence to: Mai T. Lam at mtlam@wayne.edu

URL: https://www.jove.com/video/55322
DOI: doi:10.3791/55322

Materials

Name	Company	Catalog Number	Comments
Human Aortic Smooth Muscle Cells	ATCC	PCS-100-012	vascular smooth muscle cells
Medium 231	Gibco (Life Technologies	M-231-500	media specific to vascular smooth muscle cells
Human Aortic Smooth Muscle Cell Growth Kit	ATCC	PSC-100-042	growth factors for maintaining vascular smooth muscle cell viability
Replicator Mini 3D printer	MakerBot	N/A	3D printer
Poly(lactic acid) 3D ink (PLA)	MakerBot	N/A	3D printer filament
Poly(dimethlysiloxane) (PDMS)	Ellworth Adhesives	3097358-1004	polymer for gluing plate parts
Fibrinogen	Hyclone Labratories, Inc.	SH30256.01	fibrin gel component
Thrombin	Sigma Life Sciences	F3879-5G	fibrin gel component
Tranforming Growth Factor-Beta 1	PeproTech	100-21	growth factor for stimulating collagen production
Hemocytometer	Hausser Scientific Co.	3200	for cell counting
Polycarbonate tubing	US Plastics	PCTUB1.750X1.625	material for making tall, ring stacking plates
Polycarbonate sheet	Home Depot	409497	material for making tall, ring stacking plates
Adhesive polymer solvent	SCIGRIP	10799	material for making tall, ring stacking plates
Instron 5940	Instron	N/A	tensile testing machine
U-Stretch	Cell Scale	N/A	tensile testing machine
Smooth Muscle Actin	MA5-11547	Thermo Fisher	antibody
Tropomyosin	MA5-11783	Thermo Fisher	antibody

