

Materials List for:

Procedure for the Development of Multi-depth Circular Cross-sectional Endothelialized Microchannels-on-a-chip

Xiang Li¹, Samantha Marie Mearns¹, Manuela Martins-Green², Yuxin Liu¹

¹Lane Department of Computer Science and Electrical Engineering, West Virginia University

²Department of Cell Biology and Neuroscience, University of California at Riverside

Correspondence to: Yuxin Liu at Yuxin.Liu@mail.wvu.edu

URL: <http://www.jove.com/video/50771>

DOI: [doi:10.3791/50771](https://doi.org/10.3791/50771)

Materials

Name	Company	Catalog Number	Comments
Reagent/Material			
Reflow Photoresist	AZ Electronic Materials	AZP4620	
Developer	AZ Electronic Materials	AZ 400K	
PDMS	Dow Corning Corporation	Sylgard 184	
MCDB 131 Culture Medium	Invitrogen	10372-019	
NacBlue Nuclei Staining	Invitrogen	H1399	
PKH Red Stain	Sigma	MINI26 and PKH26GL	
Fibronectin	Gibco	PHE0023	
L-Glutamine	Sigma	G7513	
Phosphate Buffered Saline	Invitrogen	14040-133	
HEPES Buffered Saline Solution	Lonza	CC-5024	
Trypsin/EDTA	Invitrogen	25300-062	
Trypsin Neutralizing Solution	Lonza	CC-5002	
PDMS Curing Agent	Dow Corning Corporation	Sylgard 184	
Primary Human Umbilical Vein Endothelial Cells	Lonza	CC-2517	
Fetal Bovine Serum	Lonza	14-501F	
Diluent C	Sigma	CGLDIL	
Hoechst33342	Invitrogen, Molecular Probes	R37605	
Dextran	Sigma	95771	
3.5% Paraformaldehyde	Electron Microscopy Science	15710-S	
Equipment			
Spinner	Laurell Technologies Corporation	WS-400BZ-6NPP/LITE	
Desiccator	BelArt Products	999320237	
Inverted Microscope	Nikon	Eclipse Ti	
Syringe Pump System	Harvard Apparatus	PHD Ultra	
Laminar Biosafety Hood	Thermo Scientific	1300 Series A2	
Planetary Centrifugal Mixer	Thinky	ARE-310	
Isotemp Oven	Fisher Scientific	13-246-516GAQ	
Optical Microscope	Zeiss	Invertoskop 40C	
Plasma Cleaner	Harrick Plasma	PDC-32G	
Hotplate	Barnstead/Thermolyne Cimarec	SP131635	

Laser Scanning Confocal Microscope	Zeiss	LSM 510	
---------------------------------------	-------	---------	--