

Materials List for:

# Investigating von Willebrand Factor Pathophysiology Using a Flow Chamber Model of von Willebrand Factor-platelet String Formation

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## Materials

| Name                                                        | Company                 | Catalog Number | Comments                                                                               |
|-------------------------------------------------------------|-------------------------|----------------|----------------------------------------------------------------------------------------|
| Calf-thymus unfractionated histones (UH)                    | Worthington Biochemical | HLV            | Reconstituted in serum-reduced media (5 mg/mL)                                         |
| Calf-thymus lysine-rich histones (HK)                       | Sigma-Aldrich           | H5505          | Reconstituted in serum-reduced media (5 mg/mL)                                         |
| Calf-thymus arginine-rich histones (HR)                     | Sigma-Aldrich           | H4830          | Reconstituted in serum-reduced media (5 mg/mL)                                         |
| Phorbol 12-myristate 13-acetate (PMA)                       | Sigma-Aldrich           | P8139          | Reconstituted in DMSO (20 mM)                                                          |
| Histamine                                                   | Sigma-Aldrich           | H7125-1G       | Reconstituted in water (50 mg/mL)                                                      |
| 3,3' Dihexyloxacarbocyanine Iodide (DiOC6)                  | Invitrogen              | D273           | Reconstituted in methanol (20 mM)                                                      |
| Rabbit Anti-VWF Coating Antibody                            | DAKO                    | A0082          | For VWF ELISA                                                                          |
| Rabbit Anti-VWF Detection Antibody, HRP conjugated          | DAKO                    | P0026          | For VWF ELISA and histone-VWF binding assay                                            |
| Nunc MaxiSorp flat-bottom 96-well microplates               | eBioscience             | 44-2404-21     | For histone-VWF binding assay                                                          |
| Immulon 4 HBX Flat Bottom Microtiter 96-Well Plates         | Thermo Scientific       | 3855           | For VWF ELISA                                                                          |
| Humate-P                                                    | CSL Behring             | N/A            | Plasma-derived human von Willebrand factor/factor VIII complex                         |
| Normal Reference Plasma                                     | Precision BioLogic      | CCNRP-05       | For VWF ELISA standard curve                                                           |
| O-Phenylenediamine dihydrochloride (OPD) reagent            | Sigma-Aldrich           | P8287          | Equivalent product available through ThermoFisher Scientific (Catalogue Number: 34006) |
| EGM-2 BulletKit                                             | Lonza                   | CC-3162        | For culturing and initial seeding of BOEC                                              |
| Hank's Balanced Salt Solution (HBSS)                        | ThermoFisher Scientific | 14025092       |                                                                                        |
| Rat-tail Collagen Type 1                                    | Corning                 | 354236         |                                                                                        |
| Gibco Opti-MEM I Reduced Serum Media                        | ThermoFisher Scientific | 31985070       | For endothelial cell stimulations                                                      |
| METAMORPH Microscopy Automation and Image Analysis Software | Molecular Devices       | N/A            |                                                                                        |
| BD Vacutainer Blood Collection Tubes, No Additive           | BD Biosciences          | 366703         |                                                                                        |
|  -Slide III 0.1 (flow chambers)                             | Ibidi                   |                | This product has been discontinued. We suggest using  -Slide VI 0.1 (#80661) or 0.4 (# |

|                                                               |                                                 |        |                                                                                                                      |
|---------------------------------------------------------------|-------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------|
|                                                               |                                                 |        | 80601) and recalculating flow rate and platelet volume needed to maintain a shear stress of 4.45 dyn/cm <sup>2</sup> |
| Silicone Tubing 1.6 mm ID: 5 m, sterilized                    | Ibidi                                           | 10842  |                                                                                                                      |
| Luer Lock Connector Female: natural Polypropylene, sterilized | Ibidi                                           | 10825  |                                                                                                                      |
| Elbow Luer Connector Male: white Polypropylene, sterilized    | Ibidi                                           | 10802  |                                                                                                                      |
| Blunted 18G Needle                                            | BD Biosciences                                  | 305180 |                                                                                                                      |
| 20 mL syringes                                                | BD Biosciences                                  | 302830 |                                                                                                                      |
| Syringe Pump                                                  | New Era Pump Systems Inc. NE-1600 Multi-Phaser™ | N/A    |                                                                                                                      |
| Quorum WaveFX- 4X1 spinning disk microscope                   | Quorum Technologies                             | N/A    |                                                                                                                      |
| Image Processing Software                                     | ImageJ                                          | N/A    |                                                                                                                      |