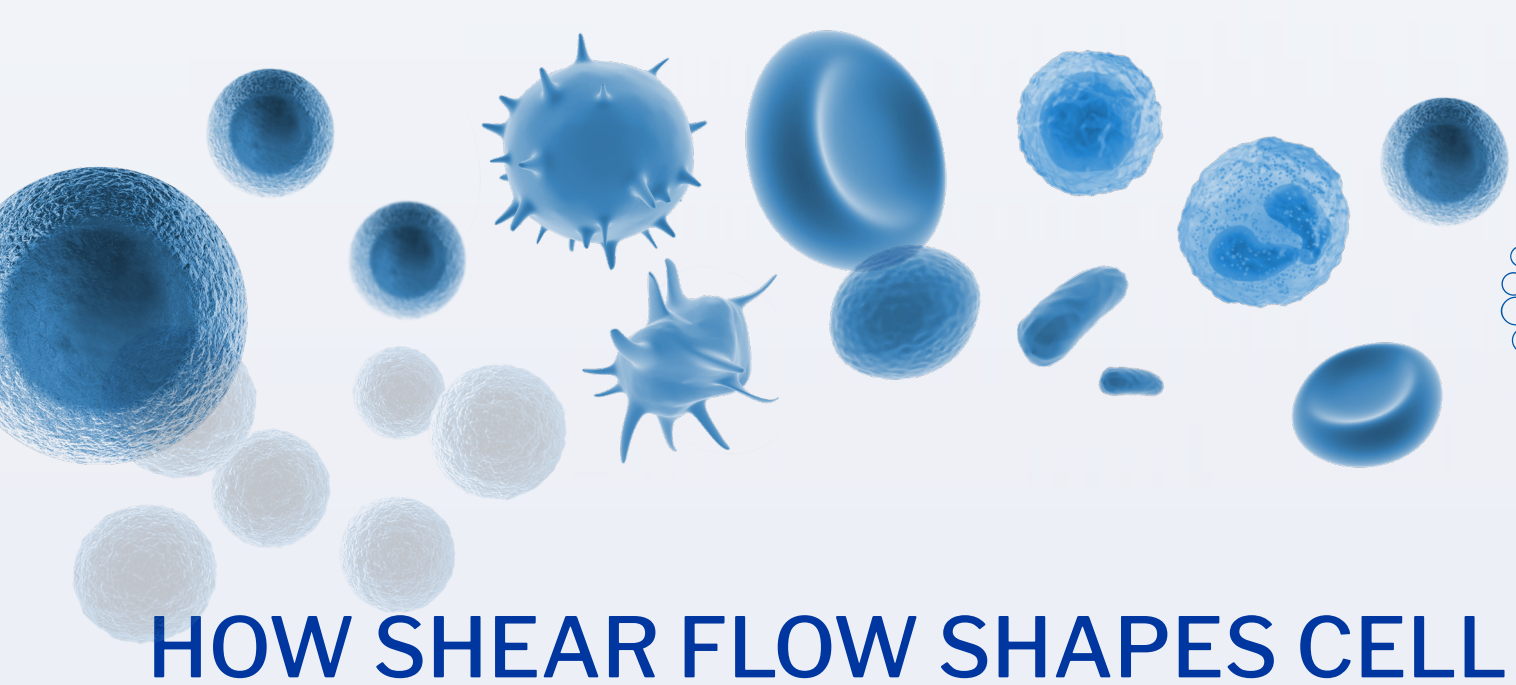
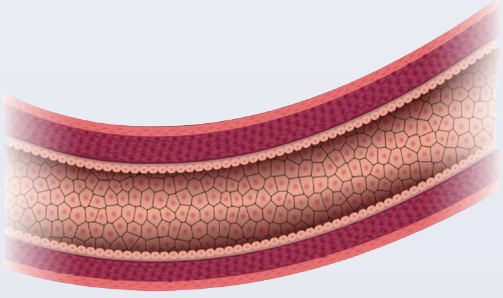


HOW SHEAR FLOW SHAPES CELL FUNCTION

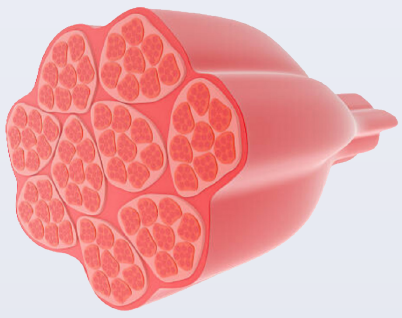
Here are just a few aspects of cells and organisms that are impacted by physiological shear flow.

ENDOTHELIAL CELLS



- Alignment
- Elongation
- Polarity
- Cell thickness
- Permeability
- Adhesion
- Nitric oxide production

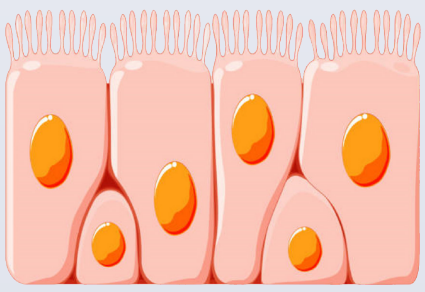
MUSCLE CELLS



- Modeling/remodeling
- Ion channel signaling
- Reactive oxygen species production
- Extracellular vesicle release

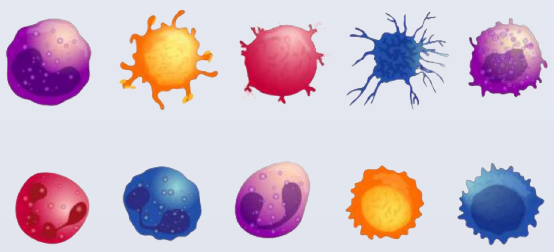
EPITHELIAL CELLS

- Migration
- Wound healing
- Differentiation
- Cytoskeletal alignment
- Autophagy

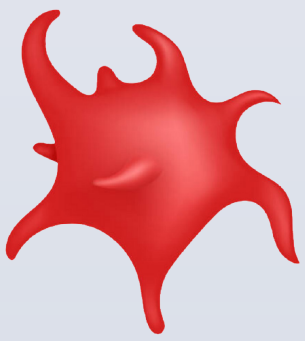


WHITE BLOOD CELLS

- Inflammatory response
- Adhesion
- Activation
- Phagocytosis
- Polarization



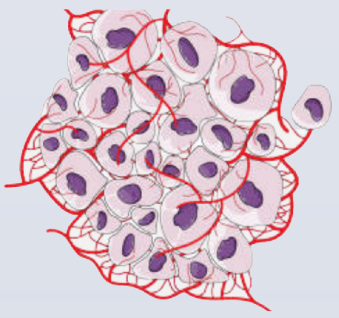
PLATELETS



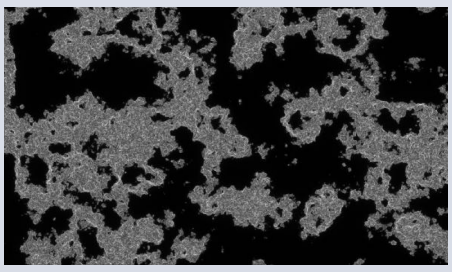
- Thrombosis
- Hemostasis
- Activation
- Morphology

CANCER CELLS

- Apoptosis
- Proliferation
- Motility
- Invasion
- Metastasis



BIOFILMS/MICROBES



- Thickness
- Attachment
- Morphology
- Growth rate
- Metabolism

Benefits of BioFlux Shear Flow Systems:

- **Bridge the gap between in vitro and in vivo** - Unidirectional, pulsatile, or oscillatory laminar flow between 0-200 dyn/cm^2
- **Increase Productivity** - Up to 24 sample throughput
- **Assay Flexibility** - Conduct 20+ assays using a truly complete system

Learn more at cellmicrosystems.com/bioflux