Red blood cell size and shape vary drastically across vertebrate species—from goats, whose blood cells are half the size of ours to amphibians with nucleated, ovoid cells 10 or 20 times larger.

Our research examines how these significant differences in size, shape, deformability and aggregation affect blood flow. While this research is intrinsically interesting on a scientific level, the ramifications extend to the design of lab-on-a-chip devices and the selection of animal models for device testing.