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It is a privilege and an honor to work at NCCT with a group of highly motivated, intelligent individuals. I am inspired by the mentoring and guidance I receive, and by the numerous opportunities for collaboration and cooperative learning. My work on computational modeling of embryonic vasculogenesis/angiogenesis is very challenging and rewarding, and aspires to elucidate a deeper understanding of human developmental toxicity pathways.

Virtual Embryo Project

Nicole Kleinstreuer is working on computational modeling and analysis of microvascular networks in EPA's Virtual Embryo. The Virtual Embryo project proposes to construct an agent-based model of microvascular network formation during early limb-bud development, to characterize these computational models by incorporating biological pathways for normal embryonic development and ToxCast predictive signatures, and to perform a functional analysis of causal linkages leading from pathway-level targets to chemical mode-of-action processes in abnormal development.