Dr. Rong Shao obtained his M.D. at Shanghai Second Medical University, Shanghai, China in 1985 and then he received his Ph.D. degree from Philadelphia College of Pharmacy and Sciences in 1997, Dr. Rong Shao, a postdoctoral fellow, participated in liver disease and breast cancer research at Duke University Medical Center. During that professional training period, Dr. Shao received a fellowship award from a federal funding agency the Department of Defense (DoD) for a project focusing on breast cancer angiogenesis, and also published a number of prestigious articles as the first author. In 2004, Dr. Shao was recruited as a scientist and assistant professor at Pioneer Valley Sciences Institute, University of Massachusetts Amherst, MA, where he continuously pursues the mechanistic studies on tumor angiogenesis and metastasis. Since then, Dr. Shao has published more than 30 papers in peer-reviewed journals, demonstrative of a cancer biologist. He has also served as an editorial board member of a number of peer-reviewed journals and a reviewer of more than ten journals. Dr. Shao’s research work has been supported by a number of federal funding agencies including NIH (NCI) and DoD.

He expertise in the identification of angiogenic molecules and their mechanisms underlying tumor growth, vessel formation, and metastasis. Tumor angiogenesis, the new vasculature formation from pre-existing blood vessels, is a fundamental process required for tumor growth, and is initially triggered by angiogenic factors that are mainly derived from tumor cells and tumorassociated stroma cells, such as growth factors VEGF and bFGF. Those angiogenic molecules specifically bind to membrane tyrosine kinase receptors to induce intracellular angiogenic signaling cascades in endothelial cells, a major component of the blood vasculature. We recently have discovered that a secreted glycoprotein referred to as YKL-40 has the ability to promote tumor vascular endothelial cell angiogenesis; thus promoting tumor progression and metastasis. Serum levels of YKL-40 were significantly elevated in a broad spectrum of human cancers, including breast, colorectal, and ovarian cancer, suggesting that YKL-40 may serve as a biomarker for the cancer diagnosis and prognosis.