1154-92-2636 **Cynthia Melissa Ramirez*** (cramir98@calstatela.edu), 5151 State University Dr, Los Angeles, CA 90032, Los Angeles, CA 90022. *Continuous Mathematical Model of Blood Vessel Formation.*

Cancer is the second leading cause of death in the United States. Tumors occur due to mutation that allow the cells to grow out of control. As nutrients and oxygen supplies are limited, growing tumors undergo metabolic stress and release Vascular Endothelial Growth Factor (VEGF). VEGF triggers the formation of new blood vessels from the existing capillaries which provide the tumor system with new supply of oxygen and nutrients. This process, called angiogenesis, plays a key role in tumor growth and its progression into cancer. The objective of this project is to investigate the effect of Avastin drug in suppressing angiogenesis and tumor growth through mathematical model and computer simulation. We develop a continuous model for tumor growth and angiogenesis. This model consists of a system of ordinary differential equations (ODEs) that govern the changes in the tumor cell density, VEGF, and oxygen concentration, as well as endothelial cell density that forms the capillaries. The least square method is employed to estimate the model parameters. This model is extended to include the effect of Avastin on angiogenesis and tumor growth. (Received September 17, 2019)