Vernonia amygdalina EXTRACTS INHIBIT THE EXPRESSION SURVIVAL, TUMORIGENESIS, METASTASIS, AND INVISION SIGNALING MOLECULES IN HUMAN BREAST CANCER CELLS

Lecia Gresham1,2 and Ernest B. Izevbigie1,2,3

1The Laboratory of Cellular Signaling, Phytoceuticals, Cancer Prevention and Therapies; 2NIH-Center for Environmental Health, College of Science, Engineering and Technology; 3Department of Biology, Jackson State University, Jackson, Mississippi 39217 USA

Abstract: Cancer of the breast is the most commonly diagnosed non-skin cancer and second leading cause of cancer-related deaths in women in the United States. Breast cancer represents 15% of new cases of all cancers. An estimated 178,000 women will be diagnosed with invasive breast cancer and 40,460 women will die from the disease this year in the United States. There is an urgent need for the discovery and development of agent(s) efficacious against breast cancer to decrease breast cancer mortality and morbidity. Vernonia amygdalina (VA) is increasingly emerging as a very strong candidate. VA may be used alone or in combination (adjuvant) with known drugs. The current study objective profiles the effect of VA on the biological functions of 24 known genes regulated by NFkB. NFkB is a transcription factor that plays pivotal functions in tumorigenesis, metastasis, invasion, and inflammatory responses. Preliminary results show VA induced an increase expression of IL1A and p53 and decreased expression of BCL2, CCND1, GAPDH, MDR1, MMP1, Myb, and TNFA.

Key words: Vernonia amygdalina, NFkB, BT-549 cells

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