Archives in Food and Nutrition

# Detecting Prodigiosin molecular mechanism pathway in Breast Cancer through an integrated systems biology approach

**Shaimaa Ahmed Abdel-mougood**

Ministry of Health & Population, Egypt

## Abstract

Prodigiosin the red pigment extracted from Serratia marc¬esens and other species, was known as the miracles of bloody bread in the medieval age. it is a "prodigious" com¬pound with high medical and industrial significance. it has antibacterial, antiprotozoal, algicidal, antimalarial, antican¬cer, and immunosuppressive properties it also used indus¬trially as a pigment. Breast cancer (BC) is a heterogeneous disease that considered the most common malignancy in women in several countries. It is classified into several sub-types, each one involving a different gene set controlling for diverse processes. The identification of cancer sub-type depends on the expression of the estrogen receptor (ER), progesterone receptor (PR), cytokeratin (CK) protein and epi¬dermal growth factor receptor 2 (ERBB2). Previous studies have shown that prodigiosin induced significant apoptosis in a broad range of cancer cell lines selectively and effectively target cancer but not healthy cells. Importantly, it is less toxic than other anticancer drugs and its pro-apoptotic effect irre¬spective of p53 status and multidrug resistance, rendering prodigiosin a promising anticancer drug. Through Integrat¬ed Systems Biology tools the aim of this study is to explore possible molecular mechanism pathway of prodigiosin and detect gene signature involved in its therapeutic response.

## Biography

Shaimaa Ahmed Abdel-Mougood has completed her MSc degree in Biotechnology from The Institute of Graduate Studies and Research /Alexandria university/Egypt (2016). She presented a part of her research thesis in 26th Cancer Genomics Congress: New Era for Cancer Prevention July 2019. She is currently working as a pharmacist & independent researcher. She also helps small pharmacists through spreading pharmaceutical concepts & information via social media

## Publication

1. Molecular Medicine 2019: Expression of antiapoptotic survivin gene in treated and untreated Ehrlich tumor bearing mice with prodigiosin as a significant marker- Shaimaa Ahmed Abdel-Mougood- Alexandria University Shaimaa Ahmed Abdel-Mougood, Ahmed H Abdulraheem, Alexandria University, Egypt
2. Expression of antiapoptotic survivin gene in treated and untreated Ehrlich tumor bearing mice with prodigiosin as a significant marker Shaimaa Ahmed Abdel-Mougood,Alexandria University, Egypt
3. Satisfaction to healthcare among elderly; comparison study between Egypt and Saudi Arabia Faten Sami Ali Mostafa1 *, Ekram M. El-Shabrawy2 , El Morsy Ahmed El Morsy2 , Shaimaa Ahmed Senosy

9th International Conference on Food Science & Technology
March 18-19, 2020 | Frankfurt, Germany

**Author Citation:** Shaimaa Ahmed Abdel-mougood, Detecting Prodigiosin molecular mechanism pathway in Breast Cancer through an integrated systems biology approach, Food Technology 2020, 9th Conference on Food Science & Technology, March 18-19, 2020, Frankfurt, Germany, 22