Mohammed Nabih Baeshen, Biol syst Open Access 2016, 5:2 (Suppl)
http://dx.doi.org/10.4172/2329-6577.C1.005

The effect of biosynthesized *Rhazya stricta* leaf extracts with gold nanoparticles on breast cancer cell lines

Mohammed Nabih Baeshen
University of Jeddah, KSA

Rhazya stricta is a popular plant used in folkloric medicine around many parts of Asia. Recent studies proved its medicinal properties against many diseases, inflammations and abnormal conditions. Many *in vivo* and *in vitro* studies showed the ability of plant extracts against different types of cancer. Our study is representing new records and novel techniques were first used for *R. Stricta*. All previous studies used whole leave extracts and alkaloidal fractions according to their famous medicinal reputation, while our present study also showed a cytotoxic effect of the non-alkaloidal fraction of the leaf extract against breast cancer MFC-7 cell line. On the other hand, we introduced in our study for the first time the cytotoxic effect of the biosynthesized extracts of *R. Stricta* leaves with gold nanoparticles against MFC-7 cell lines as aqueous whole extract, alkaloidal and non alkaloidal fractions of the extract. MTT test results showed cytotoxic effect of all nano-biosynthesized plant extracts when compared to non treated control group as represented by the percentage of cell death as follows: 82% non-alkaloidal fraction, 70% alkaloidal fraction, 52% whole aqueous extract and 0% for the control group. These results showed that the fractionations of the plant extracts were more effective than the whole aqueous extract against MFC-7 cell line and non-alkaloidal fraction as not expected gave the strongest effect against MFC-7 cell lines. In conclusion, our results were promising for the treatment of cancer and we recommend to apply it more *in vivo* and *in vitro* studies against more types of cancer with more experiments of the biosynthesis of *R. stricta* extracts alone or mixed with other medicinal plant extracts with more types of nanoparticles in different physical and chemical conditions to get the best results for this promising plant.

Biography

Mohammed Nabih Baeshen is an Assistant Professor of Genomics and Biotechnology, Department of Biology, Faculty of Science, University of Jeddah since 2014 to till date. He has completed his PhD in 2010 from King Abdulaziz University (KAU) and been assigned as an Assistant Professor at the Department of Medical Laboratories at the Faculty of Health Sciences, KAU. He was also assigned as Consultant in the Center of Nanotechnology at KAU. He has three reference books in practical and theoretical introductory biology and up to 29 publications to his credit.

mnbaeshen@uj.edu.sa

Notes: