

4<sup>th</sup> Global Conference on Cancer Science and therapy  
9<sup>th</sup> World Summit on Virology, Microbiology & Infectious Disease  
6<sup>th</sup> International Conference on Biomedical Biopharma and Clinical Research  
October 11, 2022 | Webinar

## **Transfecting miR-20a-5p miRNA mimic to inhibit the autophagy pathway in highly aggressive HOS 143B osteosarcoma cell line**

**Meral Gok**

Middlesex University London, United Kingdom

In children and teenagers, osteosarcoma is the most common kind of bone tumour. Due to the chemo resistance ability of osteosarcoma, the survival rate has remained unimproved and stayed under 20%. The mechanism behind this resistance is the ability of autophagy formation which enables the cancer cell to escape cell death. In order to overcome the mechanism behind resistance, which is autophagy development, it was aimed to target the autophagy formation pathway and inhibit the pathway using the miRNA mimic, miR-20a-5p. The osteosarcoma HOS 143B (highly aggressive) cell line was fast-forward transfected with miR-20a-5p mimic for 24 hours, and the Wild Type and Not Targeted Control were used as the control groups. The miRNA PCR was performed to measure the success level of transfection and RT-qPCR was performed to measure the gene expression level of ATG5, ATG7, p62, and LC3-I/LC3-II. The Western Blot method was applied to measure the protein expression levels of ATG5, ATG7, p62, and LC3-I/LC3-II. The results have shown that the transfection

of the HOS 143B was a success and the miRNA expression level was increased. However, the gene expression level was not affected at protein level as the Western Blot data showed protein expression for all of the autophagy proteins. To conclude, the miR-20a-5p mimic transfection has increased the miRNA expression but, as of now, could not inhibit the autophagy gene expression. However, this data provides a future hope for transfecting the osteosarcoma cell lines with miRNA mimics in order to inhibit autophagy and enable the chemotherapy of doxorubicin and cisplatin. More studies are being performed.

### **Biography**

Meral Gok is an MSc Cancer Biology and Therapeutics student at Middlesex University, United Kingdom. She has graduated from BSc Molecular Biology and Genetics at Istanbul University, Turkey. She is currently researching on osteosarcoma chemo resistance.

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## **Potent antiviral effects of brassica nigra**

**Rashmi Sharma**

Samrat Prithviraj Chauhan College, India

**V**iral zoonosis Corona, Monkey pox are spreading very fast rate. Potent antivirals are discussed in this paper. Brassica nigra belongs to Angiosperms, Eudicots, Rosids, Order Brassicales, family Brassicaceae. Powder used as antiviral. This is also cough suppressant. Used cataplasm, poultice used to help muscular pains. 2-4 gms powder taken regularly act as antiviral.

**Introduction:** Brassica nigra belongs to Rosids, Order Brassicales, Family Brassicaceae, Brassica nigra. Distributed Europe and Asia. Powder of seed is potent antiviral, antibacterial, and antimicrobial, Spasmolytic, Expectorant, and Carminative. Also used as condiment. Seed has oleic acids (Fatty oil).

**Methods:** There are 2 groups

**Group 1:** Control group 10 persons. Seed powder not given.

**Group 2:** 2 gms seed powder given with honey to infected persons.

**Result:** 2nd group persons recovered earlier. Brassica nigra seeds powder are effective antiviral and antimicrobial agents.

### **Biography**

Rashmi Sharma is an Associate Professor Samrat Prithviraj Chauhan College, India. She has 26 years teaching and Research experience. She has published more than 30 papers in International journals. She has attended more than 70 International and national conferences. 8 students have completed MPhil. Under her guidance. 5 Students are doing PhD under her guidance.

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## **Reversed-phase UPLC-MS/MS analysis of serum reverse T3 (rT3) for clinical research**

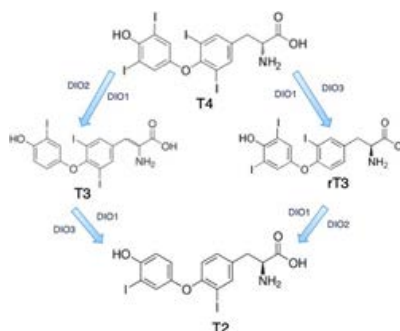
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Reverse T3 (3,3',5'-triiodothyronine or rT3) is the third most abundant iodothyronine circulating in human blood and is produced by the inner ring deiodination of the pro-hormone thyroxine (T4) 80% of T3, and 95% to 98% of all reverse T3, is derived from peripheral conversion of T4 through deiodination. Both T3 and reverse T3 can shed more iodine atoms, forming in turn various isomers of T2, T1, and ultimately T0. Unlike the more abundant and active metabolite T3, the measurement of serum rT3 is yet to find a routine clinical application. Elevated level of rT3 associated with non-thyroidal illness syndrome (NTIS), stress, liver disease, inflammation, depression, and malignant tumors. rT3 is often analyzed by using clinical routine testing methods based on immunoassay (ECLIA and ELISA) which show limited sensitivity.

Thus, a reversed-phase analytically sensitive with excellent linearity and precision, and minimal matrix effects UPLC-MS/MS method was developed that employs a SPE procedure and combines it with reversed-phase chromatography using the Waters Atlantis T3 HPLC Column. The use of mixed-mode anion exchange solid-phase extraction (SPE) plates, in combination with the unique retention and selectivity of the Waters Atlantis T3 HPLC Column and Shimadzu LCMS-8060,

results in a rapid, fast and simple analysis of serum T4, T3, rT3 and T2.



### **Biography**

Angelina I Nikitkina has been working for Clinical Mass Spectrometry Laboratory of Clinique for New Medical Technologies 'ArhiMed', where she performs development, optimization and validation of a broad range of qualitative and quantitative (LC-MS, GC-MS) methods such as: quantification of vitamin D metabolites, amino acids, steroid hormones, melatonin, serotonin, thyroid hormones, catecholamines and their metabolites in biological samples (urine, plasma, serum, and saliva).

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## **Gynecological malignancies in Aden: An overview of 4 years**

**Amani Saleh Hadi Saeed<sup>1\*</sup>, Gamal Abdul Hamid<sup>1</sup>, Faten Al-Ahdel<sup>2</sup> and Shada Yassin<sup>2</sup>**

<sup>1</sup>Aden University, Yemen

<sup>2</sup>National Oncology Centre, Yemen

**Background:** Gynaecological cancer is common among the leading causes of cancer -related death worldwide.

**Objective:** The objective of this study was to determine the pattern of gynaecological cancer registered and treated in National Oncology Centre, Aden Yemen.

**Material and Methods:** A 4year retrospective study of female genital tract malignancies was carried out in women care Unit in National Oncology Centre (NOC), Aden, Yemen between January 2013 to December 2016. The data analysed using statistical package for social science (SPSS), IBM SPSS statistics version 20, IBM incorporation and licensors 1989, 2011 New York USA and the result expressed in descriptive statistics by simple percentages.

**Result:** A total of 1646 women were seen and diagnosed as malignancies in NOC, Aden during the study period, while 224 were found to have gynaecological malignancies, most have ovarian cancers, followed by

cervix cancer (18.8%), endometrial cancer (54.4%) and the choriocarcinoma (11.6%). The mean age of endometrial and ovary (15.2%) cancer patients (48+\_14years) was higher than that of choriocarcinoma (33+\_12years), but lower than cervix cancer patients (56+\_12 years).

**Conclusion:** Ovarian cancer was the most frequent malignant tumour and the least was choriocarcinoma.

**Keywords:** Gynaecology cancer, Pattern, Aden, Yem

### **Biography**

Amani Saleh Hadi Saeed Specialist of clinical oncology, and nuclear medicine; Faculty of medicine Ain Shams University, MB, BCH; Faculty of medicine-Aden University, Director of National Oncology Centre-Aden. Head of women care unit for breast cancer and gynaecology malignancies in National Oncology Centre -Aden (before). Member of Arab council for professionals and academics. Head of health education unit for Arab council for professional and academics branch of Yemen.

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**Trace elements homeostasis in biological samples as new candidate biomarkers for early diagnosis and prognostic of female breast cancer and therapeutic response**

**Alphonse Laya**

The University of Maroua, Cameroon

**Background:** Female breast cancer (BC) remains the most Common cause of total deaths cancer around the world. Several studies were investigated for BC biomarkers; however vital circulating biomarkers (CB) for early diagnosis of malignancy are still scarce.

**Aims:** This study investigates sensitive emerging biomarkers in biological fluids in order to get better BC outcome and prolong patient's survival.

**Methods:** Relevant studies on dyshomeostasis of essential and toxics trace elements (TEs) were assessed in BC patients.

**Results:** Four essential TEs (Se, Cu, Zn and Mn) were significantly down regulated and one essential TEs (Fe) was up regulated consistently, while five toxic TEs (Cd, Cr, Pb, Co, Mo) were up regulated significantly compared to healthy groups. Se and Cu were the most consistently reported TEs decreased. Regarding toxic TEs, Cd and Pb were the most increased significantly compared to healthy groups. Among the essential TEs, Se and Zn are as the most potential biomarkers, whereas Cd and Pb may be the most

potential biomarkers among the toxic TEs of being utilized.

**Conclusion:** While, no evidence based on clinical practice, the present findings provide insights into the tumor TEs CB in fluids for BC patients. Because of heterogeneity, further investigation is requiring to extrapolate these outcomes to clinical practice in BC with high sensitivity and specificity.

**Keywords:** Breast cancer, Trace elements, Biomarker, Diagnosis, Homeostasis.

**Biography**

Alphonse Laya has done his PhD in Biochemistry, Faculty of Science, Department of Biological Sciences and University of Maroua, Cameroon. He was a Postgraduate Fellow CSIR-CFTRI, India and Postdoctoral Fellow at the Federal University of Sao Paulo, Brazil. He published more than 15 articles in reputed journals. He was actually serving as an editorial board member of reputed Journals. Current ongoing project: Biomarker of Breast cancer and Trace Elements as well as Bioactive compounds in Fermented Food Condiments as an Adjuvant to Cancer Prevention and Treatment.

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## **How can we prevent side effects or even deaths after chemotherapy use?**

**Huang Wei Ling**

Medical Acupuncture and Pain Management Clinic, Brazil

**Introduction:** Cancer patients that are using chemotherapy often have side effects of using this kind of medication that can weaken the immune system and represents an obstacle in cancer treatment. The purpose of this study is to demonstrate that the use of any kind of chemotherapy in patients with cancer can reduce the patient's vital energy and reduce the energy of the five internal massive organs (Liver, Heart, Spleen, Lungs, and Kidney) that are responsible for our immune system integrity and the treatment rebalancing and replenishing the energy of the five internal massive organs using highly diluted medications can reduce the side effects of chemotherapy or even death of these patients when using chemotherapy.

**Methods:** through two case reports of female patients, both with colon malignant cancer. The first one was in treatment only using chemotherapy. The second patient used chemotherapy associated with Chinese dietary counseling, auricular acupuncture with apex ear bloodletting, and systemic acupuncture (to rebalance the internal energy of Yin, Yang, Qi, and Blood and take out the internal Fire) and replenishment the five internal massive organs energy using highly diluted medications according to the theory Constitutional Homeopathy of the Five Elements Based on Traditional Chinese Medicine and crystal-based medications.

**Results:** The first patient suffered extreme fatigue and did not have the energy to do anything and was suffering a lot while in treatment for her colon cancer. The second patient finished all her six sessions of chemotherapy without so many side effects (she had hair loss, not too much, and little constipation that resolved using highly diluted

Chinese herbal medicine, to improve the formation of Blood and take out the Heat, that was causing constipation, according to traditional Chinese medicine's reasoning. She did not have any fatigue and reduced completely her colon malignant tumor after this associated treatment.

**Conclusion:** The conclusion of this study is that it is important to associate energy rebalancing and replenishment using highly diluted medications according to the theory Constitutional Homeopathy of the Five Elements Based on Traditional Chinese Medicine and crystal-based medications, that are responsible to keep the energy of the five internal massive organs in a level to keep the patient without much side effects and helping them achieve the cure, when in treatment of any kind of cancer using chemotherapy.

### **Biography**

Huang Wei Ling, born in Taiwan, raised and graduated in medicine in Brazil, specialist in infectious and parasitic diseases, a General Practitioner and Parenteral and Enteral Medical Nutrition Therapist. Once in charge of the Hospital Infection Control Service of the City of Franca's General Hospital, she was responsible for the control of all prescribed antimicrobial medication and received an award for the best paper presented at the Brazilian Hospital Infection Control Congress in 1998. Since 1997, she works with the approach and treatment of all chronic diseases in a holistic way, with treatment guided through the teachings of Traditional Chinese Medicine and Hippocrates. Researcher in the University of São Paulo, in the Ophthalmology department from 2012 to 2013. Author of the theory Constitutional Homeopathy of the Five Elements Based on Traditional Chinese Medicine. Author of more than 100 publications about treatment of variety of diseases rebalancing the internal energy using Hippocrates thoughts.

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## **Prognostic evaluation of anoikis resistance subpopulations in colorectal carcinoma tissues and 3D *in vitro* modeling of anoikis resistance to assess impact of mutated oncogenes**

**Madhura Patankar**

University of California, USA

**A**noikis is a form of cellular apoptosis and resistance to anoikis is a known mechanism in metastatic and invasive colorectal carcinoma. Colorectal carcinoma is the third most common cause of cancer related deaths worldwide and yet, anoikis resistance assessments are limited by *in vitro* studies. To address this, we first identified and then quantified anoikis resistant subpopulation of colorectal cancer tissues and evaluated their prognostic significance. In addition, we also generated 3D *in vitro* model of anoikis resistance using colorectal cancer cell lines with mutated KRAS and BRAF oncogenes to assess association of these mutations commonly found in CRC and their role in receiving and maintain anoikis resistance ability. For histopathological evaluations, we assessed Hematoxylin and eosin staining's on tissue microarray specimens followed by IHC staining's for proliferation, apoptosis, and basement membrane markers to establish cell/s with or without anoikis resistance. Alternately we modeled this mechanism *in vitro* and generated KRASG12V and BRAFV600E Caco-2 colon cancer cells lines using retroviruses to understand role of these mutated oncogenes on cell fate. Main findings: we observed low apoptosis rate and low proliferative index in cell populations without any contact to extracellular matrix that was shown

by absence of basement membrane staining. Colon cancer cells with mutated oncogenes showed interesting features with low apoptosis rate (annexin negative) and features of quiescence (G0 cell cycle arrest) by flow cytometry. Cells with mutated oncogenes when cultured in 3D cultures formed either partially or full filled cysts mimicking cribriform and solid structures noted from CRC tissues. In conclusion, we have shown evidence of subpopulations of carcinoma cells in micropapillary, cribriform, solid structures are resistant to anoikis resistance and abundance of these structures is new independent indicator of poor prognosis in CRC both in primary and metastatic lesions.

### **Biography**

Madhura Patankar has completed her Masters in Protein Chemistry and Biotechnology from Department of Biochemistry at University of Oulu, Finland and then completed her PhD in Experimental Pathology and Cancer Biology from Department of Pathology at University of Oulu, Finland. She then moved to University of Southern California, CA and worked on mechanisms underlying inflammatory diseases such as Gastro esophageal reflux disease (GERD.). She is currently postdoctoral research at University of California Davis, CA investigating single cell signaling dynamics in perturbed metabolic pathways and mechanisms underlying lung epithelial injury and their crosstalk with stroma.

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## **Zinc oxide nanoparticles from cassia fistula and centella asiatica leaf extract**

**Ishaan Madhivanan**

Clements High School, USA

The blood-brain barrier has been reported to be one of the main hindrances in treating neurodegenerative diseases such as Alzheimer's and Parkinson's. Previous studies have shown that nanoparticles could be used to deliver drugs to the brain to treat neurodegenerative diseases. Nanoparticles made using medicinal plants could potentially reflect the medicinal properties possessed by the plants themselves. Cassia fistula and Centella asiatica are medicinal plants reported to have neuroprotective effects. For the present study, a combination of extracts from the above plants was used to produce Zinc Oxide nanoparticles. Phytochemical analysis was

performed on the plant extracts and UV visible spectroscopy was used to confirm the formation of the nanoparticles.

### **Biography**

Ishaan Madhivanan is a 12th grader at Clements high school. He lived in India for the first 8 years of his life and then moved to the United States. He enjoys studying Chemistry and Biology as well as playing sports like badminton and Frisbee. He runs a Non-profit organization called breaking the Sky in which he was a tutor student in science, preparing them for high school, and hosting competitions as well.

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