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“ Success is the result of perfection,hardwork,learning from failure, loyalty and perfection .”

— Colin Powell

About Monday Morning

Monday morning is a weekly E- CAS (Electronic Current Awareness Service) of RMRC Library, Bhubaneswar which carries one Biomedical & health science news item and some useful current medical research links so that the scientists can access the articles. This E- Bulletin starts its journey from 21st Nov. 2016. In this maiden attempt we cordially invite your inputs and suggestions to improve in future.

Dr. Banamber Sahoo, Lib & Inf. Officer
Poonam Singh Deo & Hemanti Mahali (Lib. Trainee)

Blood test can diagnose cancers

Findings of study conducted on mice reveals that infrared spectroscopy can detect lymphoma and melanoma

DETECTION

WASHINGTON: Scientists have developed a blood test using infrared spectroscopy that may diagnose two types of cancer, lymphoma and melanoma.

The findings, published in the journal *Scientific Reports*, suggest infrared spectroscopy can detect biochemical changes induced by non-Hodgkin's lymphoma, a solid tumorous condition of the immune system, and subcutaneous melanoma, a deadly form of skin cancer.

The technique has diagnostic potential as a screening technique for these cancers, according to researchers, including those from Georgia State University in the United States. They used mid-infrared spectroscopy to analyse blood serum derived from experimental mice and differentiate mice with non-Hodgkin's



lymphoma and subcutaneous melanoma from healthy mice and also between these two tumorous conditions.

The mid-infrared spectral region of the electromagnetic spectrum is frequently used to characterise biological samples at the molecular level. Developing a rapid and reliable pre-screening strategy for melanoma and lymphoma is critical be-

cause early diagnosis and treatment of these malignancies improve the patients' chances of survival. Fourier Transform Infrared (FTIR) spectroscopy in Attenuated Total Reflection (ATR) sampling mode provides high-quality results with better reproducibility compared to other vibrational spectroscopy. It has attracted scientists' attention for its rapid and reliable detection of various health conditions using body fluid samples.

The study shows infrared spectroscopy can identify cancer. Researchers used mice with lymphoma and melanoma cancers. The study found remarkable differences between the ATR-FTIR spectra of serum samples from tumour-bearing mice with melanoma and non-Hodgkin's lymphoma and healthy, control mice. The findings are also applicable to humans, researchers said.

1. Spicy food can reduce heart attack and stroke risk

Eating more spicy food can help to reduce a person's risk of suffering a heart attack or stroke, according to a new study. Research carried out in China by scientists from the University of Chongqing found that cutting down the level of salt in a meal and replacing it with extra spice so that flavour is not lost can potentially help to lower heart attack and stroke risk significantly. For more details click on the below link

<http://www.mediplacements.com/article-801841607-spicy-food-can-reduce-heart.html>

2. Could these psychological traits help us live longer?

A new study suggests that they might be. Optimism, stubbornness, a good work ethic, and a strong family bond — could these be the ingredients to a long, happy life? Scientists found that these psychological traits were common in a group of elderly adults from Italy, and that these adults had better mental well-being than younger members of their family. For more details click on the below link

<https://www.medicalnewstoday.com/articles/320354.php>

3. Inherited gene variation may be to blame for poor survival of patients with early-onset breast cancer

A new study led by scientists at the University of Southampton has found that inherited variation in a particular gene may be to blame for the lower survival rate of patients diagnosed with early-onset breast cancer. Breast cancer is the second leading cause of cancer-related death in women, with nearly 450,000 deaths per year from the disease worldwide. For more details click on the below link

<https://www.news-medical.net/news/20171214/Inherited-gene-variation-may-be-to-blame-for-poor-survival-of-patients-with-early-onset-breast-cancer.aspx>

4. Coarse particulate matter may increase asthma risk

Children exposed to coarse particulate matter may be more likely to develop asthma and to be treated in an ER or be hospitalized for the condition, according to new research published online in the American Thoracic Society's American Journal of Respiratory and Critical Care Medicine. For more details click on the below link

https://www.eurekalert.org/pub_releases/2017-12/ats-cpm121217.php



E- CAS (Current Awareness Service)

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