



## ONCOLOGY

### STARVING CELLS TO TREAT CANCER

Scientists have discovered a way to kill cancer cells by depriving them of nutrients. Professor Chris Proud from the University of Southampton in the United Kingdom, along with Canadian researchers from the British Columbia Cancer Agency Research Centre, think this could lead to a new treatment for cancer.

“As cancer cells grow and divide much more rapidly than normal cells, they have a much higher demand for nutrients and oxygen,” explained Prof Proud. “We have discovered that a cellular component, eEF2K, plays a critical role in allowing cancer cells to survive nutrient starvation, while normal, healthy cells do not usually require eEF2K to survive. Thus, blocking the function of eEF2K should kill cancer cells without harming normal healthy cells in the process.”

Traditional therapies such as radiotherapy and chemotherapy often harm normal healthy cells, while targeted treatments may only work for a particular type of cancer. This discovery does not damage healthy cells, and can potentially be applied to treat many different cancers. Prof Proud hopes to develop drugs that block eEF2K.

“**BLOCKING THE FUNCTION OF THE CELLULAR COMPONENT eEF2K SHOULD KILL CANCER CELLS WITHOUT HARMING NORMAL HEALTHY CELLS**”

## PSYCHOLOGY

### Misery Vital To Mental Health

While being angry or sad can be unpleasant, these emotions are important and possibly vital to good mental health, say psychologists. A recent study by psychologist Jonathan Adler of the Franklin Olin College of Engineering and Hal Hershfield, Professor of Marketing at New York University in the United States examined the link between emotional experience and psychological welfare among a group of people undergoing 12 sessions of psychotherapy.

“Acknowledging the complexity of life may be an especially fruitful path to psychological well-being,” Dr Adler told *Scientific American*. In fact, suppressing bad thoughts can actually have a contrary effect — instead of making you feel better, avoiding negative emotions can even diminish your sense of contentment. Unpleasant feelings can help you make sense of life’s ups and downs. “One of the primary reasons we have emotions in the first place is to help us evaluate our experiences”, Dr Adler added.



**PULMONOLOGY**

## HAZARDS OF HAZE

The dust and dirt in the air don't just sting your eyes — they can kill you, say scientists. Researchers from the University of North Carolina in the United States estimate that about 2.1 million people worldwide die each year as a result of a surge of fine particulate matter air pollution, according to a study published in the journal *Environmental Research Letters*.

“Outdoor air pollution is among the most important environmental risk factors for health,” said study co-author Jason West. “Many of these deaths occur in East Asia and South Asia, where populations are high and air pollution is severe.”

Researchers simulated the concentrations of ozone and fine particulate matter air pollution at the start of the Industrial Revolution in 1850 and compared it with data from the year 2000. The study showed that since then, millions died from an increase in air pollution. It also estimated 470,000 deaths occur every year due to increased ozone levels.

“**SOME 2.1 MILLION PEOPLE DIE EACH YEAR AS A RESULT OF A SURGE IN AIR POLLUTION**”



**ONCOLOGY**

## HPV Vaccine Protects Throats, Too



A cervical cancer vaccine also appears to protect against certain throat cancers caused by the human papillomavirus (HPV), according to a study by the World Health Organization's International Agency for Research on Cancer.

The study found that Cervarix, a cervical cancer vaccine, provided 93 per cent protection against infection

with the two types of HPV that cause the majority of throat cancers. While researchers have long suspected that the vaccine would prevent throat cancer, this is the first study to provide evidence. “We were surprised at how big the effect was,” Dr Rolando Herrero, the study's lead author, told *The New York Times* newspaper. “It's a very powerful vaccine.”

While the study only surveyed young sexually-active women, men would “probably” get the same level of protection because the vaccine produces the same amount of antibodies in both sexes, said Dr Herrero. What remains unknown is “how long-term the protection is, or if re-vaccination is necessary”.

“**A CERVICAL CANCER VACCINE PROVIDED 93 PER CENT PROTECTION AGAINST THE VIRUSES THAT CAUSE MOST THROAT CANCERS**”

PHOTOS: CORBIS, SHUTTERSTOCK

## calendar SEP/OCT



### PINK RIBBON WALK 2013

Join National Healthcare Group Diagnostics at the Pink Ribbon Walk 2013. The event shows solidarity with breast cancer survivors and raises awareness of breast cancer. The first 500 women to sign up will enjoy a \$10 discount on a mammogram\* on NHG Diagnostics' Mammobus at the event or at National Healthcare Group Polyclinics, courtesy of NHG Diagnostics.

\* To see who is eligible for a mammogram, please refer to the BreastScreen Singapore eligibility criteria at [www.hpb.gov.sg](http://www.hpb.gov.sg).

**DATE**

**28 Sep 2013**

**TIME**

**5pm — 7pm**

**VENUE**

**Marina Bay Waterfront Promenade**

**FEE**

**Adults: \$38. Concessions are available for group participations, past participants, Breast Cancer Foundation members, students and senior citizens. Register at [www.pinkribbonsingapore.com](http://www.pinkribbonsingapore.com)**



### CARE FOR THE ELDERLY COURSE

The Primary Care Academy is offering a training programme conducted by experienced registered nurses to equip you and your caregiver with the skills for caring for the elderly.

A Caregiver's Training Grant is available. To be eligible for the grant, the caregiver must:

- Be looking after a person needing care, who is a Singapore citizen or Singapore Permanent Resident.
- Be the main caregiver; he or she could be a family member or foreign domestic worker.

**DATE**

**21 Oct 2013**

**TIME**

**10am — 5pm**

**VENUE**

**Primary Care Academy Learning Centre, Choa Chu Kang Polyclinic, Level 3, 2 Teck Whye Lane, S(688846)**

**FEE**

**\$117.70 (incl GST). Call 6496-6682 or 6496-6683 to register.**



## DERMATOLOGY

### LINK BETWEEN ECZEMA AND FOOD ALLERGIES

A study by scientists from King's College London in the United Kingdom has found that children with the skin condition eczema are more likely to have food allergies as well. Published in the *Journal of Investigative Dermatology*, the study found that the more severe the eczema, the greater the person's sensitivity to food allergens such as peanuts and cow's milk.

Dr Carsten Flohr, a dermatologist who led the study, told The Telegraph Media Group that it would appear that eczema plays a key role in the development of allergies by damaging the barrier created by the skin. Eczema causes itchy, cracked skin which exposes the immune system beneath the skin to particles of food it would not normally encounter, thus priming it to see the food particles as a threat. This can cause inflammation, and in people with severe forms of the allergy, can also result in swelling and shock.

Dr Flohr said, "We thought that food allergies are triggered from the inside out, but our work showed that in some children it could be from the outside in, via the skin. It opens up the possibility that if we can repair the skin barrier and prevent eczema effectively then we might also be able to reduce the risk of food allergies."

“ ECZEMA CAUSES CRACKED SKIN, WHICH LETS IN UNUSUAL FOOD PARTICLES. THIS PRIMES THE IMMUNE SYSTEM TO SEE SOME OF THESE PARTICLES AS A THREAT



## PHYSIOLOGY

### Writing Heals, Literally



Emotions — and the expression thereof — really do have an effect on a person's physical health. A New Zealand study reported in *Pacific Standard* magazine showed that the physical wounds of healthy seniors healed more quickly if the seniors wrote about their feelings.

Published in the journal *Psychosomatic Medicine*, the study confirmed the results of an earlier 2010 study and extends the findings to cover older adults, a group that is prone to suffering wounds and which tends to have fewer ways of coping.

A University of Auckland research team looked at 49 healthy elderly people who were asked to write either about an upsetting experience or to merely list their daily activities, without mentioning their opinions, feelings or beliefs. The half that wrote about their traumatic emotions recovered more quickly from a skin biopsy done on their inner arms.

"The biological and psychological mechanisms behind this effect remain unclear," said the researchers, who noted that the expressive writers did not exhibit lower stress levels nor fewer symptoms of depression.

## NEUROLOGY

# Memory Lapses A Concern

Recent studies show that physically healthy people prone to memory lapses are significantly more likely to develop more severe problems in the future, reports The Telegraph Media Group. This suggests that people should seek advice early if they are concerned about memory lapses, said researchers.

One study conducted by two American hospitals found that elderly people with memory concerns but who were otherwise healthy had significantly greater levels of the plaque that also appears in the brains of those suffering from Alzheimer's.

Another study by the University of Kentucky also showed that those who self-reported changes in their memory were almost twice as likely to be diagnosed with dementia or cognitive impairment over the next 10 years.

Dr Marie Janson of Alzheimer's Research UK said, "Self-reported memory problems could become an important tool for clinicians seeking to detect dementia early. A serious worry about declining memory or thinking skills could be an early indicator that something else is going on."



## NUTRITION

# A GENE FOR OVEREATING

If you've wondered why you can't seem to stop overeating, the answer may lie in your genes. Scientists at the University College of London in the United Kingdom have found that a gene called **FTO**, which has been linked with obesity, can cause weight gain by reducing the chemical signals that tell your brain to stop eating. The same gene can also increase your attraction to calorie-laden, fatty foods.

In the study, which was published in the *Journal of Clinical Investigation*, men with two copies of the obesity-variant of the **FTO** gene ranked themselves 20 to 25 per cent hungrier after a meal than men without the gene. Concentrations of ghrelin, a hormone that stimulates appetite, were also elevated. Carriers of the **FTO** variant also rated the most calorie-laden foods as 50 per cent more attractive than non-carriers.

"People with the gene variant don't suppress ghrelin properly after a meal, so they remain hungry," Rachel Batterham, one of the study's co-authors, told The Telegraph Media Group. "You become a slave to that extra ghrelin."

“PEOPLE WITH THE GENE VARIANT DON'T SUPPRESS GHRELIN PROPERLY AFTER A MEAL, SO THEY REMAIN HUNGRY”



PHOTOS: SHUTTERSTOCK

## calendar SEP/OCT



### WORLD MENTAL HEALTH DAY 2013

The Institute of Mental Health and the Singapore Association for Mental Health are commemorating World Mental Health Day 2013.

In line with this, a showcase of the creative talents of recovering patients — dubbed "Towards Recovery: A Showcase of Talents" — will be on show, including photography, paintings, pottery, books and crafts. Join in the carnival and sign up for the workshop for caregivers by our keynote speaker on "Crisis Management in the Community".

#### DATE

12 Oct 2013

#### TIME

12pm — 5.30pm

#### VENUE

Lasalle College of the Arts,  
1 McNally St, S(187940)

#### FEE

Open to the public (free).

Registration is required for the caregivers' workshop. Please email your name and contact details to [samhcomed@gmail.com](mailto:samhcomed@gmail.com)