

SCIENCE CENTRE NEWS LETTER

August 2016
Issue 16



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SCIENCE CENTRE

Volume 2, Issue 4

WHAT'S NEW IN SCIENCE

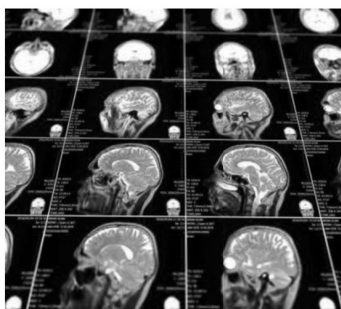
New Technology Could deliver Drugs to brain Injuries

A new study led by Scientists at the Stanford Burnham Prebys Medical Discovery Institute (SBP) describes a technology that could lead to new therapeutics for traumatic brain injuries. The discovery published in "Nature communications", provides a means of homing drugs or nanoparticles to injured areas of the brain.

Distinguished professor in SBP's NCI Cancer Center and senior author of the Study. Erkki Ruoslahti, M.D., Ph. D. said that "We have found a peptide sequence of four amino acids, cysteine, alanine, glutamine, and lysine (CAQK), that recognizes injured brain tissue". More than one hundred compounds are currently in preclinical tests to lessen

brain damage following injury. These candidate drugs block event that cause secondary damage, including inflammation, high levels of free radicals, over- excitation of neurons, and signalling that leads to cell death. The CAQK peptide binds to components of the meshwork surrounding brain cells called chondroitin sulfate proteoglycans.

Ruoslahti Commented that "This peptide could also be used to create tools to identify brain injuries by attaching the peptide to materials that can be detected by Medical imaging devices and, because the peptide can deliver nano particles that can be loaded with large molecules, it could enable enzyme or gene silencing therapies".



SCIENTIST OF THE MONTH

Vikram A. Sarabhai

Vikram Ambalal Sarabhai was born on August 12, 1919, at Ahmadabad in Gujarat. His education qualifications include Tripos in Physics and Mathematics from Cambridge University in 1939. He was a research scholar, Indian Institute of Science, Bangalore in 1940-1945. Dr. Vikram Sarabhai was responsible for the foundation of the physical Research Laboratory (PRL) in Ahmedabad. He did distinguished research work on the time variations of cosmic rays. He was an innovator in space research work in India.

He stressed upon the fact that space research

is useful for the country and could be used in the areas of education, communication, meteorology, geodesy, remote sensing, etc. He setup Indian Institute of Management (IIM) and Rocket Launching Centre at Thumba, at Sriharikota and at Ahmadabad.

Dr. Sarabhai was awarded Shanti Swarup Bhatnagar Prize in 1962 and the Padma Bhushan in 1966. He was Posthumously conferred the Padma Vibhushan in 1972. Dr. Vikram Sarabhai died on December 30, 1971 at Thumba.



SCIENCE FACTS AUGUST 2016



Timings

Tuesday to Friday
9.30 am to 4.30 pm

Saturday - Sunday
& Public Holidays
11.30 am to 6.30 pm

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2 August 1861	Indian Scientist Sir Prafullchandra Ray was born on this day.
4 August 1956	India's first Nuclear Reactor "Apsara" went critical at ' Trombay' (BARC Bhabha Atomic Research Centre).
5 August 1930	Neil Alden Armstrong (First person to set foot upon the moon) was born on this day.
6 August 1881	Prof. Alexander Fleming (discoverer of Penicillin) was born on this day.
7 August 1976	"Viking 2" Spacecraft of America entered into Orbit of Mars.
8 August 1901	Ernest Lawrence (inventor of Cyclotron) was born on this day.
12 August	: International Youth Day. (by U.N.)
12 August 1919	Well known Indian Scientist Dr.Vikaram Ambalal Sarabhai was born on this day.
14 August 1888	Johan Logie Baird (inventor of colour Television) was born on this day.
17 August 1870	Frederick Russell (inventor of first successful typhoid fever vaccine) was born on this day
21 August 1754	William Murdoch (inventor of Gas lighting) was born on this day.
22 August 1920	Denten Cooley (who performed the first artificial heart transplant) was born on this day.
25 August 1989	Space Craft 'Voyager 2's closest approach to Planet Neptune was noted on this day.
26 August 1906	Albert Sabin (inventor of oral polio vaccine) was born on this day.
29 August	International Day against Nuclear Tests. (by U.N.)

U.N. United Nations

WHO : World Health Organization

Ans : 1)-C 2)- C 3)- D 4)-A 5)-D 6)- A 7)- B 8)-A

KNOW THE EXHIBITS AT FUN SCIENCE GALLERY

Is Light Visible ?

Look through the hole, you cannot see any beam of light although a lamp is on. Now, bring your hand inside the hole. you will be able to see the light beams.

Why now you See the light beams ?

Light rays are not visible unless they reach our eyes after being reflected or scattered by objects on their path.



SCIENTIFIC QUESTION

What is an Element ? (Part-2)

In part - 1, we understood about the useful elements saving elements and valuable elements and its properties. now, in this part we will see the different forms of elements, yellow elements and Glowing elements.



Different forms of an Element :

Some elements can exist in different physical forms. one is Carbon. If its atoms are squashed near together, it forms one of the hardest substances in the world- Diamond.

If atoms of Carbon are spaced farther apart than in a diamond, and linked more loosely, they form a very different substance. they make the soft, black lumps that we call coal. A third

form of the element carbon is the soft, black, slippery powder known as graphite.

Yellow Element :

Pure Sulfur forms brittle, yellow lumps, sulfur crystals, or a yellow powder known as amorphous ("Shapeless") sulfur. These pure forms of sulfur are found around volcanoes and hot springs. sulfur is extremely important in the chemical industry, used to make matches, fireworks, paper, pesticides and medicines.

Glowing Element :

The bright



flashing lights of advertising signs are sometimes called "neon Lights". when high power electricity is passed through a tube

containing neon gas, this glows fiery red. similar gases give off other colours. Argon in a tube glows deep blue- green, while krypton glows brilliant green. these elements all belong to a group called the inert or noble

gases. these gases are found in tiny quantities. in normal air. they have no color, taste, or smell in their natural form. they are called inert (inactive) because their atoms hardly ever join or link with the atoms of other elements.



SCIENCE QUIZ

1) Light Year is related to

- a) Energy b) Speed c) Distance d) Intensity

2) How many Dynes are there in one gram weight ?

- a) 900 b) 375 c) 981 d) 250

3) The unit of energy in MKS system is

- a) volt b) Erg c) Ohm d) Joule

4) Alexander Fleming discovered

- a) Penicillin b) X-ray c) Streptomycin d) Telephone

5) Philology is the

- a) Study of Bones b) Study of muscles c) Study of architecture d) Study of languages

6) Who discovered Uranus ?

- a) Herschel b) Ganleo c) Copernicus d) None of these

7) NaCl is the chemical formula for which common household chemical ?

- a) Hydrogen Peroxide b) Sodium Chloride (Table salt) c) Ammonia d) Water

8) What is the electrical charge of a Neutron ?

- a) No charge b) Positive Charge c) Negative Charge d) Either positive or Negative charge

SCIENCE CENTRE

Science Centre forms the main part of the entire complex; it displays thematic galleries in the field of Science and Technology. The ground floor of Science Centre showcases 3D Theatre and Souvenir Shop. The first floor of Science Centre showcases Fun Science Exhibits and Second floor of Science Centre showcases Diamond Gallery where as Entering into space, Textile Gallery, Power of Play Gallery, Cosmos Gallery and Polar Science Gallery are under development.

3d Show	Tuesday to Friday (Time)	Saturday, Sunday & Holidays (Time)
English	09:15, 11:20, 12:00, 02:40, 04:00	11:20, 12:00, 02:40, 04:00
Hindi	10:00, 10:40, 12:40, 01:20, 02:00, 03:20	12:40, 01:20, 02:00, 03:20, 04:40, 05:20, 06:00
Science Centre + Planetarium + Museum + Diamond Gallery		
Above 18 Years	Rs. 100	
3 Years to 18 Years	Rs. 65	
Science Centre + Museum + Diamond Gallery		Planetarium
Above 18 Years	Rs. 60	
3 Years to 18 Years	Rs. 40	
Science Centre + Planetarium + Museum + Diamond Gallery + 3D Show		
Above 18 Years	Rs. 120	
3 Years to 18 Years	Rs. 80	
Planetarium		
Above 18 Years	Rs. 50	
3 Years to 18 Years	Rs. 40	
3D Show		
Above 18 Years	Rs. 60	
3 Years to 18 Years	Rs. 40	