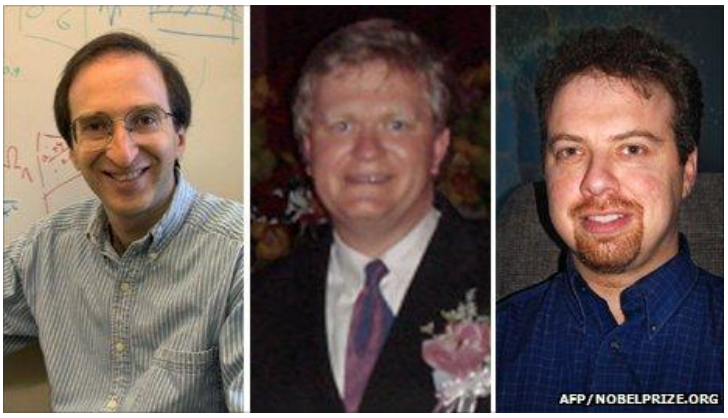
Sound of Science (理聲)

Newsletter of Science Society
November, 2011 二零一一年十一月

NOBEL PHYSICS PRIZE HONORS ACCELERATING UNIVERSE FIND



The three researchers' work has led to an expanding knowledge of our Universe

Three researchers behind the discovery that our Universe's expansion is accelerating have been awarded this year's Nobel Prize for physics.

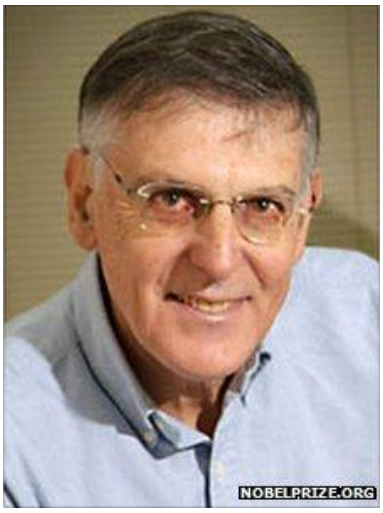
Saul Perlmutter and Adam Riess of the US and Brian Schmidt of Australia will divide the prize.

The trio studied what are called Type 1a supernova (超級新星), determining that more distant (遠的) objects seem to move faster.

Because their explosive ends are of roughly the same brightness, the amount of light observed from the supernovae on Earth should be an indication of their distance; slight shifts in their colour indicate how fast they are moving.

NOBEL WIN FOR CRYSTAL DISCOVERY

"There can be no such creature," Dr Shechtman initially said



The Nobel Prize for chemistry has gone to a single researcher for his discovery of the structure of quasicrystals.

The new structural form was previously thought to be impossible and provoked (激起)controversy (爭論).

Daniel Shechtman, from Technion - Israel Institute of Technology in Haifa, will receive the entire 10m Swedish krona (£940,000) prize.

The Nobel Prize in chemistry caps this year's science awards.

Professor David Phillips, president of the Royal Society of Chemistry, called quasicrystals "quite beautiful".

He added: "Quasicrystals are a fascinating aspect of chemical and material science - crystals that break all the rules of being a crystal at all."

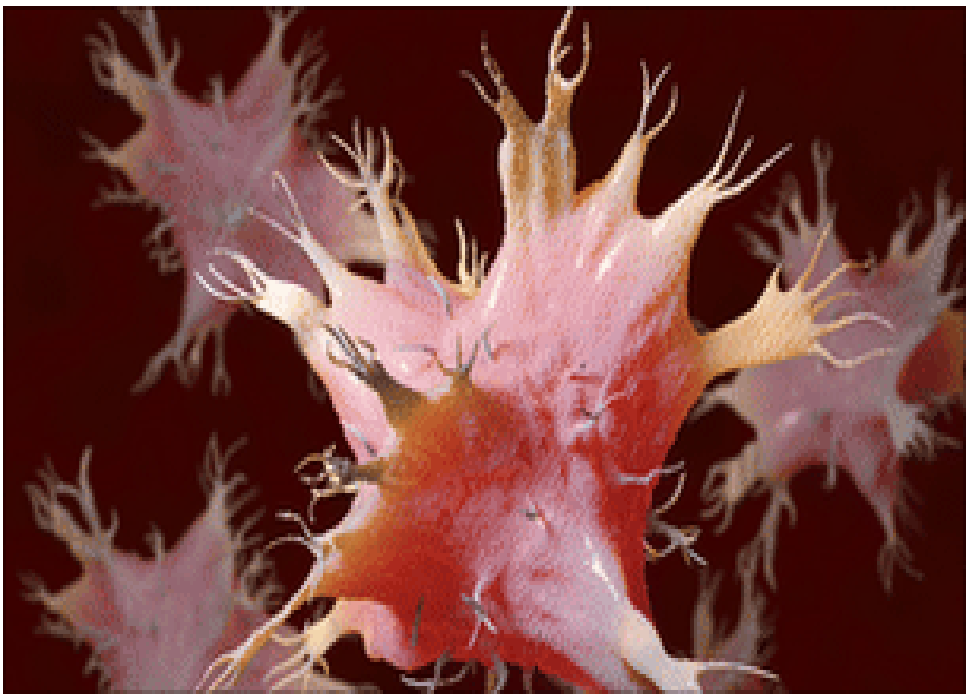
Dr Shechtman had to fight a fierce (兇猛的) battle against established science

to convince others of what he had first seen in his lab at the National Institute of Standards and Technology in Washington - formerly called the National Bureau of Standards - on an April morning in 1982.

THE NOBEL PRIZE WINNERS

Three scientists who "revolutionised" (徹底改革) understanding of how the body fights infection have shared this year's Nobel prize for medicine. Bruce Beutler, of the US, Jules Hoffmann from France and Ralph Steinman from Canada all shared the prize. Profs Beutler and Hoffman discovered how the body's first line of defence was activated. Prof Steinman discovered the dendritic cell, which helps defeat infection.

In 1996, Prof Hoffmann discovered that a gene (基因) called "Toll" was essential for kick starting the innate (與生俱來的)system in fruit flies. Without the gene, the flies could not "sense" and then fight bacterial infection.



An equivalent gene, Toll-like receptor, was found by Prof Beutler in 1998 in his study on mice. More than a dozen Toll-like receptors have since been found in humans. The adaptive (適合的) immune system takes longer to activate, but clears the infection and can provide long lasting protection.

Prof Steinman discovered, in 1973, the dendritic (樹狀突的) cell. He showed that it can act as a bridge between the two immune systems, deciding whether to activate the adaptive system. The Nobel prize committee said: "Together Bruce Beutler, Jules Hoffmann and Ralph Steinman have revolutionized understanding of the immune system by discovering key principles for its activation. "They have opened up new avenues for prevention and therapy (治療) ."

LUNCH TIME VIDEO SHOW: NOV 2011

古獸再現 / 聖經解密

(12:20P.M.)@CHEM LAB RM512

Date	Name of Program	Language / Subtitle	Area
1/11 (Tue)	Prehistoric Hunters: Short-faced bears 史前掠食巨獸：短面熊 (Part I)	English/ Chinese	Archeology 考古學
4/11 (Fri)	Prehistoric Hunters: Short-faced bears 史前掠食巨獸：短面熊 (Part II)	English / Chinese	Archeology 考古學
15/11 (Tue)	Quest For Dragons 龍的傳說 (Part I)	English / Chinese	Archeology 考古學
18/11 (Fri)	Quest For Dragons 龍的傳說 (Part II)	English / Chinese	Archeology 考古學
22/11 (Tue)	Search for Adam 尋找亞當 (Part I)	English/ Chinese	Archeology 考古學
25/11 (Fri)	Search for Adam 尋找亞當 (Part II)	English/ Chinese	Archeology 考古學

科普講座名稱	日期	時間	地點	講員
核能是安全和可靠嗎?	26.11.2011 (星期六)	2:30p.m. - 3:30 p.m	科學館演講廳	陸炳林博士(香港城市大學機械及生物醫學工程學系高級工程師)
認識核能發電及香港 燃料組合	17.12.2011 (星期六)			蘇木山先生 (機電工程署 機電工程師)

電影名稱	日期	票價	地點
星河傳說	至12月31日	前座12元，後座16元 (優惠票)	何鴻燊天象廳 (香港太空館)
古海龍王	至2月29日		

SCIENCE SOCIETY 2011-12

Chairperson: Mak Shun Ki 麥順淇 4E

Committee Member: Lau Wai Nim 劉威念 4A, Lee Ka Hang 李嘉恒 4A, Tang Pui Kei 鄧珮琦 4A, Lam Ho Lim 林皓廉 4D,Wong Chun Fung 黃進鋒 4D, Chau Iris 周雅詩 4E & Chik Chung Yin 植頌然 4E

RELAX A MOMENT!

We successfully held the first funny experiment on the 7th of October.

In the next funny experiment, We will do more interesting and incredible experiments with the participants. Hope you can join us!

7				8		3		
1	9	5	7					
	6	3					9	
		9	3	2	5	8		
	8					4	2	
					2	6	4	1
		7		3				8

Please welcome to join our lunch time video show activity. There are many exciting videos are waiting for you!

Previous Answer:

8	2	5	4	9	7	1	3	6
7	9	6	5	1	3	2	8	4
3	4	1	6	8	2	7	9	5
6	8	4	2	7	1	3	5	9
9	1	2	8	3	5	6	4	7
5	3	7	9	6	4	8	1	2
2	7	3	1	5	9	4	6	8
4	5	8	3	2	6	9	7	1
1	6	9	7	4	8	5	2	3

SCIENCE QUIZ(1/11-30/11)

Q1. Who is not the 2011 Nobel prize winner mentioned on the news above?
A. Bruce Beutler B. Jules Hoffmann C. Steve Jobs D. Ralph Steinman

Q2. Bruce Beutler is a Brazilian (T/F)

Q3. Spain's Altamira Cave is now open to public. (T/F)

Q4. What problems will occur if the Spain's Altamira Cave opens to public again? A. Increase in temperature B. reactivating condensation C. rock corrosion

Previous Answers (Oct): Q1. C Q2. T Q3. C Q4. F Q.T

You can use the answer sheet on the right to answer the question. Collection box is put on the notice board of Science Society near the Staff Common Room (Rm102). The students who answer all correct will be given a special gift. Everyone can submit one answer sheet only. Extra copy of "Sound of Science" can be found in library. Thanks for your participation!

Name:_____

Class:_____(____)

1._____ **4.**_____

2._____ **5.**_____

3._____

Hope you can find out the answers and know more about Science!