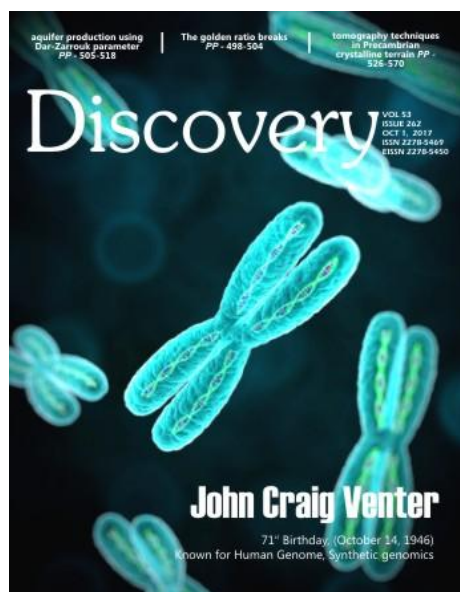


Discovery

About the Cover



CELEBRITY OF THE MONTH

John Craig Venter

71st Birthday, (October 14, 1946)

Known for Human Genome, Synthetic genomics

John Craig Venter is an American biologist and entrepreneur. He was born on October 14, 1946, in Salt Lake City. He earned a doctorate in physiology and pharmacology from the University of California at San Diego and entered the world of biochemical research at the National Institutes of Health. Venter founded Celera Genomics, The Institute for Genomic Research (TIGR) and the J. Craig Venter Institute (JCVI). He is one of the first to sequence the human genome. He is a member of the USA Science and Engineering Festival's Advisory Board. He was an American geneticist, biochemist, and businessman who pioneered new techniques in genetics and genomics research and headed the private-sector enterprise, Celera Genomics, in the Human Genome Project (HGP). Venter's first wife sequenced the genome of the microorganism *Mycoplasma genitalium*. In 1995, in collaboration with American molecular geneticist Hamilton Smith of Johns Hopkins University, in Baltimore, Md., Venter determined the genomic sequence of *Haemophilus influenzae*, a bacterium that causes earaches and meningitis in humans. The achievement marked the first time that the complete sequence of a free-living organism had been deciphered, and it was accomplished in less than a year. Venter has also contributed to the sequencing of the genomes of the fruit fly, mouse, and rat, and he is the founder or co-founder of The Institute for Genomic Research (1992), Celera Genomics (1998), Synthetic Genomics (2005), and the J. Craig Venter Research Institute (2006). Critics and colleagues have described Venter as an egomaniac. He developed a pioneering system for tagging genes called expressed sequencing tags (ESTs), and later sequenced the entire human genome. He is a member of numerous prestigious scientific organizations including the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Society for Microbiology (Image: static.independent.co.uk).

ANALYSIS

The golden ratio breaks

Zhen-hua Mei

Based on El Naschie's relation ($r^{-1} = 20/w^4$), it was found that the golden ratio is slightly broken at subatomic scale. That takes significant physical meanings. However it is nothing if its energy was as high as about the magnitude of MeV; there are almost no consequence are caused, otherwise as energy down lowed at or below KeV, the symmetry would break at all. Also because of the broken, that the multidimensional real physical space above four dimensions was proved exist in subatomic scale.

Discovery, 2017, 53(262), 498-504

RESEARCH

Estimation and characterization of aquifer production using Dar-Zarrouk parameter in crystalline basement terrain, southwest, Nigeria

Cyril Chibueze Okpoli, Abel Idowu Olayinka, Michael Adeyinka Oladunjoye

The estimation and characterization of aquifer productivity of thirty six vertical electrical soundings were applied to hydrogeological and geophysical data. The data was acquired, digitized and analysed; which was aimed at characterizing the productivity of the aquifer system using Dar-Zarrouk parameter. From the borehole logs 13 wells has poor aquifer while 23 wells are good aquifer. The results show hydraulic conductivity, transmissivities, total transverse resistance and longitudinal unit conductance range from 0.31m/s to 11.4m/s; 0.78 to 243.5m/s; 159.1 to 50,425.7 Ω m² and 0.01 to 0.22 siemens respectively. It is evident that aquiferous zones have poor to good permeability which revealed why wells in the study area usually have low to high yield due to clay and weathered/fractured layers respectively.

Discovery, 2017, 53(262), 505-518

REVIEW

Red meat consumption and cardiovascular disease

Neil K Agarwal, Shashi K Agarwal

Several epidemiological and meta-analytical studies have concluded that consumption of red meat and processed meat leads to an increase in several chronic diseases. These include type II diabetes, colorectal cancer, and cardiovascular diseases. This dietary habit also leads to an increase in cardiovascular mortality and all-cause mortality. The detrimental association is seen in both men and women. These adverse effects are not seen with consumption of white meat. This review looks at the evidence based data behind this association, the possible mechanisms involved and the emerging recommendations regarding red meat and processed meat intake.

Discovery, 2017, 53(262), 519-525