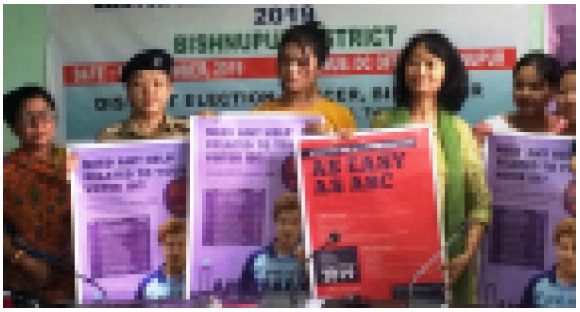
Elector Verification Programme Launched At Bpr

DIPR
BISHNUPUR, September 2,



To improve the health of electoral rolls and augment enrolment of all eligible citizens, Neeta Arambam, Deputy Commissioner of Bishnupur launched Elector Verification Programme (EVP) & "Mega Million" yesterday at Conference Hall, Mini-Secretariat Campus, Bishnupur. The event was organized by District Election Officer, Bishnupur.

The DC also launched Election Verification Facilitation Centre at District level and Electoral Registration officers in the event. Similar launching programmes were also held at ERO offices of the district. The District Administration also facilitated District Icon Mr. Hemchand Haobijam, Sumang Leela Artist and 2 Campus Ambassadors each from the six Assembly Constituencies of the districtduring the event.

Relaying the message from Election Commission of India (ECI) the DC stated that voters can verify themselves with an additional document, rectify errors in their particulars, change their old/ black and white photograph to coloured one, remove multiple entries of their names and link the family living together to one polling station within the 45 days exercise. She urged the voters to cooperate with the verification process and extend support to the government officials on duty.

Laishram Priyadashini, SP, Bishnupur, DLOs and staffs also attended the event.

A R Organises Community Service

IGAR (South)
ImphalSeptember 2,

Mantripukhri Battalion of 9 Sector Assam Rifles under the aegis IGAR (South) organised community service with an aim to interact with the local populace as well as sensitise them in regards to existing security situation in the area.

The community service cum interaction was organised by Yangangpokpi Company Operating Base (COB) of Mantripukhri Battalion at Laikot Kom village Baptist Church, Kangpokpi district. The interaction was aimed to familiarise and orient troops of the COB with the locals as well as identify with their local customs and traditions. The event commenced with offering of prayers followed by an interaction with the villagers. It was followed by an interaction with the villagers during which they willingly shared their various issues of concern with the troops of the Battalion. Tea and refreshments were provided to the villagers after culmination of the interactive meet.

News from the world of Science and Tecnology

Astronomers Catch Asteroid in the Act of Changing Color – For the First Time Ever

Courtesy : SciTech Daily
By Jennifer Chu,
Massachusetts Institute of Technology

The asteroid is likely shedding reddish dust, revealing a fresh, blue surface beneath.

Last December, scientists discovered an "active" asteroid within the asteroid belt, sandwiched between the orbits of Mars and Jupiter. The space rock, designated by astronomers as 6478 Gault, appeared to be leaving two trails of dust in its wake — active behavior that is associated with comets but rarely seen in asteroids.

While astronomers are still puzzling over the cause of Gault's comet-like activity, an MIT-led team now reports that it has caught the asteroid in the act of changing color, in the near-infrared spectrum, from red to blue. It is the first time scientists have observed a color-shifting asteroid, in real-time.

"That was a very big surprise," says Michael Marsset, a postdoc in MIT's Department of Earth, Atmospheric and Planetary Sciences (EAPS). "We think we have witnessed the asteroid losing its reddish dust to space, and we are seeing the asteroid's underlying, fresh blue layers." Marsset and his colleagues have also confirmed that the asteroid is rocky — proof that the asteroid's tail, though seemingly comet-like, is caused by an entirely different mechanism, as comets are not rocky but more like loose snowballs of ice and dust.

"It's the first time to my knowledge that we see a rocky body emitting dust, a little bit like a comet," Marsset says. "It means that probably some mechanism responsible for dust emission is different from comets, and different from most other active main-belt asteroids."

Marsset and his colleagues, including EAPS Research Scientist Francesca DeMeo and Professor Richard Binzel, have published their results today in the journal *Astrophysical Journal Letters*.

A rock with tails

Astronomers first discovered 6478 Gault in 1988 and named the asteroid after planetary geologist Donald Gault. Until recently, the space rock was seen as relatively average, measuring about 2.5 miles wide and orbiting along with millions of other bits of rock and dust within the inner region of the asteroid belt, 214 million miles from the sun.

In January, images from various observatories, including NASA's Hubble Space Telescope, captured two narrow, comet-like tails trailing the asteroid. Astronomers estimate that the longer tail stretches half a million miles out, while the shorter tail is about a quarter as long. The tails, they concluded, must consist of tens of millions of kilograms of dust, actively ejected by the asteroid, into space. But how? The question reignited interest in Gault, and studies since then have unearthed past instances of similar activity by the asteroid.

"We know of about a million bodies between Mars and Jupiter, and maybe about 20 that are active in the asteroid belt," Marsset says. "So this is very rare."

He and his colleagues joined the search for answers to Gault's activity in March, when they secured observation time at NASA's Infrared Telescope Facility (IRTF) on Mauna Kea, Hawaii. Over two nights, they observed the asteroid and used a high-precision spectrograph to divide the asteroid's incoming light into various frequencies, or colors, the relative intensities of which can give scientists an idea of an object's composition.

From their analysis, the team determined that the asteroid's surface is composed mainly of silicate, a dry, rocky material, similar to most other asteroids, and, more importantly, not at all like most comets.

Comets typically come from the far colder edges of the solar system. When they approach the sun, any surface ice instantly sublimates, or vaporizes into gas, creating the comet's characteristic tail. Since Marsset's team has found 6478 Gault is a dry, rocky body, this means it likely is generating dust tails by some other active mechanism.

A fresh change

As the team observed the asteroid, they discovered, to their surprise, that the rock was changing color in the near-infrared, from red to blue.

"We've never seen such a dramatic change like this over such a short period of time," says co-author DeMeo.

The scientists say they are likely seeing the asteroid's surface dust, turned red over millions of years of exposure to the sun, being ejected into space, revealing a fresh, less irradiated surface beneath, that appears blue at near-infrared wavelengths.

"Interestingly, you only need a very thin layer to be removed to see a change in the spectrum," DeMeo says. "It could be as thin as a single layer of grains just microns deep."

So what could be causing the asteroid to turn color? The team and other groups studying 6478 Gault believe the reason for the color shift, and the asteroid's comet-like activity, is likely due to the same mechanism: a fast spin. The asteroid may be spinning fast enough to whip off layers of dust from its surface, through sheer centrifugal force. The researchers estimate it would need to have about a two-hour rotation period, spinning around every couple of hours, versus Earth's 24-hour period.

"About 10 percent of asteroids spin very fast, meaning with a two- to three-hour rotation period, and it's most likely due to the sun spinning them up," says Marsset.

This spinning phenomenon is known as the YORP effect (or, the Yarkovsky-O'Keefe-Radzievskii-Paddack effect, named after the scientists who discovered it), which refers to the effect of solar radiation, or photons, on small, nearby bodies such as asteroids. While asteroids reflect most of this radiation back into space, a fraction of these photons is absorbed, then reemitted as heat, and also momentum. This creates a small force that, over millions of years, can cause the asteroid to spin faster.

Astronomers have observed the YORP effect on a handful of asteroids in the past. To confirm a similar effect is acting on 6478 Gault, researchers will have to detect its spin through light curves — measurements of the asteroid's brightness over time. The challenge will be to see through the asteroid's considerable dust tail, which can obscure key portions of the asteroid's light.

Marsset's team, along with other groups, plan to study the asteroid for further clues to activity, when it next becomes visible in the sky.

"I think [the group's study] reinforces the fact that the asteroid belt is a really dynamic place," DeMeo says. "While the asteroid fields you see in the movies, all crashing into each other, is an exaggeration, there is definitely a lot happening out there every moment."

(This research was funded, in part, by the NASA Planetary Astronomy Program.)

News from the world of Medicine

Diabetes Medication May Protect Against Heart Disease

Courtesy : SciTech Daily
By St. Michael's Hospital

A new study from St. Michael's Hospital in Toronto, Canada shed lights on how a class of medications that help regulate blood sugar for patients with Type 2 diabetes can also protect against heart disease.

The findings from the EMPA-HEART CardioLink-6 Trial, presented today at the ESC Congress 2019, organized by the European Society of Cardiology, and simultaneously published in *Cell Metabolism*, focus on the effect of a diabetes medication – empagliflozin – on cell repair in blood vessels and the resulting risks of heart disease. Empagliflozin is a medication that falls under a category of drugs called SGLT2 inhibitors, which lower blood sugar.The research suggests that circulating progenitor cells– which are found in bone marrow and play a role in heart health – along with inflammatory cells are regulated with this diabetes medication. For patients who have diabetes and are at risk of heart disease, such medications may provide heart protection by relieving damaged cells that would otherwise perpetuate heart disease by causing faulty vessel repair.

"We have seen large-scale clinical trials giving us clear evidence that SGLT2 inhibitors can also protect our patients who have diabetes from heart disease," said Dr. Subodh Verma, a cardiac surgeon and scientist at the Keenan Research Centre for Biomedical Science (KRCBS) of St. Michael's Hospital. "Before our study, it wasn't known why this was happening."According to the World Health Organization, an estimated 1.6 million deaths were caused by diabetes in 2016. It is a major cause of blindness, kidney failure, heart attacks, stroke and lower limb amputation. Heart disease is a major concern for people with diabetes as they often have compromised blood vessel repair, making them more susceptible to cardiovascular issues.

The team at St. Michael's collaborated with Dr. David Hess, an associate professor at Western University's Schulich School of Medicine & Dentistry and a scientist at Robarts Research Institute. Dr. Hess is an expert in the identification and quantification of blood vessel progenitor cells. Using blood samples from the EMPA-HEART CardioLink-6 Trial, Dr. Hess was able to show that in diabetes, regenerative progenitor cells were reduced. In patients who took empagliflozin, however, these progenitor cells were restored.

"We found that in people with diabetes, not only were beneficial progenitor cells increased but we saw indications of reduced inflammation and oxidative stress, which can also contribute to cardiovascular disease," said Dr. Hess.

For patients with diabetes, this is an important step forward to reduce their risk of heart disease, Dr. Verma said.

The team at St. Michael's included: Dr. Verma; Dr. Rotstein; Dr. David Mazer, an anesthesiologist and scientist at the KRCBS; Dr. Mohammed Al-Omran, a heart surgeon and scientist at the KRCBS; Dr. Kim Connelly, a cardiologist and scientist at the KRCBS; Dr. Andrew Yan, a cardiologist; and Dr. Lawrence Leiter, an endocrinologist and scientist at the Li Ka Shing Knowledge Institute.

The researchers say these novel findings may provide the basis for new therapies for patients who have heart disease complicated by diabetes.

The EMPA-HEART CardioLink-6 trial was supported by an unrestricted investigator-initiated study grant from Boehringer Ingelheim, a pharmaceutical company that manufactures empagliflozin.

New Study Suggests: Eat Nuts for a Lower Risk of Fatal Heart Attack and Stroke

Courtesy : SciTech Daily
By- European Society of Cardiology

This study examined the association between nut consumption and the risk of cardiovascular disease and death in the Iranian population. A total of 5,432 adults aged 35 and older with no history of cardiovascular disease were randomly selected from urban and rural areas of the Isfahan, Arak and Najafabad counties. Intake of nuts including walnuts, almonds, pistachios, hazelnuts, and seeds was assessed in 2001 with a validated food frequency questionnaire.

Participants or family members were interviewed every two years until 2013 for the occurrence of cardiovascular events and death. The specific outcomes investigated were coronary heart disease, stroke, total cardiovascular disease, death from any cause, and death from cardiovascular disease.

During a median 12-year follow-up, there were 751 cardiovascular events (594 coronary heart disease and 157 stroke), 179 cardiovascular deaths, and 458 all-cause deaths.

Eating nuts two or more times per week was associated with a 17% lower risk of cardiovascular mortality compared to consuming nuts once every two weeks. The connection was robust even after adjusting for factors that could influence the relationship such as age, sex, education, smoking, and physical activity. Nut intake was inversely associated with the other outcomes but lost significance after adjustment.ESC guidelines list 30 grams of unsalted nuts per day as one of the characteristics of a healthy diet, while noting that the energy density of nuts is high.

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Violence against medical .....

It should always be noted that for instance, in cases of dengue with multiple organ failure, tremendous efforts are put in by the doctors and upto 60-70% of the cases survive after being admitted in ICU for many days. The result of ongoing blame game can be slowing the private healthcare (with lack of Government involvement), doctors also are becoming wary of taking up critically sick patients. With complete destruction of trust and faith between the doctor and patient community has only led to worsening of the situation.

Instead of relying only upon improving the infrastructure, beds, advanced machinery in government hospitals and governments expenditure on healthcare, research on low cost medication and scientific solution(without solely depending upon ayurveda and homeopathy) better outcomes can also be achieved. Changes in insurance policies according to the cost of modern healthcare, educating doctors for better communication and documentation along with finding solution to prevent corruption will definitely revive the best doctor - patient trust.

Fortunately 19 states have enacted a law which is known as prevention of violence against the medical fraternity and medical establishments, which has different provision. This is the main reason for putting up a strong central law to check violence on the medical profession. But as we all know that law alone cannot serve the purpose unless, we both doctors and the patients don't realize the sensitivity of the situation and make attempts to improve the doctor-patient relationship.