TRINITY MIRROR

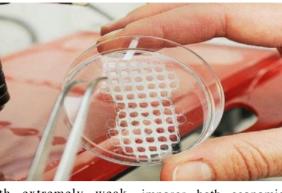
Health Matters Static electricity enhance biomedical implant durability

integrating science and medicine have improved the quality of life for patients. Especially noteworthy is the emergence of electronic devices implanted in the or brain, which enable real-time measurement and regulation of physiological signals. presenting new solutions for challenging conditions like Parkinson's disease. However, technical constraints have hindered the semi-permanent use of their implantation.

A collaborative research team led by electrostatic materials Professor Sung-Min Park that function even

Medical technology from the Departments innovations achieved by of Convergence IT Engineering, Mechanical Engineering, and Electrical Engineering, and the School of Interdisciplinary Bioscience and Bioengineering at POSTECH, alongside body, such as in the heart Jiho Lee, enrolled in the MS/PhD programme, and Professor Sang-Woo Kim from Yonsei University's Department of Materials Science and Engineering, together with Dr. Young-Jun Kim and MS/PhD student Joon-Ha Hwang from Sungkyunkwan University, has achieved

electronic devices after a groundbreaking development. They've created



with extremely weak ultrasound, heralding the era of permanent implantable electronic devices in biomedicine.

Patients with implanted devices need to undergo periodic surgeries for battery replacement.

This process carries a significant risk of complications and

Now, researchers could

to see what was causing

In fact, colitis devel-

oped because of the

composition of the gut

microbiota, which caused

hyper-activated while

imposes both economic and physical burdens on patients.

Recent research explores implantable medical devices that operate wirelessly, yet finding a safe energy source and protective materials remains challenging.

Presently, titanium (Ti) is used due to its

biocompatibility and durability.

However, radio waves cannot pass through this metal, necessitating a separate antenna for wireless power transmission.

Consequently, this enlarges the device size, creating more discomfort for patients. The research team

addresses this issue by opting for ultrasound, a safety-validated method in various medical fields for diagnoses and treatments, instead of radio waves. They developed an

electrostatic material capable of responding to weak ultrasound by high dielectric polymers

high dielectric constant activated even at standard ceramic material known imaging ultrasound levels as calcium copper titanate (CCTO, CaCu3Ti4O12). This material generates static electricity through friction between its material layers, producing effective electrical energy, and possesses an extremely low output impedence, facilitating stimulation. efficient transmission of Park stated: "We have the generated electricity. Using this technology, the addressed the challenges research team created an

in the field of implantable implantable neurological medical devices using stimulator powered by ultrasound-based energy ultrasound-based energy transmission technology that is harmless to transmission, eliminating the human body. This the need for batteries. research serves as a case

This was confirmed utilizing a composite of through experimental of introducing advanced validation. In animal material technology into medical devices."

(P(VDF-TrFE)) and a model trials, the device was (500 mW/cm2), imposing minimal strain on the human body.

Professor Sung-Min

industry, including the treatment of intractable Furthermore, it diseases using implantable effectively mitigated devices." Professor Sang-Woo symptoms related to abnormal urination caused Kim remarked: "Devices by overactive bladder manufactured based on disorders through nerve

highly biocompatible materials exhibit excellent mechanical and chemical stability, making them suitable for treating various diseases requiring longterm therapy. Non-battery, miniaturized components with established longterm stability are expected to bring forth new innovations in the market of human-insertable

medical devices, and we

anticipate that it will

promote the emergence of

a next-generation medical

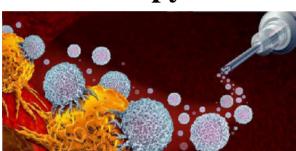
Cancer immunotherapy without side effect

Researchers at the University of Michigan Health Rogel Cancer Centre have identified a mechanism that causes severe gastrointestinal problems with immunebased cancer treatment.

They also found a way to deliver immunotherapy's cancer-killing impact without the unwelcome side effect.

"This is a good example of how understanding a mechanism helps you to develop an alternative therapy that's more beneficial. Once we identified the mechanism causing the colitis, we could then develop ways to overcome this problem and prevent colitis while preserving the anti-tumor effect," said senior study author Gabriel Nunez, MD. Paul de Kruif Professor of Pathology at

Michigan Medicine. Immunotherapy has this side effect. emerged as a promising treatment for several types Rogel team, led by first put the brakes on T cell



Ph.D., created a new But immune checkpoint inhibitors can also cause mouse model, injecting severe side effects, inmicrobiota from wildcluding colitis, which is caught mice into the inflammation in the digestraditional mouse model. In this model, the mice tive tract.

did develop colitis after Colitis can cause severe administration of antibodgastrointestinal discomies used for tumor imfort, and some patients will discontinue their munotherapy. cancer treatment because trace back the mechanism of it.

The problem facing researchers was that while patients were developing colitis, the laboratory mice were not. So researchers couldn't

study what was causing immune T cells to be To get past this, the regulatory T cells that in the gut.

This was happening within a specific domain of the immune checkpoint antibodies. Researchers then removed that domain, which they found still resulted in a strong anti-tumor response but without inducing colitis.

"Previously, there were some data that suggested the presence of certain bacteria correlated with response to therapy. But it was not proven that microbiota were critical to develop colitis. This work for the first time shows that microbiota are essential to develop colitis from immune checkpoint inhibition," Nunez said.

To follow up what they saw in mice, researchers reanalyzed previously reported data from studies of human cells from patients treated with immune checkpoint antibodies, which reinforced the role of regulatory T cells

Antibiotic over use rings alarm bells Antibiotic resistance is Dr Satyavan Saurabh in or antibiotic resistance. one of the world's most a article says: Antibiotics But if a person is using urgent health problems are important medicines. antibiotics repeatedly, and overuse and misuse Many antibiotics can then the bacteria develop of antibiotics are major successfully treat immunity against that medicine. After this, it factors in antibiotic infections caused by bacteria (bacterial becomes very difficult to resistance, says Dr Satyavan Saurabh. The infections). Antibiotics fix it. This is called antimicrobial resistance. In general public, healthcare can stop the disease from providers, and hospitals spreading. Antibiotics can such a situation, treatment is not done properly but

can all help ensure that reduce serious disease medications are used complications. However, correctly. This may reduce some antibiotics that used the growth of antibiotic to be typical treatments resistance. Overuse of for bacterial infections no antibiotics – especially longer work as well. And when they are not the some drugs don't work at right treatment – promotes all against some bacteria. antibiotic resistance. When an antibiotic no According to the Centers longer works against for Disease Control and certain strains of bacteria, Prevention, about onethose bacteria are said third of antibiotic use to be antibiotic-resistant. in people is neither Antibiotic resistance is necessary nor appropriate. one of the world's most urgent health problems. Healthcare professionals and especially pharmacists Taking antibiotics for play/can play an important colds and other viral role in drug abuse and drug safety. Appropriate and it can create bacteria and effective patient that are harder to kill. education and counseling Taking antibiotics too by pharmacists is key often or for the wrong

is neither necessary nor appropriate.

He also calls for a strong regulatory framework to monitor and enforce compliance with antibiotic prescription guidelines. It includes mechanisms to punish non-compliance and encourage compliance. Regular monitoring of antibiotic resistance patterns is important. The effectiveness of guidelines can be assessed by the ability to track changes in resistance patterns over time and take corrective action. Restricting access to reserve antibiotics is important to reduce resistance. Overuse and misuse of antibiotics are major factors in antibiotic resistance. The general public, healthcare providers, and hospitals can all help ensure that medications are used correctly. This especially when they are not the right treatment may reduce the growth - promotes antibiotic of antibiotic resistance. Healthcare professionals sistance. According to play/can play an important

activation were deleted in inducing colit

this reaction.

Nutrients for Enhanced Immune Health in 2024

Start your new year on a strong note by making a new year resolution to attain better immune health. Good nutrition is critical to support a healthy immune system. There is a strong relationship between poor nutritional status and compromised immunity. By boosting your immunity, you can benefit from better health. Whether you're an adult aiming for optimal health or a parent looking to fortify your child's immunity, incorporating essential nutrients into your daily diet is key.

To help you attain better immune health, Dr. Ganesh Kadhe, Director, Affairs, Abbott's Nutrition Businesslists down important nutrients and their sources that can keep you strong:

Adult Nutrition for **Enhanced Immunity**

fundamental building blocks for every cell in the body, contributing to the development of vital components such as muscles, bones, hormones, and antibodies. It plays a crucial role in fortifying the immune tomatoes, cauliflower, system by supporting the production of antibodies and providing essential amino acids as fuel for immune cells. Eggs stand out as an excellent radicals. Healthy cell

protein source, yet a diverse range of foods, including chickpeas, cottage cheese, quinoa, response. Vitamin E is a Greek yogurt, peanuts, and almonds, also function as significant oils, seeds, and nuts contributors to protein intake.

2. Vitamin A helps regulate the immune system. Known as the "anti-infective vitamin, this nutrient keeps your skin, mouth, stomach, and lungs healthy so that they can fight infection. It's also key for sharp vision. Consume it with some fat for better absorption. Sweet potato, pumpkin, carrots, and spinach are loaded with Vitamin A.

3. Vitamin C helps the Medical and Scientific body build healthy skin and connective tissue, which blocks the entry of foreign microbes. Vitamin C also acts as an antioxidant protecting cells from damage. It also helps protect against 1.Proteinserves as the anemia by helping us absorb more iron from plant foods. Oranges are best known as sources of Vitamin C. However, apart from that, certain foods power-packed with Vitamin C are kiwis, strawberries, broccoli, and red peppers.

an antioxidant, protecting cell membranes from damage due to free

membranes help keep foreign microbes out and support a healthy immune common nutrient found in most foods. Cooking are exceptionally rich sources.

5.Vitamin D is a multitasking nutrient that helps to activate immune cells and regulate their function. Vitamin D helps our bodies absorb calcium and promotes a strong immune system. There are few foods that are naturally rich in vitamin D3, such as flesh of fatty fish and fish liver oils, egg yolks, orange juice and cheese.

6.Zinc is needed for cellular reproduction, which is important in the synthesis of new immune system cells. Zinc is also critical for proper growth and development, especially during childhood and adolescence. Meat, especially the red meat is an excellent source of zinc for those who prefer non vegetarian food. For vegetarians, food like chickpeas, lentils and beans contain substantial quantity of zinc. Seeds could also be a healthy addition to your diet.

Child Nutrition for

1.Protein-Packed

Meals: Children, in their

developmental years,

Strong Immunity

4.Vitamin E works as

benefit from protein-rich foods for growth and a resilient immune system. Include sources like lean meats, dairy products, eggs, legumes, and nuts in their diet

2.Colorful Fruits and Vegetables: Introduce a variety of fruits and vegetables to provide essential vitamins and minerals. Brightly colored produce such as berries, carrots, and leafy greens are not only visually appealing but also rich in nutrients

3.Calcium and Vitamin D for Growth: For better bone health and overall growth ensure sufficient intake of calcium and Vitamin D. Include dairy products, fortified cereals, and kid-friendly Vitamin D-rich foods

4.Fiber for Gut Health: Ensure a balanced diet with fiber-rich foods like whole grains, fruits, and vegetables. A healthy gut contributes to a robust immune system

Prioritizing nutrient rich diet can go a long way in strengthening the immune system, thereby crafting a roadmap to vitality and long-term resilience. Here's to a year of nourishing our bodies, cultivating strength, and unlocking the limitless potential that comes with taking charge of our well-being.

patients, including clinical, economic, and humanitarian outcomes.

to achieving desired

Novel approach for lymph node metastasis treatment

Researchers at Tohoku University have discovered a new approach for treating lymph node metastasis. Anticancer drugs are administered directly into the LNs under ultrasound guidance (Lymphatic Drug Delivery System or LDDS) to target sentinel lymph nodes (LNs) and

generate antitumor effects locally, preventing distant metastasis. This approach not only improves the anticancer effect but also reduces the nasty side effects commonly associated with systemic chemotherapy.

Professor Tetsuya Kodama from Tohoku School of Engineering led the research team. Recent research has

highlighted sentinel LNs as the gateway for metastasis.

They are the initial lymph nodes that receive drainage from a primary tumor and indicate that metastasis has begun or could potentially occur.

Thus, there is a need for improved control of surgical or radiation interventions.

Still, the occurrence of side effects can differ from individual to individual and from one treatment to another.

outcomes for treating to change so much that antibiotics no longer work against them. This is called bacterial resistance

In fact, two individuals

reasons can cause bacteria

undergoing the same treatment may encounter markedly different experiences. Most commonly, some individuals experience uncomfortable side effects that gradually diminish

> over time. In a prior investigation, some of the current researchers utilized LDDS incorporating heightened osmotic pressure and viscosity of docetaxel, yielding promising outcomes in the treatment of early-stage LN metastasis during preclinical research.

Based on this, they University's Graduate hypothesized that administering docetaxel -- a widely used clinical anticancer drug -- through LDDS at an osmotic pressure and viscosity of 1,960 kPa and 12 mPaûs would result in superior antitumor effects, prolonged survival, and minimal adverse reactions. To test this hypothesis, Kodama and his team administered the treatment to a preclinical model LN metastasis without of a metastatic lymph node mouse model. Their findings confirmed superior therapeutic outcomes, increased complete response, improved survival, and reduced adverse complications.

the Centers for Disease and especially pharmacists Control and Prevention, about one-third of role in drug abuse and antibiotic use in people drug safety.

toxins start accumulating

in the liver. A recent

survey by the National Centers for Disease

Control found that more

than half of the nearly

10,000 hospital patients

surveyed for the study

were given antibiotics

to prevent rather than

treat infections. This is

a worrying sign as India

has one of the highest

burdens of drug-resistant

pathogens worldwide,

leading to the high

incidence of antimicrobial

resistance (AMR).

Overuse of antibiotics -

KOTAK MAHINDRA BANK LIMITED (Mulke-Austro) Backang Office 77 BKC C 77 Geleck Bandra Krida Complex Bandra (F) Municia SALE OF ASSL Kotak Kahindra Verse Varinda sant Registered Office: 27 BKC, C 27, G-Block, Bandra Kurla Complex, Bandra (K Maharashtra, Pin Code-400 051 Branch Office : 185,2nd Floor,anna Salai Thousa

SALE NOTICE FOR SALE OF IMMOVABLE PROPERTIES

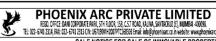
Maharashira, Vin Code-2000 VSI Eranch Office #1625/00 Eloopenna Sala Increase Lights Channel 600 0005 SALE NOTICE FOR SALE OF IMMOVABLE PROPERTIES E-auction sale notice for sale of immovable assets under the securitisation and reconstruction of financial assets and enforcement of security interest act, 2002 under rule 8(5) read with proviso to rule 8(6) of the security interest (enforcement) rule, 2002. Notice is hereby given to the public in general and in particular to the borrower (s) and guarantor (s) that the below described immovable property mortgaged/charged to the secured creditor, the possession of which has been taken by the authorised officer of Kotak Mahindra Bank Ltd. (KMBL) on 03-02-2023, pursuant to the assignment of debt in its favour by Bajal Housing Finance Limited (bft), will be sold on "as is where is", "as is what is", and "whatever there is basis on 02-02-2024 between 12:00 pm to 01:00 pm with unlimited extension of 5 minutes, for recovery of Rs. 44,60, 866/--(Forty four lakh six) thousand six hundred and eighty six only as of 06-1/2024 along with future interest applicable from 07-01-2024 until payment in full with cost and charges under the Loan Account No.403TLH68909494. 403TLH68910412, due to KMBL, secured creditor from Mr. Rs Krishna Murthy, Mrs. G.K Aruna. The reserve price will be Rs. 29,00,000/- (Rupees twenty nine lakh only), the earnest money deposit will be Rs. 29,00,000/- (Rupees twenty nine lakh only), the gamest money deposit will be Rs. 20,000/- (Rupees two lakh ninety thousand only) &last date of submission of end with kycis 01-02-2024. PROPERTY DISCRIPTION - All That Piece And Parcel Of Flat No. Cs-2, 2nd Floor, Block-c, Plot No. A1, A2, B1, Ganapathi Nagar, Logambal Street, S. No. 136, New S. No. 136/2, Vandalur, Guduvanchery, Chengalpet Distric, Chennai-600048 Measuring The Extent Of Land Is 556 Sq. FL Uds Out Of 6680 Sq. FL The Super Built Up Area Of The Flat Is 158 Sq. FL (including Common Area)postal Address-flat No. Cs-2, 2nd Floor, Block-c, Plot No. A1, A2, B1, Gan

For detailed terms and conditions of the sale, please refer to the link https://www.kotak.com/en/bank auctions.html provided in kotak mahindra bank website i.e. www.kotak.comand/or or https://bankauctions.in/

Authorised Officer For Kotak Mahindra Bank Ltd.

ONLINE E - AUCTION

SALE OF ASSET



Place: Chennai Date: 16.01.2024

SALE NOTICE FOR SALE OF IMMOVABLE PROPERTIES E-auction sale notice for sale of immovable assets under the securitization and reconstruction of financial assets and enforcement of security interest act. 2002 under rule 8(5) read with proviso rule 8 (6) of the security interest (enforcement) rule, 2002.

Notice is hereby given to the public in general and in particular to the borrower (s) and guaranto (s) that the below described immovable property mortgaged/charged to the secured creditor, the (Is) that the below described immovable propenty mortgaged/charged to the secured creduit, the physical possession of which has been taken by the authorised officer of Phoenix Arc Private Limited (acting As A Trustee Of Phoenix Trust - Fy 19-5 Scheme E)(PARC) on 24.02.2023, pursuant to the assignment of debt in its favour by Tata Capital Financial Services Limited (TCFSL), whatever there is "basis on 08-02-2024 between 12:00 pm to 01:00 pm with unlimited extension of 5 minutes, for recovery of Rs. 1,27,51,360 (Rupees one crore twenty seven lakh fifty one thousand three hundred and sixty only) as of 31-12-2023 with further interest from 31-12-2023 along with all cost, charges & along with all cost, charges & expense until payment in full, under the Loan Account No. 3122017, due to PARC, secure creditor from Mr. Jegakumar R P K & Mrs. Suja J. The reserve price will be Rs. 1,26,00,000/ (Rupees one crore twenty six lakh only) and the earnest money deposit will Rs.12,60,000/ rupees twelve lakh sixty thousand only) &last date of submission of emd with kyc is 07-02-2024 up to 6.00 pm (ist.)

PROPERTY DISCRIPTION - All That Piece And Parcel Of Flat No. Cs-2, 2nd Floor, Block-c, Plo No. A1, A2, B1, Ganapathi Nagar, Logambal Street, S. No. 136, New S. No. 136/2, Vandalur, Guduvanchery, Chengalpet District, Chennai- 600048 Measuring The Extent Of Land Is 556 Sq. Ft. Uds Out Of 6680 Sq. Ft. The Super Built Up Area Of The Flat Is 1158 Sq. Ft. (including Commo Area)postal Address:-flat No. Cs-2, 2nd Floor, Block-c, Plot No. A1, A2, B1, Ganapathi Nagai Logambal Street, Vandalur, Chennai- 600048

The borrower's attention is invited to the provisions of sub section 8 of section 13, of the sarfaes act, in respect of the time available, to redeem the secured asset. Public in general and borrowers in particular please take notice that if in case auction scheduled herein fails for any reaso In particular please take flottee that in in case autoints strebuled intern fails for any reason whatsoever then secured creditor may enforce security interest by way of sale through e-auction. In case of any clarification/requirement regarding secured assets under sale, bidder may contac Mr. Vishal Adhisheshan (+91 99941016600), Mr. Suriya Narayanan P (+91 9600222111), Mi Vijaykumar Menon (+91 9940572248), Mr.Velmurugan (+91 9884718338) & Mr. Rajende Dahiya (+91 8448264515).

For detailed terms and conditions of the sale, please refer to the link https://phoenixarc.co.in?p=4749provided in parc's website i.e. www.phoenixarc.co.in and/or or https://bankeauctions.com

Place: Chennai	Authorised Officer For PHOENIX ARC PRIVATE LIMITED
Date: 16.01.2024	(acting As A Trustee Of Phoenix Trust - Fy 19-5 Scheme E)