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ANA MARIA OLIVA

PhD Biomedicine

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HIDDEN IN PLAIN SIGHT

COVID-19 "Vaccine" composition

www.universityofterrain.com

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INFORMATION TO MAKE BETTER DECISIONS

OUTLINE

01
CONTEXT

02
HYPOTHESIS

03
COMPONENTS

04
CONCLUSION

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01

CONTEXT

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Origin of Vaccines

Homeopathic remedy to stimulate adaptation

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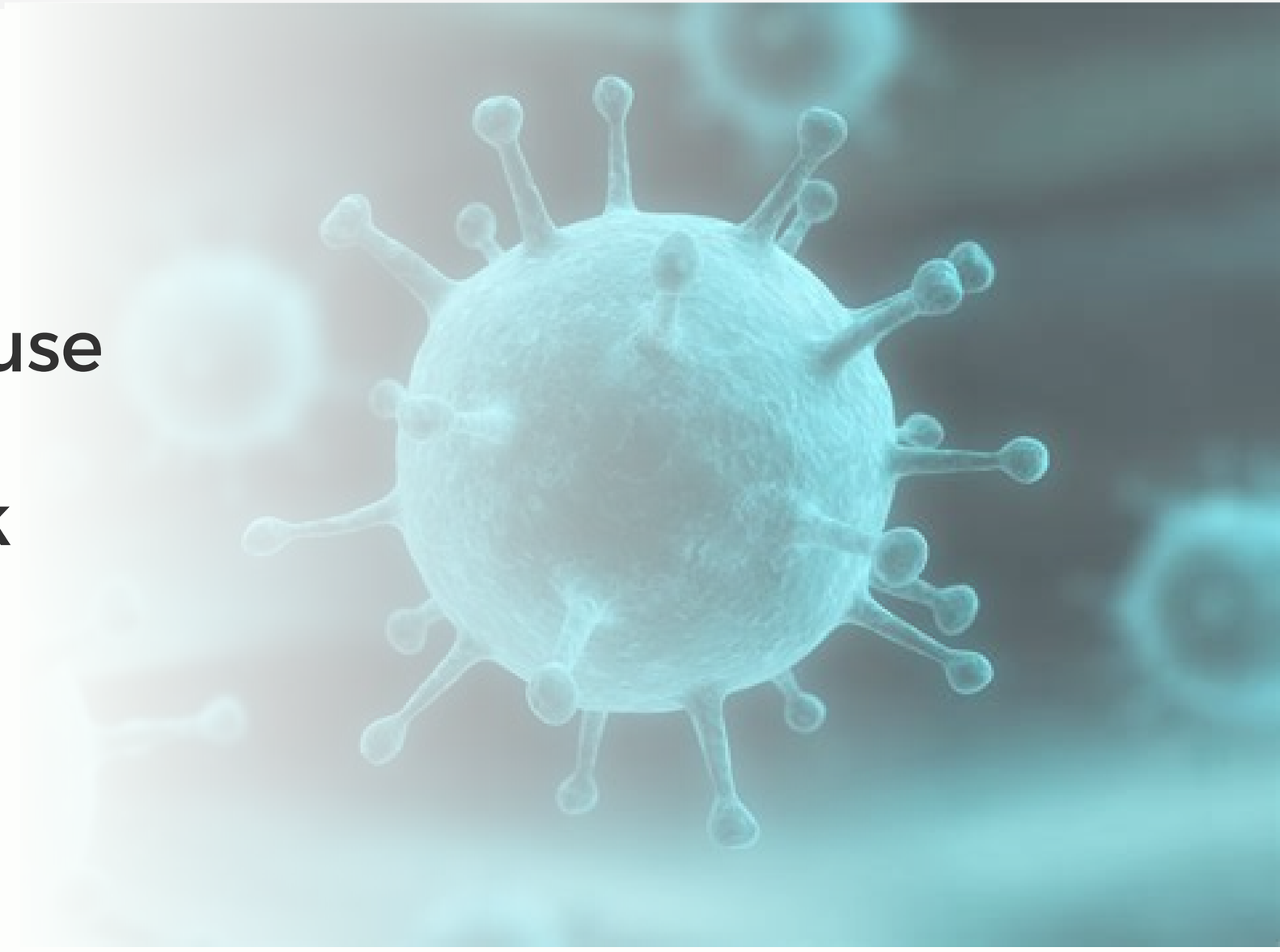
Small CONTEXT

- never isolated
- virus are not cause
- no autopsies
- tests don't work
- "no treatment"



CONTEXT

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CONTEXT

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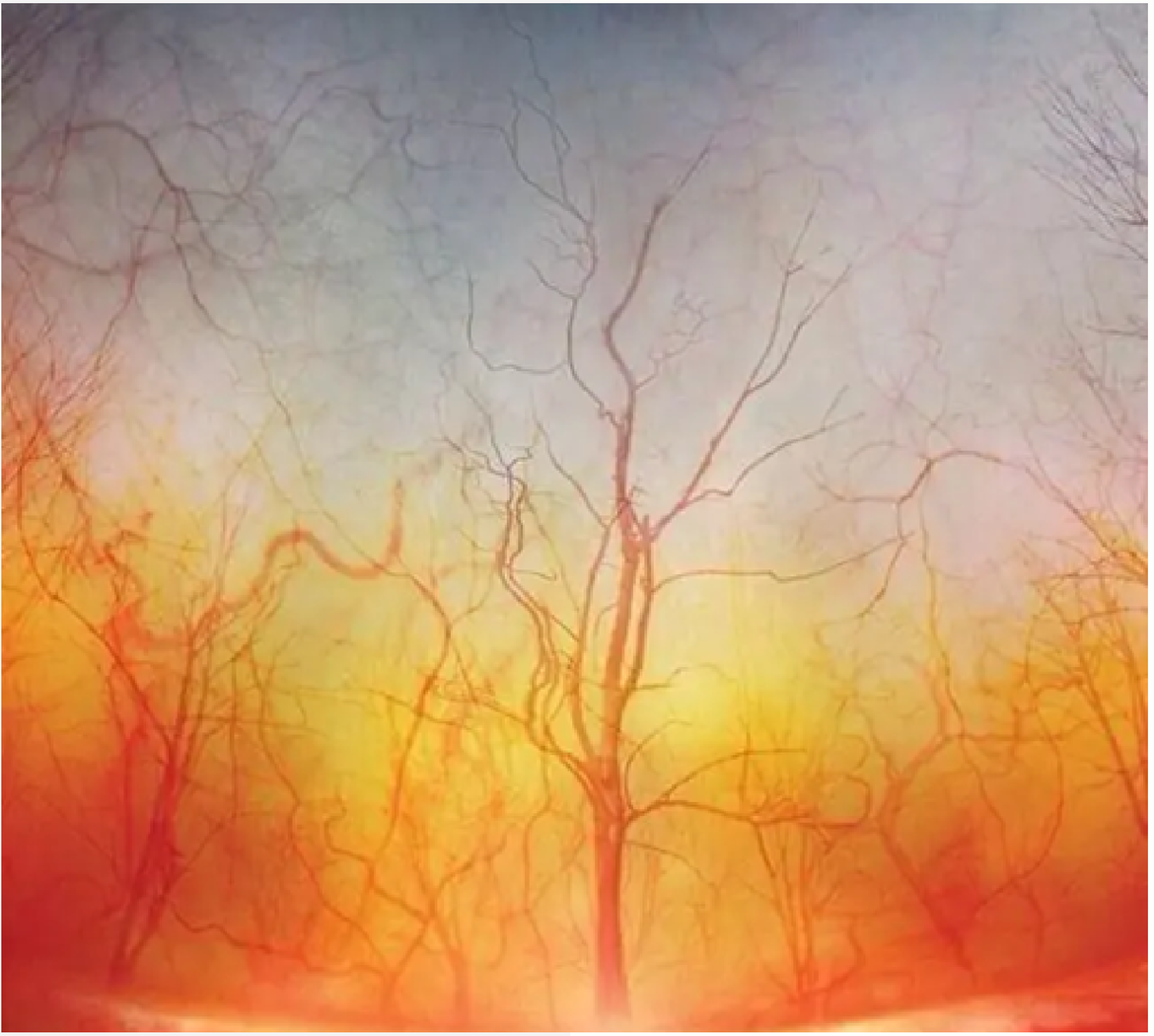
CONTEXT



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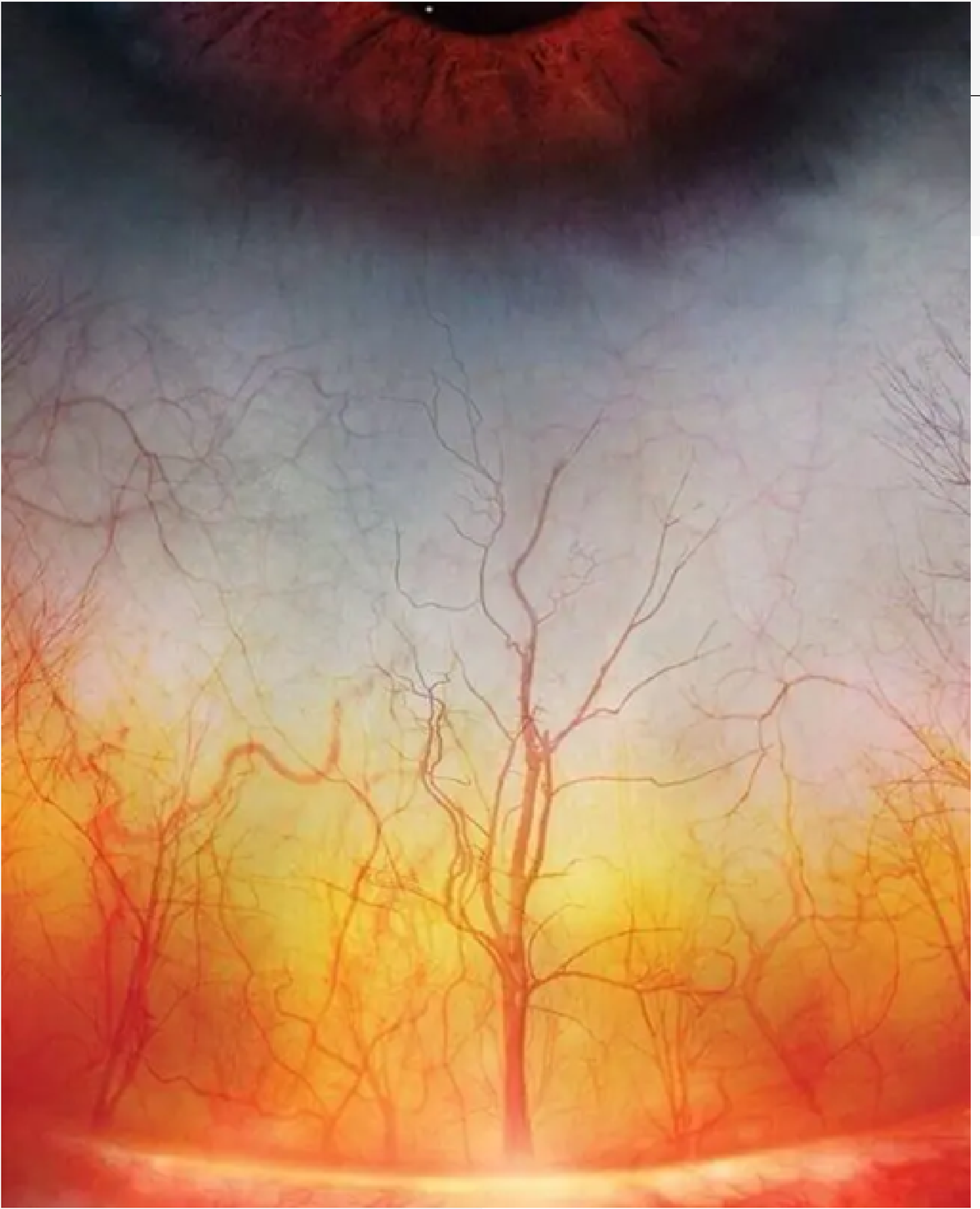

CONTEXT

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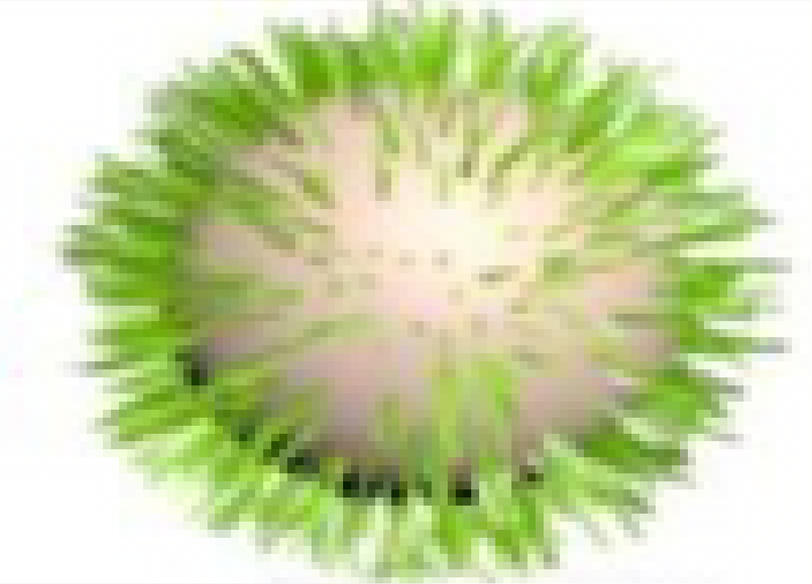
CONTEXT



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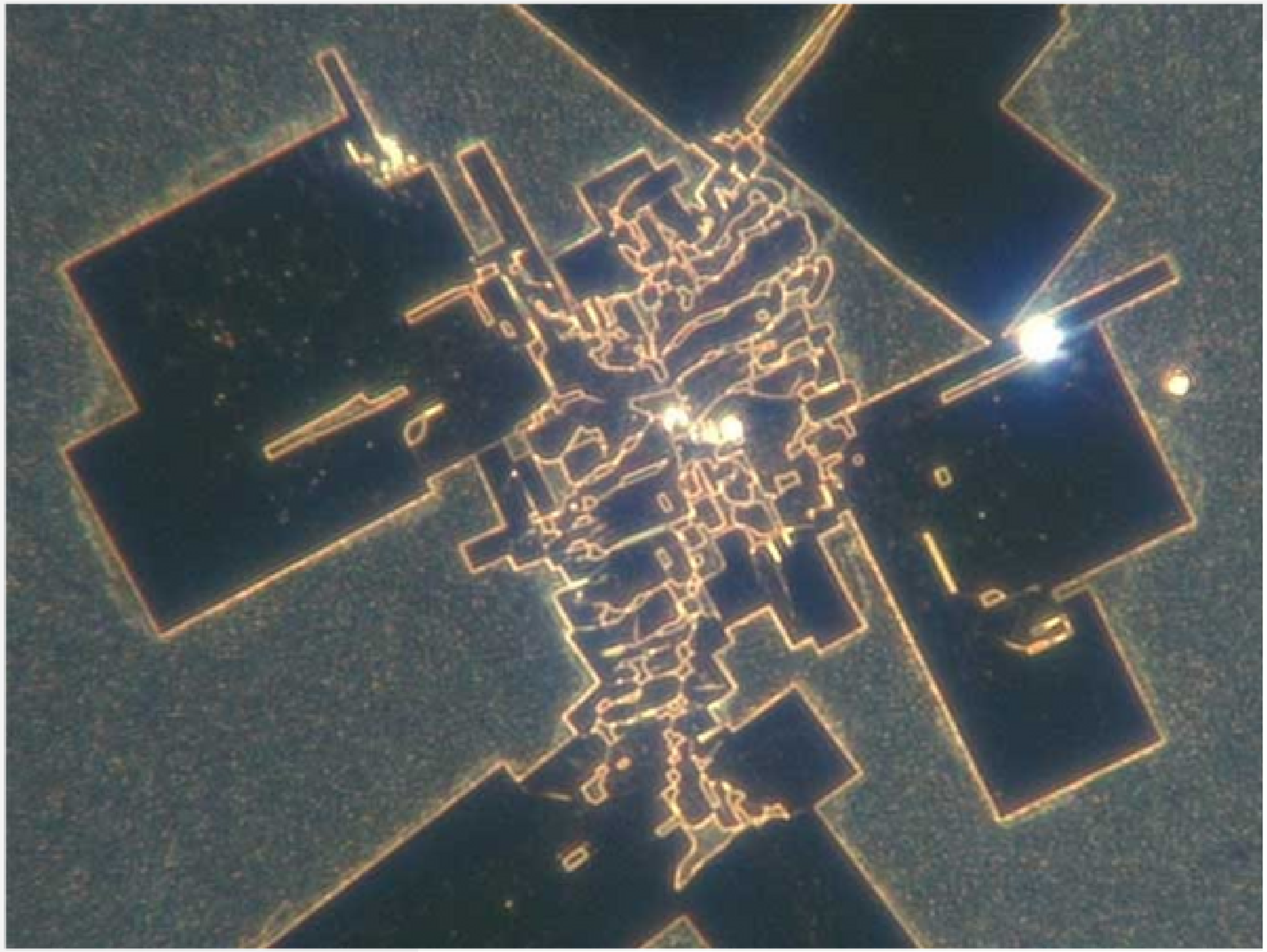
Liberación dirigida de fármacos



CONTEXT

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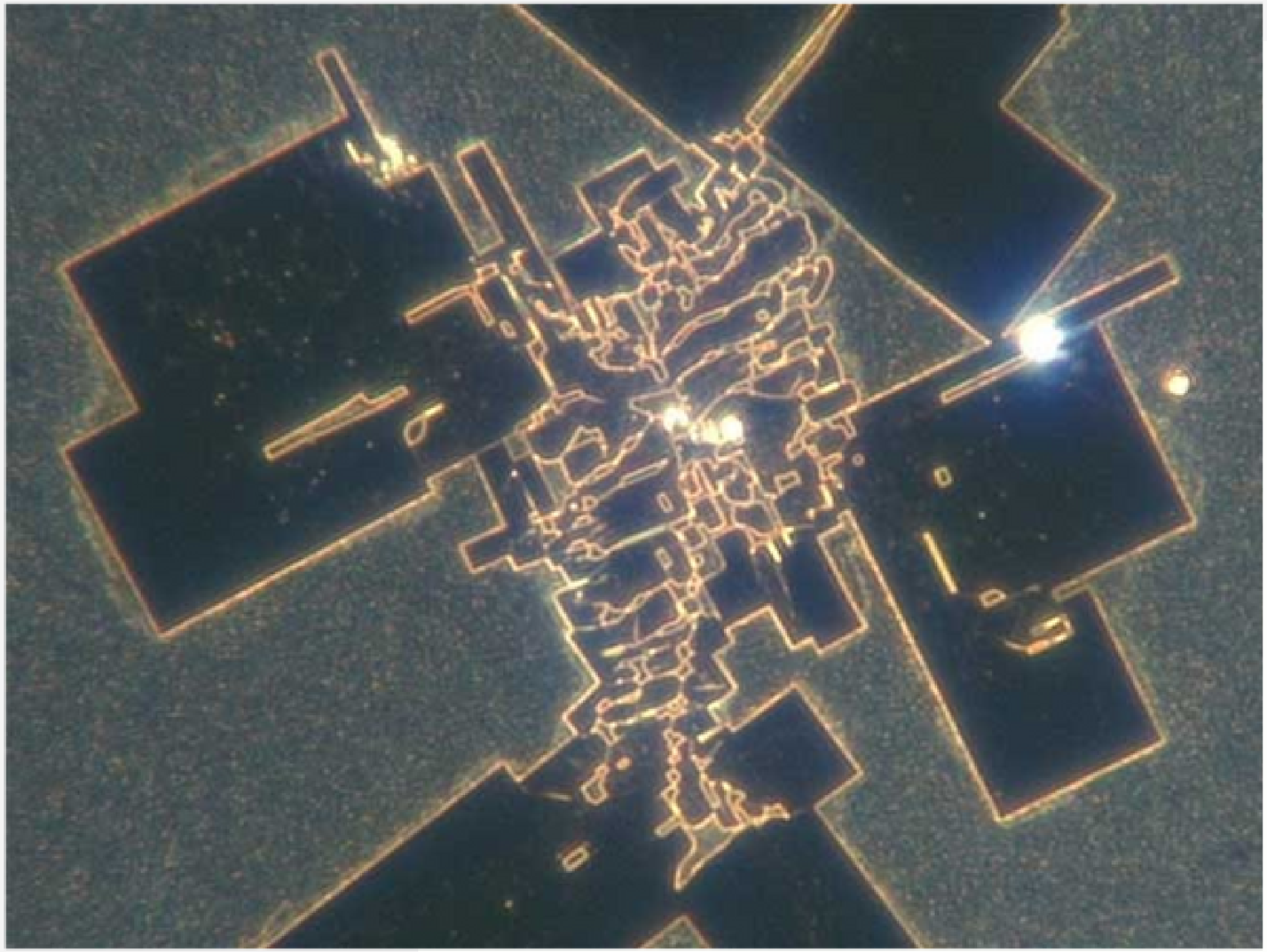

CONTEXT

Pfizer
Saline
Sea Water
Stem Cells
Exosomes
Urine
Tears...

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DARPA, the Department of Defense's research arm, is paying scientists to invent ways to instantly read soldiers' minds using tools like genetic engineering of the human brain, nanotechnology and infrared beams. The end goal? Thought-controlled weapons, like swarms of drones that someone sends to the skies with a single thought or the ability to beam images from one brain to another.

This week, DARPA (Defense Advanced Research Projects Agency) announced that six teams will receive funding under the Next-Generation Nonsurgical Neurotechnology (N3) program. Participants are tasked with developing technology that will provide a two-way channel for rapid and seamless communication between the human brain and machines without requiring surgery.

Flying saucers to mind control: 22 declassified military & CIA secrets

DARPA N3 DEVELOPED NONSURGICAL BRAIN MACHINE INTERFACES FOR SOLDIERS TO USE THEIR THOUGHTS ALONE TO CONTROL MULTIPLE UNMANNED VEHICLES OR A BOMB DISPOSAL ROBOT ON BATTLEFIELD

Rajesh Uppal February 13, 2021 BioScience, Soldier, Unmanned

Comments Off
on DARPA N3 developed Nonsurgical Brain Machine Interfaces for soldiers to use their thoughts alone to control multiple unmanned vehicles or a bomb disposal robot on battlefield

7,147 Views

The brain-computer interface (BCI) allows people to use their thoughts to control not only themselves, but the world around them. BCI
enables a bidirectional communication between a brain and an external device, bidirectional generally includes direct neural readout and feedback and direct neural write-in.

RESEARCH

https://www.darpa.mil › program › our-research › darpa-and-the-brain-initiative

DARPA and the Brain Initiative

The NESD program aims to develop an implantable neural **interface** able to provide unprecedented signal resolution and data-transfer bandwidth between the **brain** and the digital world. Towards a High-Resolution, Implantable Neural **Interface** Bridging the Bio-Electronic Divide Neuro Function, Activity, Structure and Technology (Neuro-FAST)

https://pubmed.ncbi.nlm.nih.gov › 25107852

DARPA-funded efforts in the development of novel brain-computer ...

Randolph St., Arlington, VA 22203, USA. Electronic address: Douglas.Weber@darpa.mil. 12 System Planning Corporation, 3601 Wilson Boulevard, Arlington, VA 22201, USA. Electronic address: Tracey.Wheeler.ctr@darpa.mil. 13 Defense Advanced Research Projects Agency, Biological Technologies Office, 675N. Randolph St., Arlington, VA 22203, USA.

https://newatlas.com › darpa-brain-computer-interface-investment › 50445

DARPA backs 6 brain-computer interface projects - New Atlas

July 11, 2017 **DARPA** has awarded six contracts in the pursuit of practical **brain-computer interfaces** adamfaheydesigns/Depositphotos View 1 Images With Elon Musk founding Neuralink and...

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BIGGER CONTEXT

IoB
IoT
6G
Transhumanism

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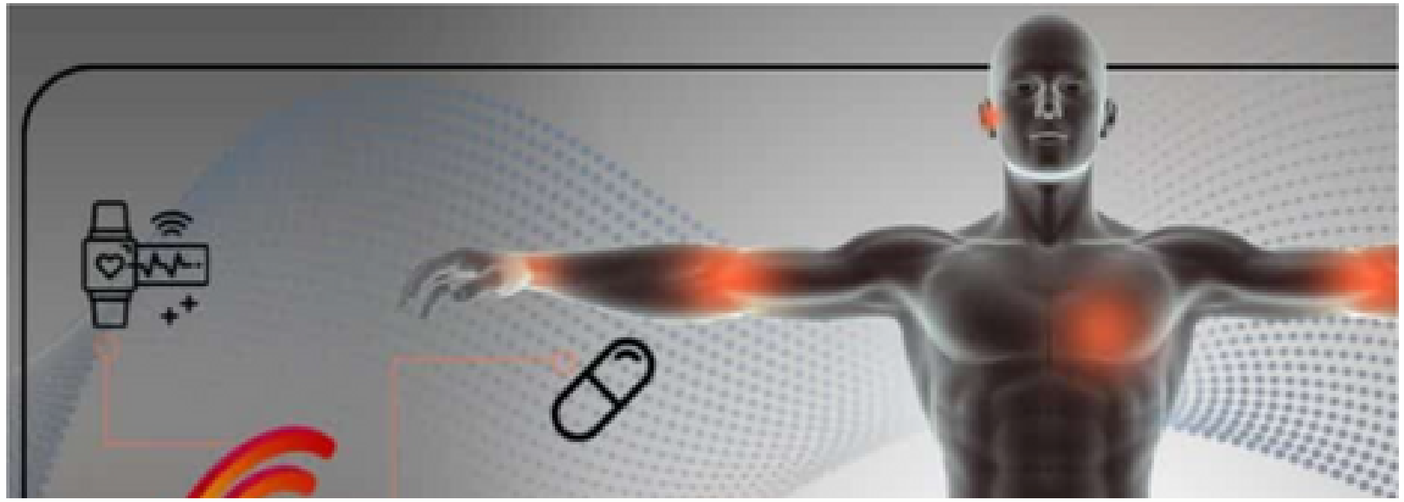
SOME BIG NAMES

Ray Kurtzweil
Yuval Noah Harari
Geordi Rose
James Giordano
(Elon Musk)

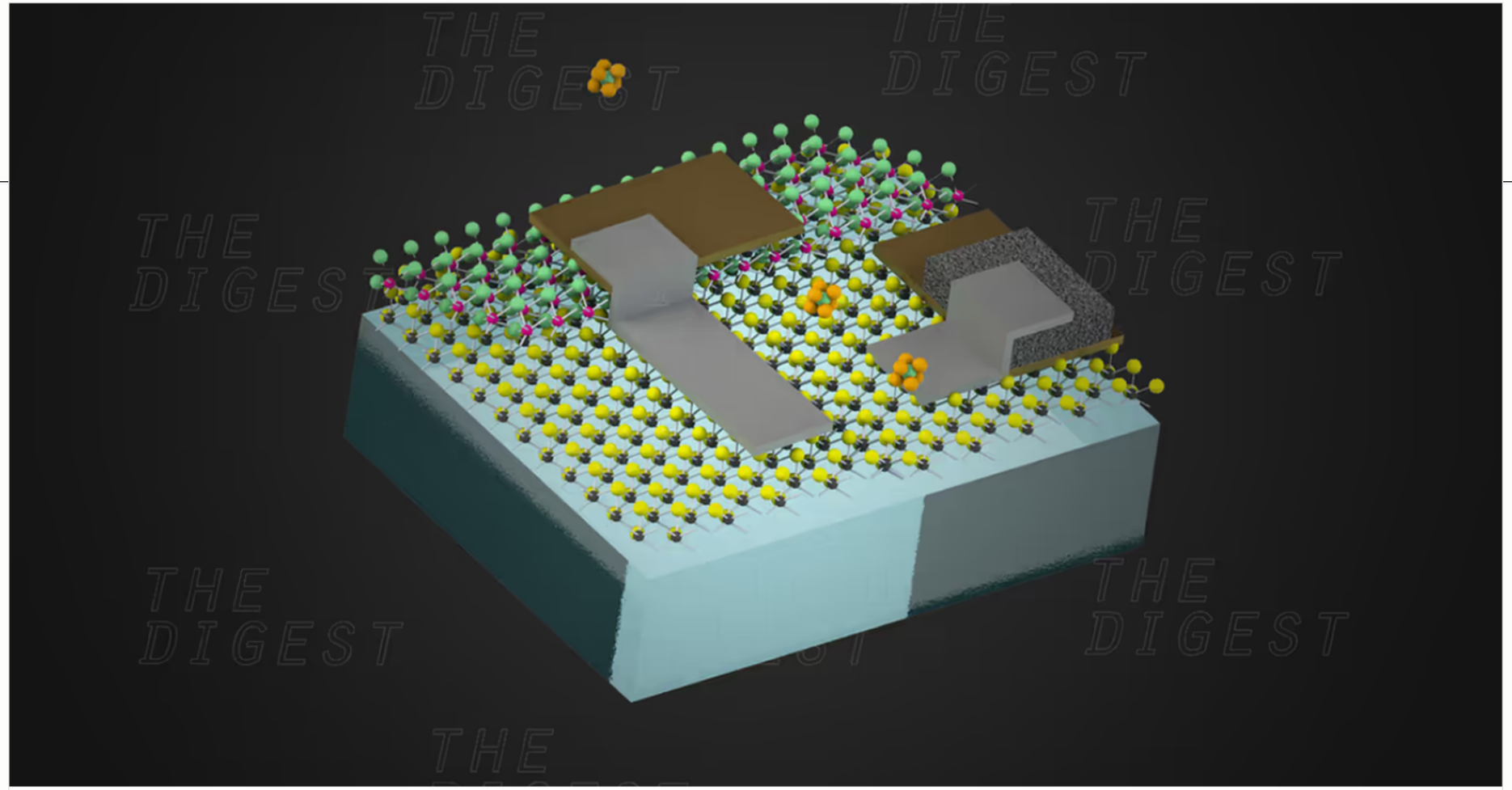
Beyond IoT and 5G: Internet of Bodies or IoB



MACHINES

Scientists propose putting nanobots in our bodies to create 'global superbrain'

by Colm Gorey



MIT Researchers Create an Aerosol Spray Loaded With Nanobots

MIT researchers have created nanobots that can travel via an aerosol spray, potentially opening up a new field in robotics.

Futurism / Jul 23, 2018

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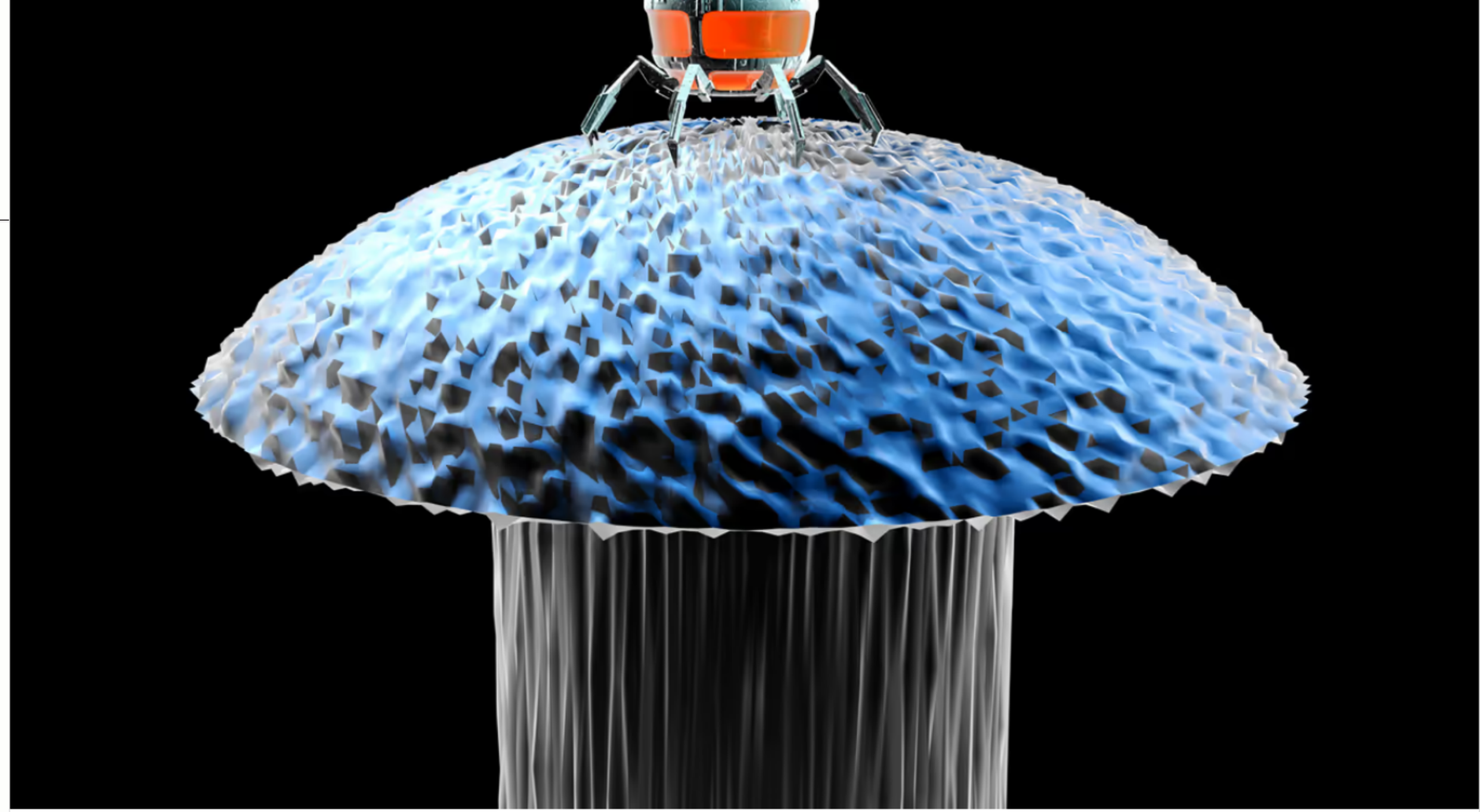
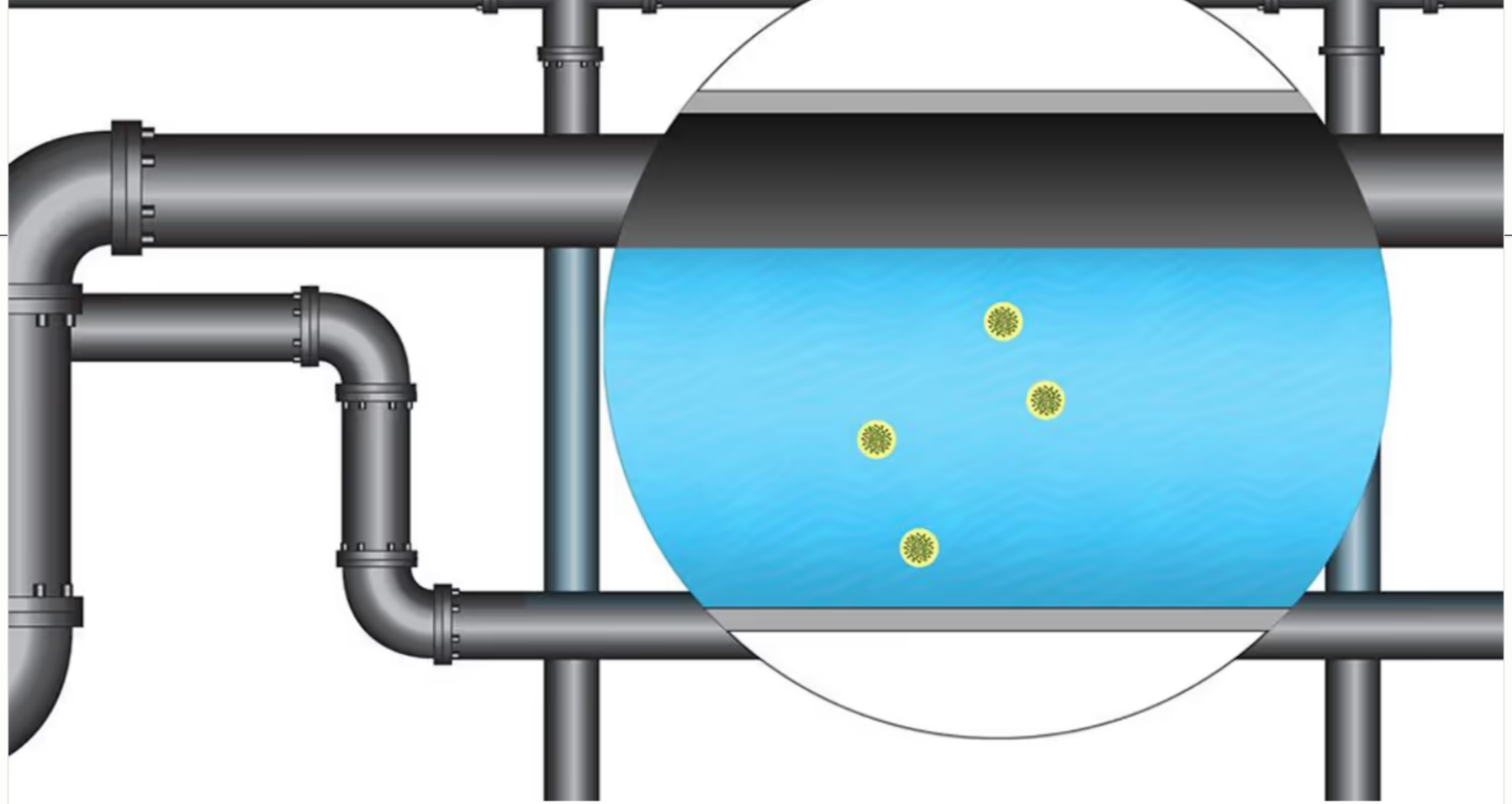


Kurzweil: By 2030, Nanobots Will Flow Throughout Our Bodies

In an interview with James Bedsole, Futurist Dave Evans explained what the thought of Ray Kurzweil's prediction of nanobots in the body by 2030.

Futurism / Apr 24, 2017



Cell-sized robots can sense their environment

MIT researchers have created what may be the smallest robots yet that can sense their environment, store data, and even carry out computational tasks. Made of electronic circuits coupled to minute particles, the devices could flow through intestines or pipelines to detect problems.

MIT News

Computer Science > Computer Vision and Pattern Recognition

[Submitted on 9 Dec 2022 (v1), last revised 4 Apr 2023 (this version, v2)]

4K-NeRF: High Fidelity Neural Radiance Fields at Ultra High Resolutions

Zhongshu Wang, Lingzhi Li, Zhen Shen, Li Shen, Liefeng Bo

In this paper, we present a novel and effective framework, named 4K-NeRF, to pursue high fidelity view synthesis on the challenging scenarios of ultra high resolutions, building on the methodology of neural radiance fields (NeRF). The rendering procedure of NeRF-based methods typically relies on a pixel-wise manner in which rays (or pixels) are treated independently on both training and inference phases, limiting its representational ability on describing subtle details, especially when lifting to a extremely high resolution. We address the issue by exploring ray correlation to enhance high-frequency details recovery. Particularly, we use the 3D-aware encoder to model geometric information effectively in a lower resolution space and recover fine details through the 3D-aware decoder, conditioned on ray features and depths estimated by the encoder. Joint training with patch-based sampling further facilitates our method incorporating the supervision from perception oriented regularization beyond pixel-wise loss. Benefiting from the use of geometry-aware local context, our method can significantly boost rendering quality on high-frequency details compared with modern NeRF methods, and achieve the state-of-the-art visual quality on 4K ultra-high-resolution scenarios. Code Available at \url{this https URL}

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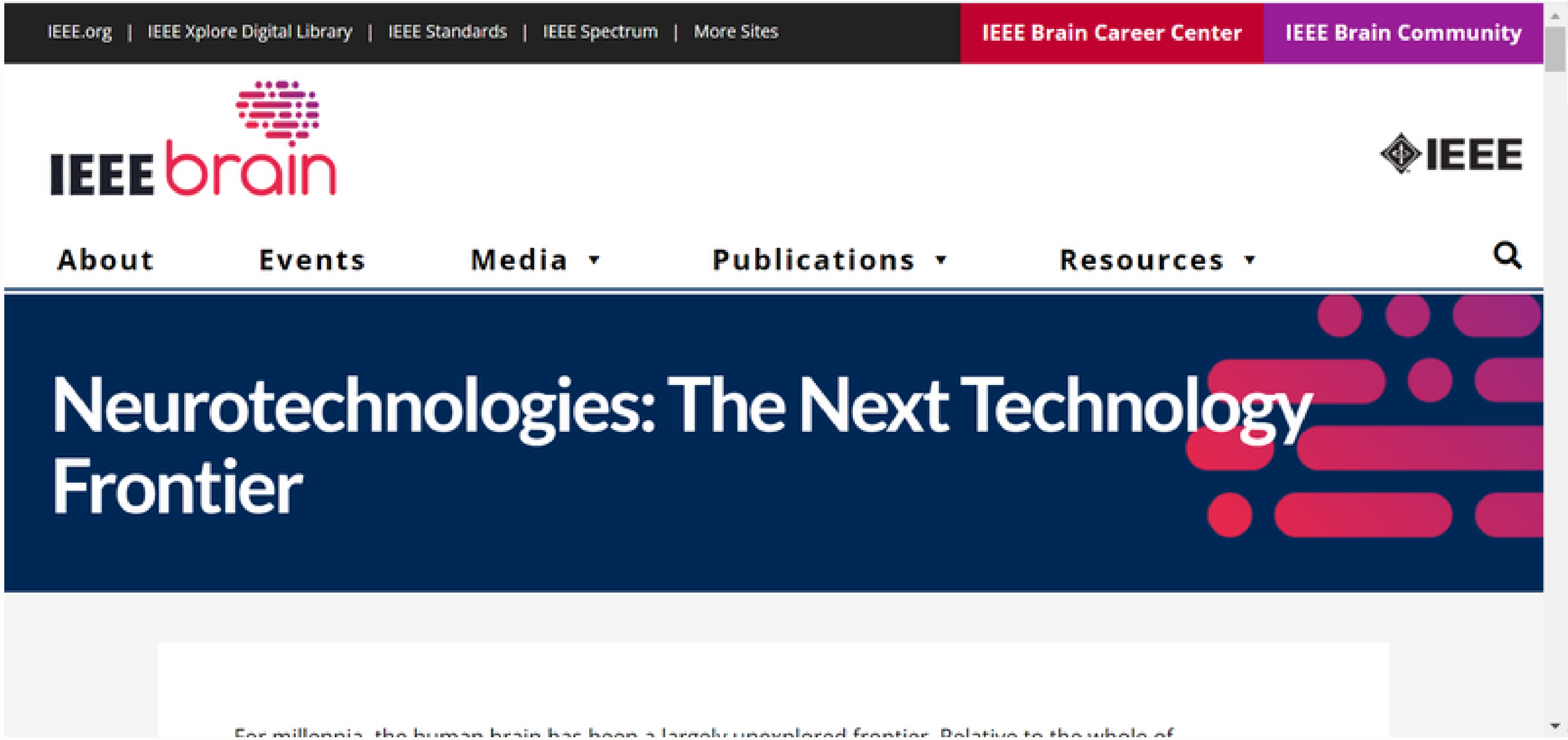

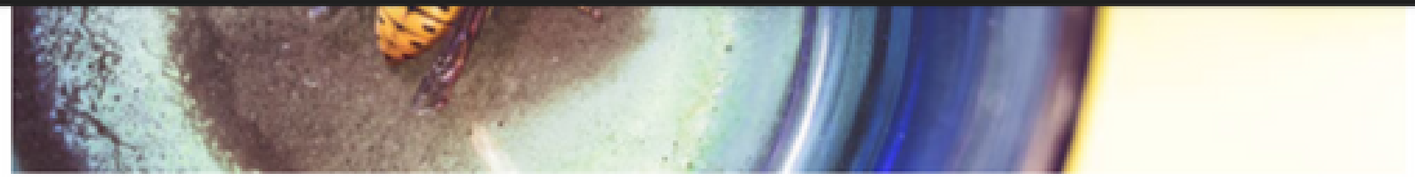

Developing a Hive Mind: The Essentials of Team Building

"A leader's job is to build a team and then get them to perform at their highest level. A leader's purpose is to remove and reduce the obstacles that are blocking the team or the individual from achieving the goal." – Robin Chakrabarti, Empresario Capital Partners

Whether you're socially active, socially awkward, or prefer solitary confinement, there's no denying that working as a team is the best way to complete a project. If you're running a business, you're going to need an effective team to execute your plan to achieve your goals. Developing a 'Hive Mind' so all the pieces fit together to become one perfectly oiled machine is going to take some work. It doesn't happen automatically.

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Outline

Show full outline

Cited By (9)

ELSEVIER

Procedia Computer Science

Volume 7, 2011, Pages 61-64

The European Future Technologies Conference and Exhibition 2011

Brain-Chip Interfaces: The Present and The Future

Stefano Vassanelli

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https://doi.org/10.1016/j.procs.2011.12.020 ↗

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Part of special issue

Proceedings of the 2nd European Future Technologies Conference and Exhibition 2011 (FET 11)

Edited by Elisabeth Giacobino, Rolf Pfeifer

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Political Welcome Address to Conference Parti

FEEDBACK

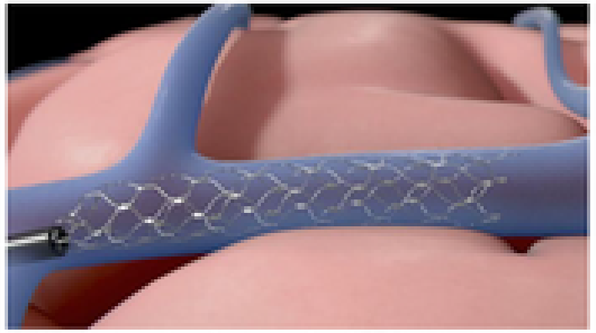
IEEE FUTURE DIRECTIONS

IEEE Future Directions

IEEE

LOOKING FOR A CHIP IMPLANT IN YOUR BRAIN? HERE IT IS!

Roberto Saracco | August 6, 2021 | Blog | 1,592 Views



A US start up has just received FDA permission to start clinical trials of brain implants aimed at supporting a Brain Computer Interface for paralysed people. The image shows the insertion of the electrodes in a brain vein, using a catheter through the jugular vein. Image credit: Synchron

RELATED ARTICLES

Feeling the heat of Generative AI

May 5, 2023

IEEE FUTURE DIRECTIONS Newsletter

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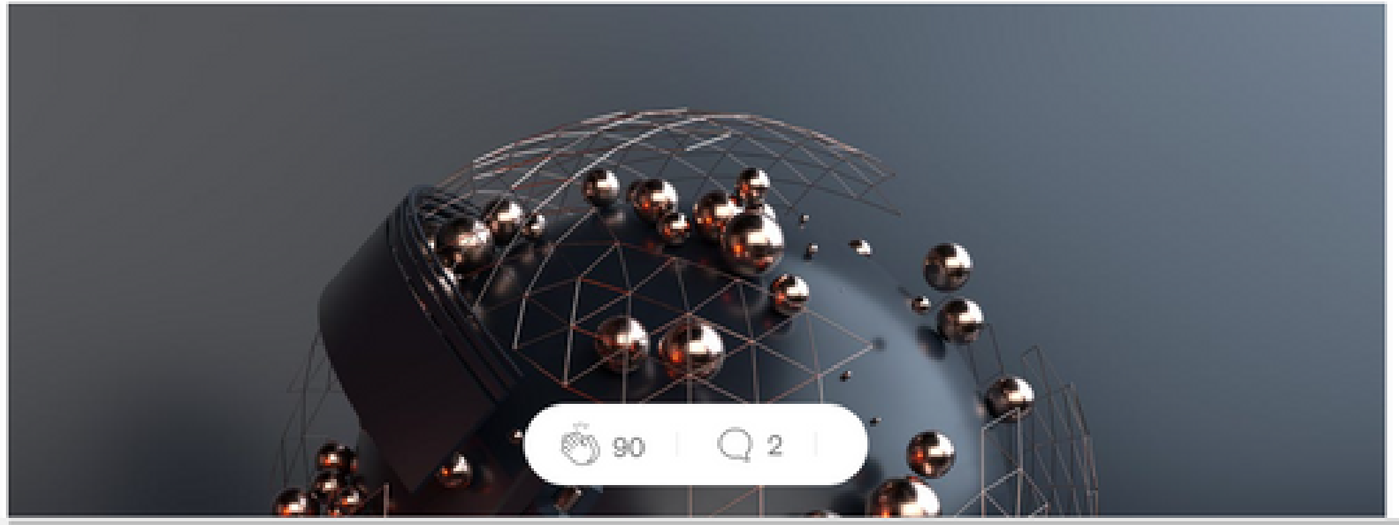
Sentient World Simulations and Digital Twins

The Metaverse is only the beginning



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Why do mirrors flip left-and-right but not up-and-down?

Sentient World Simulation and NSA Surveillance – Exploiting Privacy to Predict the Future?

Last updated on May 19, 2019, published by Daniel Faggella

Daniel Faggella is Head of Research at Emerj. Called upon by the United Nations, World Bank, INTERPOL, and leading enterprises, Daniel is a globally sought-after expert on the competitive strategy implications of AI for business and government leaders.

Review > Curr Med Chem. 2017;24(5):537-548. doi: 10.2174/0929867323666160814000442.

Remote Neural Stimulation Using Magnetic Nanoparticles

Andy Tay [1], Dino Di Carlo [1]

Affiliations + expand

PMID: 27528057 DOI: 10.2174/0929867323666160814000442

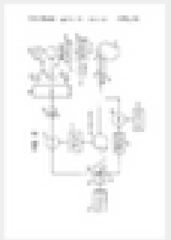
Google Patents

Apparatus and method for remotely monitoring and altering brain waves

Abstract

Apparatus for and method of sensing brain waves at a position remote from a subject whereby electromagnetic signals of different frequencies are simultaneously transmitted to the brain of the subject in which the signals interfere with one another to yield a waveform which is modulated by the subject's brain waves. The interference waveform which is representative of the brain wave activity is re-transmitted by the brain to a receiver where it is demodulated and amplified. The demodulated waveform is then displayed for visual viewing and routed to a computer for further processing and analysis. The demodulated waveform also can be used to produce a compensating signal which is transmitted back to the brain to effect a desired change in electrical activity therein.

Images (2)



Classifications

US3951134A
United States

Download PDF | Find Prior Art | Similar

Inventor: Robert G. Malech

Current Assignee : Dorne and Margolin Inc

Worldwide applications

1974 · ~~US~~ 1975 · ZA ~~AU~~

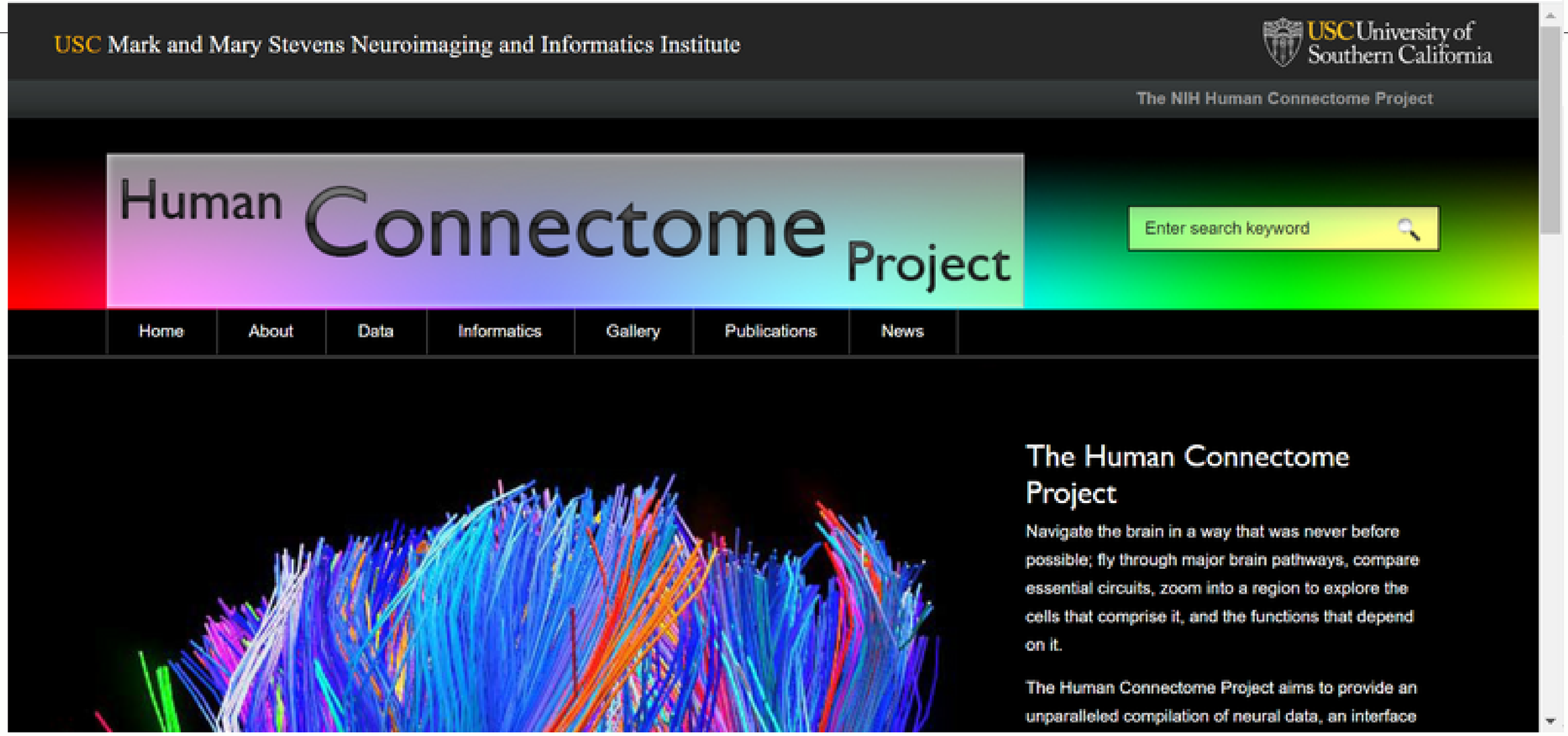
Application US05/494,518 events

1974-08-05 • Application filed by Dorne and Margolin Inc

1974-08-05 • Priority to US05/494,518

1975-06-03 · Priority to ZA00753599A

1975-06-09 · Priority to AU81950/75A


USC Mark and Mary Stevens Neuroimaging and Informatics Institute
USC University of Southern California
The NIH Human Connectome Project
Human Connectome Project
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The Human Connectome Project
Navigate the brain in a way that was never before possible; fly through major brain pathways, compare essential circuits, zoom into a region to explore the cells that comprise it, and the functions that depend on it.
The Human Connectome Project aims to provide an unparalleled compilation of neural data, an interface

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"NITRC is a critical part of the neuroscience tool ecosystem." - Director, Data Science and Sharing Team, NIMH

BrainNet Viewer

Visit Website

BrainNet Viewer is a brain network visualization tool, which can help researchers to visualize structural and functional connectivity patterns from different levels in a quick, easy, and

Image 1 of 5
Click for more.

Statistics

Home Page
NeuroLex ID: nlx_155589
RRID: SCR_009446
Funding: the Natural Sci...
Documents: 12

Sci Rep. 2019 Apr 16;9(1):6115. doi: 10.1038/s41598-019-41895-7.

BrainNet: A Multi-Person Brain-to-Brain Interface for Direct Collaboration Between Brains

Linxing Jiang [1], Andrea Stocco [2 3 4 5], Darby M Losey [6 7], Justin A Abernethy [2 3], Chantel S Prat [2 3 4 5], Rajesh P N Rao [8 9 10]

Affiliations + expand

PMID: 30992474 PMCID: PMC6467884 DOI: 10.1038/s41598-019-41895-7

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Multifunctional GO Hybrid Hydrogel Scaffolds for Wound Healing

Xiaoya Ding [1] [2], Yunru Yu [2], Chaoyu Yang [2], Dan Wu [2], Yuanjin Zhao [1] [2]

Affiliations + expand

PMID: 36349336 PMCID: PMC9639445 DOI: 10.34133/2022/9850743

Free PMC article

Abstract

Hydrogel dressings have received extensive attention for the skin wound repair, while it is still a challenge to develop a smart hydrogel for adapting the dynamic wound healing process. Herein, we develop a novel graphene oxide (GO) hybrid hydrogel scaffold with adjustable mechanical properties, controllable drug release, and antibacterial behavior for promoting wound healing. The scaffold was prepared by injecting benzaldehyde and cyanoacetate group-functionalized dextran solution containing GO into a collection pool of histidine. As the GO possesses obvious photothermal behavior, the hybrid hydrogel scaffold exhibited an obvious stiffness decrease and effectively promoted cargo release owing to the breaking of the thermosensitive C=C double bond at a high temperature under NIR light. In addition, NIR-assisted photothermal antibacterial performance of the

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Google Patents

Cryptocurrency system using body activity data

Abstract

Human body activity associated with a task provided to a user may be used in a mining process of a cryptocurrency system. A server may provide a task to a device of a user which is communicatively coupled to the server. A sensor communicatively coupled to or comprised in the device of the user may sense body activity of the user. Body activity data may be generated based on the sensed body activity of the user. The cryptocurrency system communicatively coupled to the device of the user may verify if the body activity data satisfies one or more conditions set by the cryptocurrency system, and award cryptocurrency to the user whose body activity data is verified.

Classifications

- G06Q20/3672 Payment architectures, schemes or protocols characterised by the use of specific devices or networks using electronic wallets or electronic money safes involving electronic purses or money safes initialising or reloading thereof

View 15 more classifications

WO2020060606A1
WIPO (PCT)

Download PDF | Find Prior Art

Other languages: French

Inventor: Dustin Abramson, Derrick Fu, Josep
Jr.

Worldwide applications

2018 - US 2019 - WO

Application PCT/US2019/038084 events

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News & Events

For media inquiries, please contact us at media@profusa.com. Follow this link to download the executive summary.

Injectable Body Sensors Take Personal Chemistry to a Cell Phone Closer to Reality

MARCH 19, 2018

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What is synthetic biology?

Synthetic biology is an engineering approach to biology. By modifying the DNA of organisms using specialized tools, we can get cells to behave differently, allowing us to use them to find solutions for global problems such as climate change, cancer, or pretty much anything.

Epub 2021 Jan 2.

Self-assembled mRNA vaccines

Jeonghwan Kim [1], Yulia Eygeris [1], Mohit Gupta [1], Gaurav Sahay [2]

Affiliations + expand

PMID: 33400957 PMCID: PMC7837307 DOI: 10.1016/j.addr.2020.12.014

Free PMC article

Abstract

mRNA vaccines have evolved from being a mere curiosity to emerging as COVID-19 vaccine front-runners. Recent advancements in the field of RNA technology, vaccinology, and nanotechnology have generated interest in delivering safe and effective mRNA therapeutics. In this review, we discuss design and self-assembly of mRNA vaccines. Self-assembly, a spontaneous organization of individual molecules, allows for design of nanoparticles with customizable properties. We highlight the materials commonly utilized to deliver mRNA, their physicochemical characteristics, and other relevant considerations, such as mRNA optimization, routes of administration, cellular fate, and immune activation, that are important for successful mRNA vaccination. We also examine the COVID-19 mRNA vaccines currently in clinical trials. mRNA vaccines are ready for the clinic, showing tremendous

Review > Curr Opin Chem Biol. 2022 Jun;68:102151. doi: 10.1016/j.cbpa.2022.102151. Epub 2022 Apr 25.

Electrogenetics: Bridging synthetic biology and electronics to remotely control the behavior of mammalian designer cells

Maysam Mansouri [1], Martin Fussenegger [2]

Affiliations + expand

PMID: 35483127 DOI: 10.1016/j.cbpa.2022.102151

Free article

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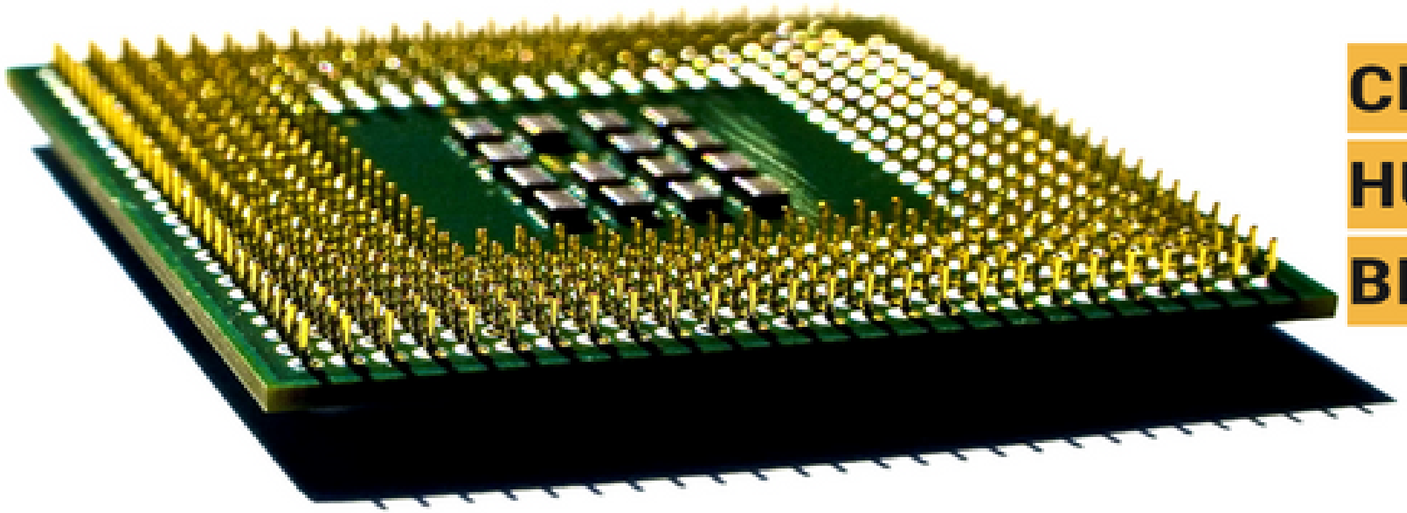
Neurophilosophy Science

Genetically engineered 'Magneto' protein remotely controls brain and behaviour

"Badass" new method uses a magnetised protein to activate brain cells rapidly, reversibly, and non-invasively

Scientists developed a new method of controlling certain nerve cells of the brain to manipulate behaviors — and it's delivered via viral injection.



CRISPR CAN TURN HUMAN CELLS INTO BIOCOMPUTERS

APRIL 16TH, 2019

POSTED BY PETER RÜEGG-ETH ZURICH

(Credit: Scott Thompson/Flickr)

Researchers have integrated two CRISPR-Cas9-based core processors into human cells, a step towards creating powerful biocomputers.

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> Nat Commun. 2020 May 15;11(1):2427. doi: 10.1038/s41467-020-16249-x.

A redox-based electrogenetic CRISPR system to connect with and control biological information networks

Narendranath Bhokisham [# 1 2], Eric VanArsdale [# 2 3 4], Kristina T Stephens [2 3 4], Pricila Hauk [2], Gregory F Payne [2 3 4], William E Bentley [5 6 7]

Affiliations + expand

PMID: 32415193 PMCID: PMC7228920 DOI: 10.1038/s41467-020-16249-x

Free PMC article

02

HYPOTHESIS

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TABU

- SPIKE PROTEINS
- GRAPHENE OXIDE

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ELEMENTS

- (Pseudo)METAL NANO-PARTICLES
- BIOLOGY (mRNA)
- "GLUE" (LNP)

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METAL NANOPARTICLES

- Copper, silver, gold, aluminum, silicium, carbon, metal oxides
- in food, cosmetics, vaccines, drugs...

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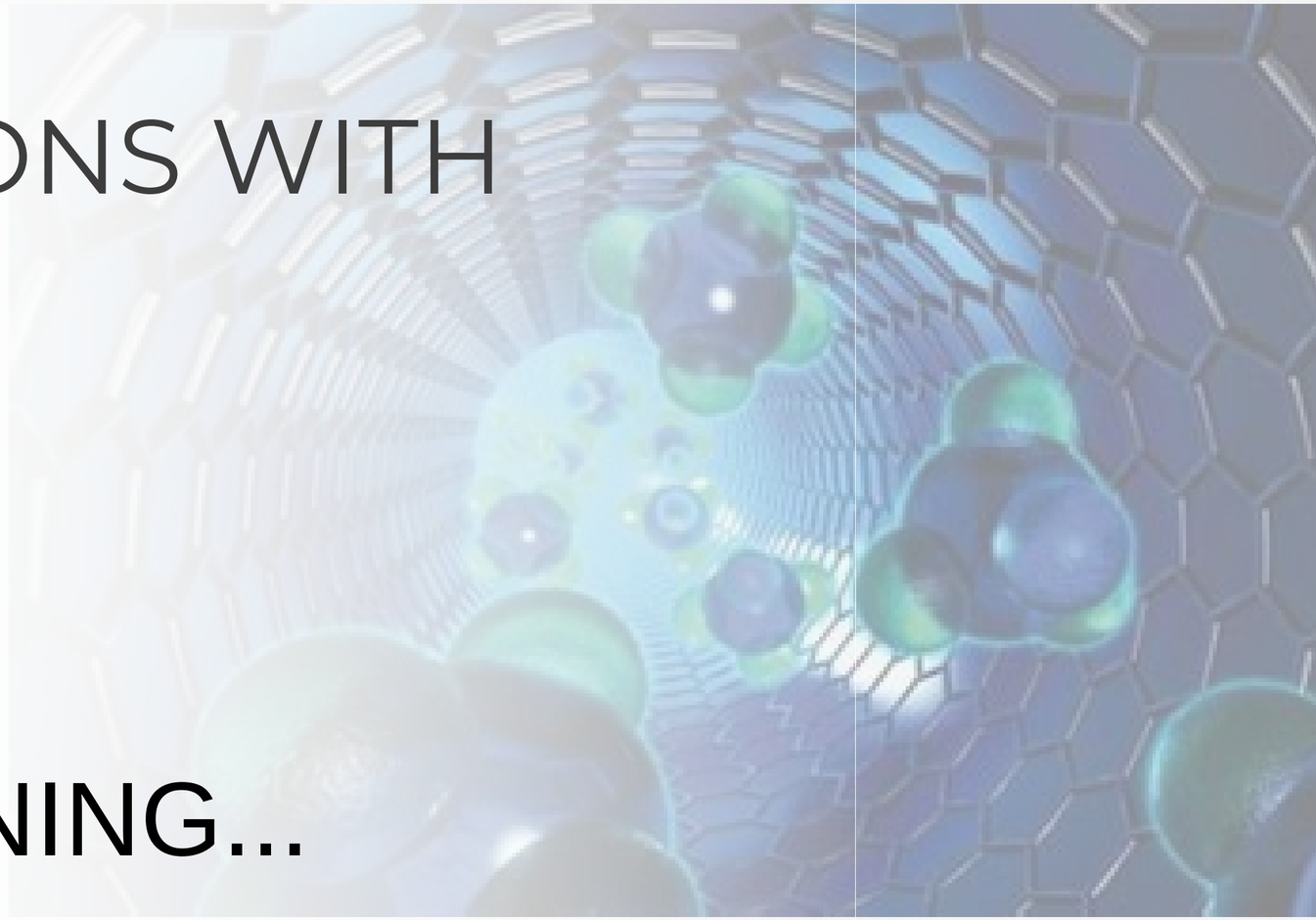
GRAPHENE

AQUOUS SOLUTIONS WITH GRAPHENE



MEDICAL

COSMETIC / CLEANING...

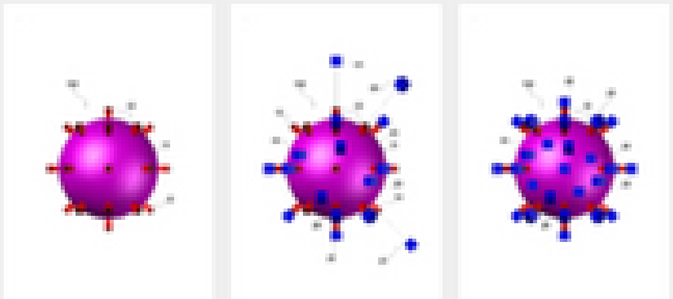
FOOD

Physiological Saline Containing Graphene

Abstract

The present invention relates to an injection solution, a physiological saline solution, a glucose solution, and an IV, which are to be administered in a blood vessel and subcutaneous tissue of the human body for the purpose of curing a disease. A physiological saline solution containing graphene dispersed therein according to the present invention is intended to be used for each disease including dementia, Parkinson's disease, Lou Gehrig's disease, Huntington's disease, and the like. The physiological saline solution containing graphene dispersed therein according to the present invention is intended to be used as a therapeutic agent for viruses such as MERS, SARS, Corona virus, and the like, and is also to be used as a therapeutic agent by dispersing graphene powder with a size of 0.2 nm or less in a means used as an injection solution such as injection solution, an IV, a physiological saline solution, and a glucose solution used in conventional hospitals. The IV with the graphene powder dispersed therein is injected into the human body where the virus has penetrated, and when the virus and graphene powder meet, the graphene powder and the virus are attracted to each other by nano-cohesion. When the graphene powder adheres to the body and spike projections of the virus, the virus cannot function properly and cannot proliferate and eventually die.

Images (3)



KR20210028062A

South Korea

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Other languages: Korean

Inventor: 김한식

Worldwide applications

2020 · *KR*

Application KR1020200045648A events

- Priority claimed from KR20190109223

2020-04-16 • Application filed by 김한식

2020-05-08 • Priority to KR1020200054820A

2021-03-11 • Publication of KR20210028062A

Info: Similar documents, Priority and Related Applications

Nano coronavirus recombinant vaccine taking graphene oxide as carrier

Abstract

The invention belongs to the field of nano materials and biomedicine, and relates to a vaccine, in particular to development of 2019-nCoV coronavirus nuclear recombinant nano vaccine. The invention also comprises a preparation method of the vaccine and application of the vaccine in animal experiments. The new corona vaccine contains graphene oxide, carnosine, CpG and new corona virus RBD; binding carnosine, CpG and neocoronavirus RBD on the backbone of graphene oxide; the CpG coding sequence is shown as SEQ ID NO 1; the novel coronavirus RBD refers to a novel coronavirus protein receptor binding region which can generate a high-titer specific antibody aiming at the RBD in a mouse body, and provides a strong support for prevention and treatment of the novel coronavirus.

Images (1)

CN112220919A

China

Download PDF | Find Prior Art | Si

Other languages: Chinese

Inventor: 崔大祥, 高昂, 梁辉, 田静, 李雪玲, 沈琦

Current Assignee : Shanghai National Engineering Center for Nanotechnology Co Ltd

Worldwide applications

2020 · CN

Application CN202011031367.1A events

Physiological saline containing graphene dispersion and corona virus vaccine using the same

Abstract

The present invention relates to an injection solution, a physiological saline solution, a glucose solution, and an IV, which are to be administered in a blood vessel and subcutaneous tissue of the human body for the purpose of curing a disease. A physiological saline solution containing graphene dispersed therein according to the present invention and a corona virus vaccine using the same are intended to be used for each disease including dementia, Parkinson's disease, Lou Gehrig's disease, Huntington's disease, and the like. The physiological saline solution containing graphene dispersed therein according to the present invention and the corona virus vaccine using the same are intended to be used as a therapeutic agent for viruses such as MERS, SARS, Corona virus, and the like, and are also used as a therapeutic agent by dispersing graphene powder with a size of 0.2 nm or less in a means used as an injection solution such as an injection solution, an IV, a physiological saline solution, and a glucose solution used in conventional hospitals. The IV with the graphene powder dispersed therein is injected into the human body where the virus has penetrated, and when the virus and graphene powder meet, the graphene powder and the virus are attracted to each other by nano-cohesion. When graphene powder adheres to the body and spike projections of the virus, the virus cannot function properly and cannot proliferate and eventually die. In the present invention, a process of mixing and dispersing the corona virus cultured in physiological saline containing graphene dispersed therein is repeated, and thus the graphene nanopowder invades each microscopic organ of the spike protrusion of the corona virus to decrease the function of the corona virus, stop functioning thereof, or kill some coronaviruses, resulting in a coronavirus vaccine.

KR20210028065A

South Korea

Other languages: Korean

Inventor: 김한식

Worldwide applications

2020 · KR

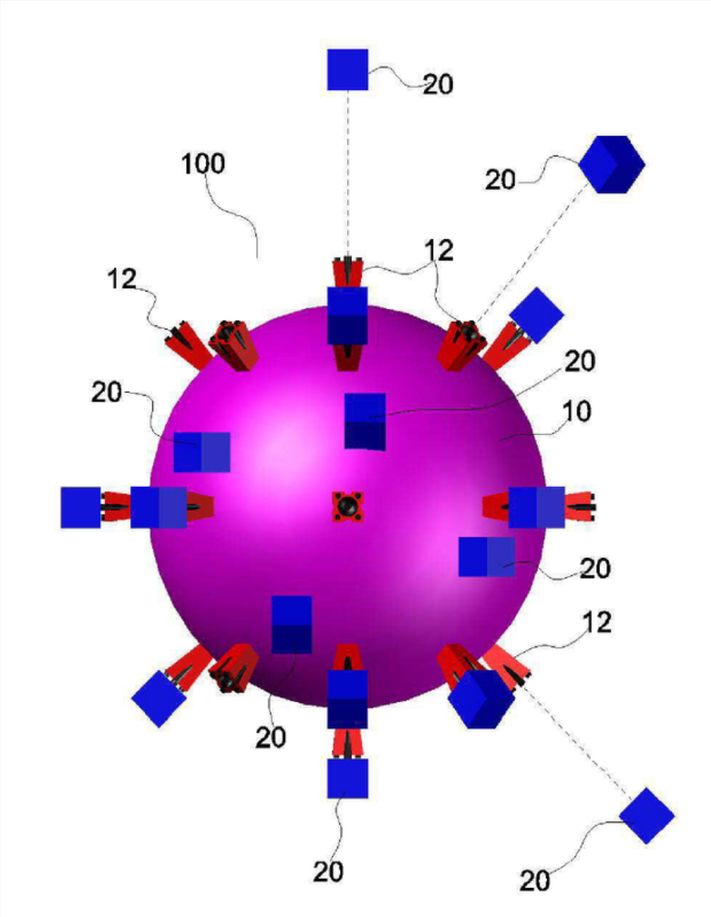
Application KR1020200054820A events

- Priority claimed from KR20190109223

2020-04-16 · Priority claimed from KR1020200045648A

2020-05-08 • Application filed by 김한식

2021-03-11 • Publication of KR20210028065A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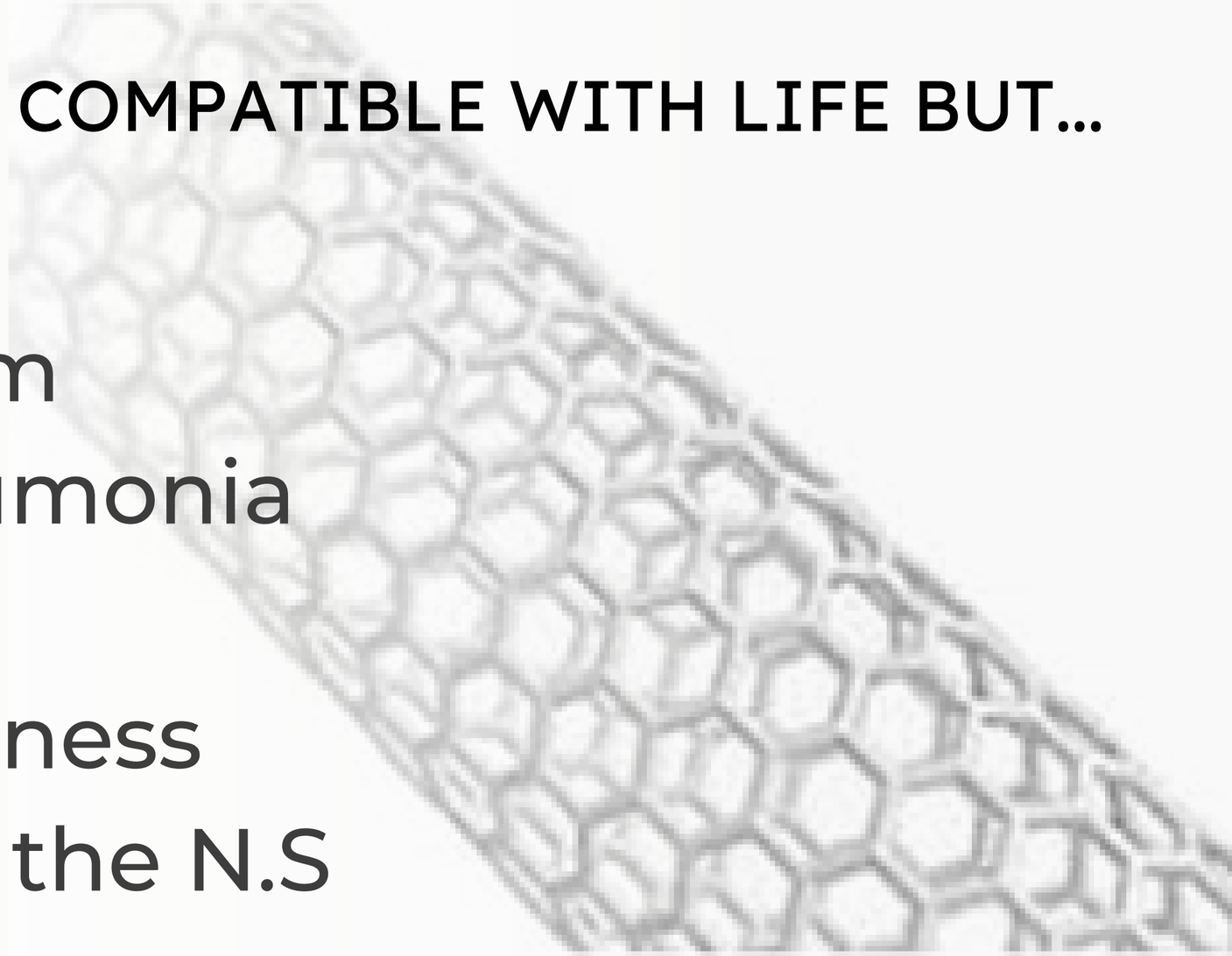
Living University of TERRAIN

GRAPHENE IS QUITE COMPATIBLE WITH LIFE BUT...

- cytokine storm
- bilateral pneumonia
- blood clots
- oxidation, tireness
- affectation to the N.S



@InfoVacunas

Solución acuosa con óxido de grafeno

Utilizada como base líquida en la fabricación de productos médicos

Soluciones líquidas acuosas con óxido de grafeno y polvo de óxido de grafeno para su elaboración

* Bases líquidas utilizadas en todas las industrias para la fabricación de múltiples productos.
También se usan para investigación científica, y para la fabricación de vacunas, medicamentos, y productos médicos.

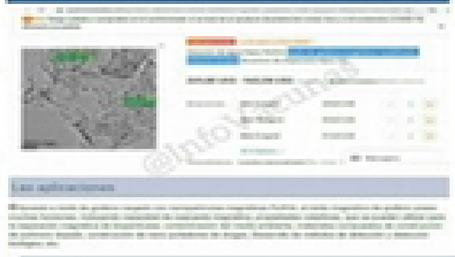
Formato: Lechadas, soluciones acuosas, polvo.

Vía de introducción: cutánea, inhalada, ingerida, bebida, inyectada...

Solución acuosa con óxido de grafeno

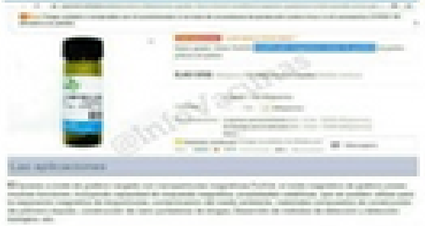
Solución acuosa con óxido de grafeno

Solución acuosa con nanopartículas de óxido de grafeno MAGNÉTICO



Polvo de óxido de grafeno MAGNÉTICO para diluir en soluciones acuosas

Polvo de óxido de grafeno MAGNÉTICO para añadir a soluciones acuosas



Solución acuosa con grafeno para nanodispersión

Solución acuosa con grafeno

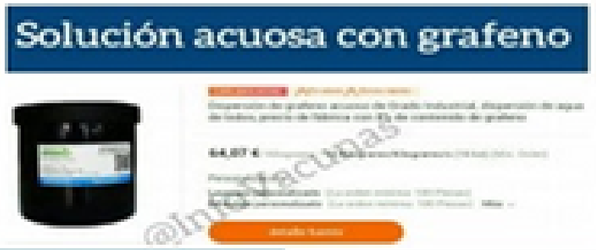
Solución acuosa con grafeno

Soluciones acuosas con grafeno y polvo de grafeno para soluciones acuosas (empaquetado para envío)

Grafeno en polvo para diluir en agua

Grafeno en polvo para diluir en agua

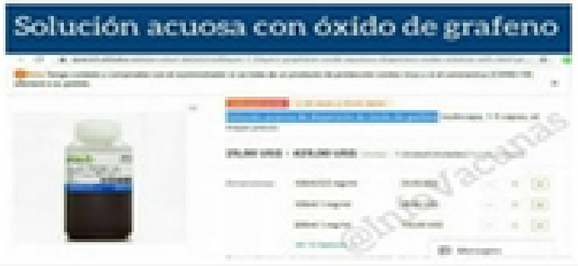
Solución acuosa con grafeno



Telegram @InfoVacunas

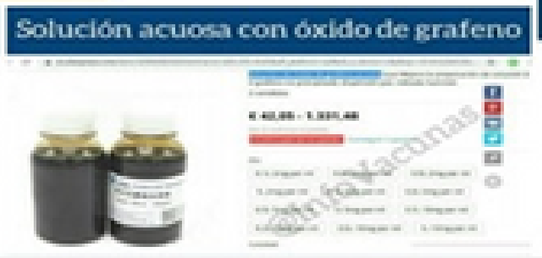
Nanopartículas de polvo de grafeno para disoluciones acuosas

Solución acuosa con óxido de grafeno



Solución acuosa con óxido de grafeno

Solución acuosa con óxido de grafeno



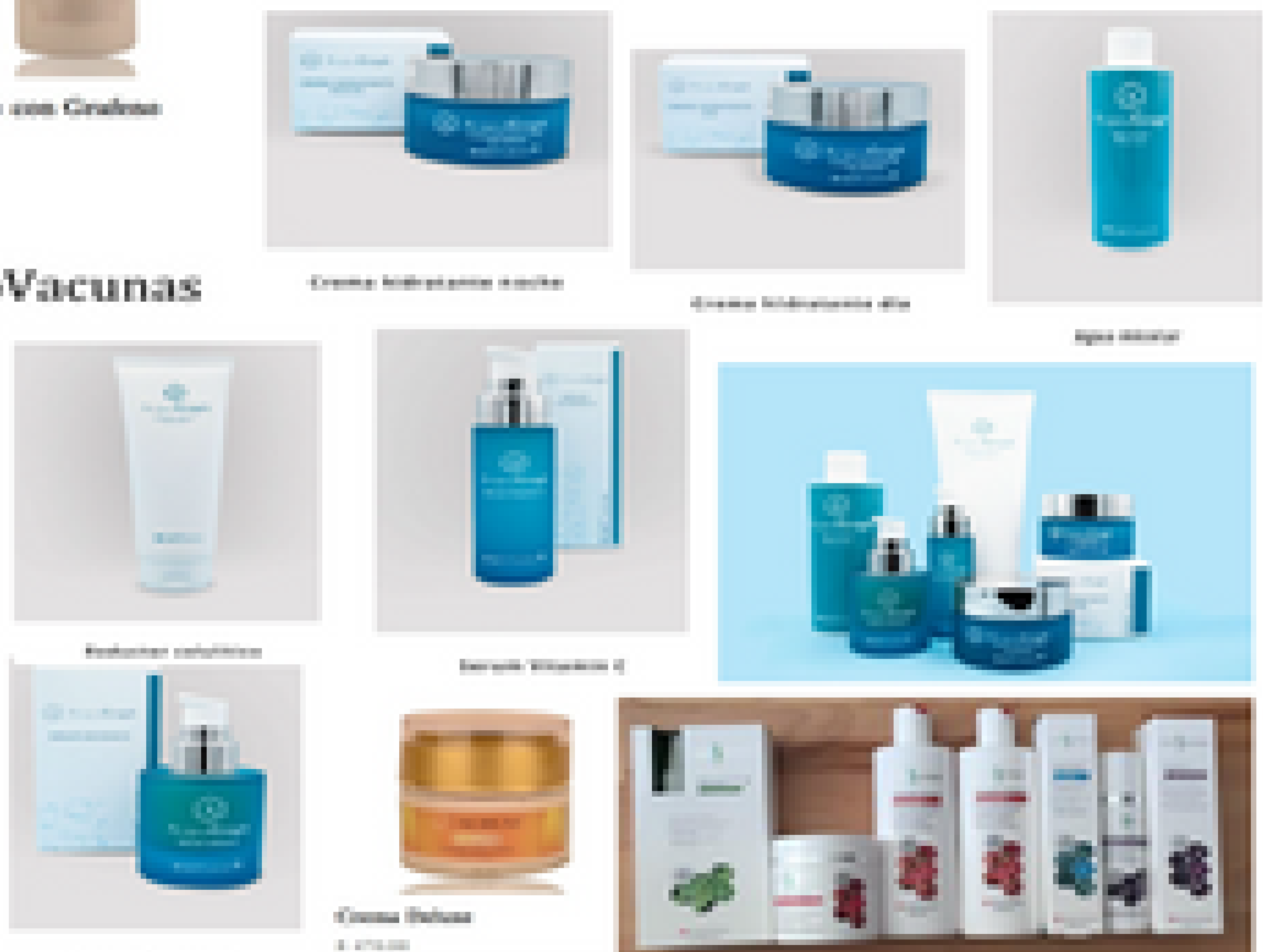
Polvo de grafeno para elaborar soluciones acuosas

Ejemplo de productos fabricados con bases líquidas acuosas con grafeno que llegan a introducirse en nuestro organismo

* Todos los artículos de la imagen contienen grafeno.
Algunos no lo pone en el exterior del envase, pero sale en la descripción del producto.

Productos: cremas corporales, sprays, geles, jabones, shampoos, suavizantes, regeneradores capilares, reductores celulíticos, etc.

Vía de introducción: cutánea e inhalada (posible ingesta)



Ejemplo de productos fabricados con bases líquidas acuosas con grafeno que llegan a introducirse en nuestro organismo

* Todos los artículos de la imagen contienen grafeno.
Algunos no lo pone en el exterior del envase, pero sale en la descripción del producto.

Productos: pinturas, imprimaciones, selladoras, aceites, grasas, ceras, revestimientos, abrillantadores, plastificantes para mezclas, aditivos para hormigón, etc.
Vía de introducción: cutánea e inhalada (posible ingesta)

Google Patents

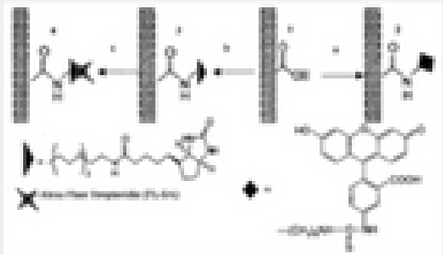
US20060275371A1

Hydrophobic nanotubes and nanoparticles as transporters for the delivery of drugs into cells

Abstract

Methods and materials for delivering biologically active molecules to cells in vitro or in vivo are provided. The methods and materials use carbon nanotubes or other hydrophobic particles, tubes and wires, functionalized with a linking group that is covalently bound to the nanotubes, or, alternatively, to the biologically active molecule, such as a protein. The biologically active molecule is preferably released from the nanotube when the complex has been taken up in an endosome.

Images (11)



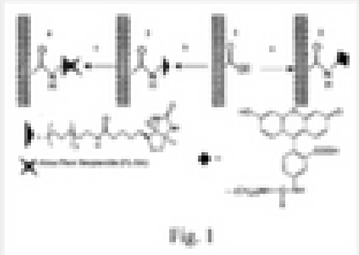


Fig. 1

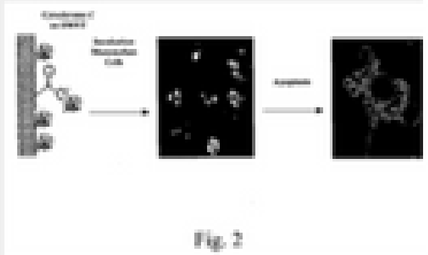


Fig. 2

Classifications

- C12N15/87 Introduction of foreign genetic material using processes not otherwise provided

US20060275371A1

United States

Download PDF | Find Prior Art | Similar

Inventor: Hongjie Dai, Nadine Kam, Paul Wender, Zhuang Liu

Current Assignee : Leland Stanford Junior University

Worldwide applications

2006 · ~~US~~ 2012 · ~~US~~

Application US11/431,346 events

2006-05-09 • Application filed by Leland Stanford Junior University

2006-05-09 • Priority to US11/431,346

2006-12-07 • Publication of US20060275371A1

Abstract

Methods and materials for delivering biologically active molecules to cells in vitro or in vivo are provided. The methods and materials use carbon nanotubes or other hydrophobic particles, tubes and wires, functionalized with a linking group that is covalently bound to the nanotubes, or, alternatively, to the biologically active molecule, such as a protein. The biologically active molecule is preferably released from the nanotube when the complex has been taken up in an endosome.

[0009] It has now been surprisingly found that non-covalent functionalization of SWNTs can be accomplished by binding proteins to the nanotubes by various mechanisms, including strong adsorption of phospholipids grafted with polyethylene glycol (PEG) chains, which renders the nanotubes highly water-soluble. Previously, PEG-phospholipids (PEG-PL) have been investigated in the formation of micelles and liposomes for drug delivery

hydrophobic interactions. As shown in FIG. 1 of the US PGPUB 2005/0100960, plurality of noncovalently-bonded molecules, having a highly aromatic group such as a pyrenyl group, are configured and arranged for bonding to additional molecules, such as biomolecules such as antibodies, antigens and DNA. These complexes are intended for in vitro use, e.g., as biosensors, where the attached molecules do not dissociate from the nanotubes.

[0013] Chen et al., PNAS 100:4989 (2003) shows the binding of various proteins (Steptavidin, avidin, BSA, staphylococcal protein A and α-glucosidase) to as-grown nanotubes, and nanotubes treated with surfactants such as Tween, Pluronic P103 and Triton-X. It was reported that a monolayer of Tween 20 anchored on a nanotube would repel non-specific binding of

[0015] Another drawback associated to those complexes is that once dissociated from the complex, the carbon nanotube by itself is not soluble in aqueous systems and tends to form hydrophobic aggregates, which precipitate. Besides, non-functionalized carbon nanotubes have been shown to be toxic in several instances (Warheit et al., (2004) Toxicological Sciences 77:117-125; Lam et al., (2004) Toxicological Sciences 77: 126-134; Shvedova et al., (2003) Journal of Toxicology and Environmental Health, Part A 66:1909-1926).

the desired nanotube concentration.

[0151] SWNTs produced by laser ablation and high pressure CO (Hipco) were used in this work and similar results were obtained with the two materials. The nanotubes were added to a 0.1% (w/w) aqueous solution of 1,2-dipalmitoyl-sn-glycero-3 phosphoethanolamine-N-[methoxy(polyethylene glycol)-2000] (1, PEG-PE) or of the amine-terminated 1,2-Distearoyl-sn-Glycero-3-Phosphoethanolamine-N-[Amino(Polyethylene Glycol)2000] (2, NH2-PEG-PE) and the mixture (nanotubes concentration ˜0.05 to 0.5 mg/mL) was sonicated for 1 h. Excess phospholipids in the solution were then removed by filtration and the PEG-PL coated nanotubes were re-dispersed in water by sonication for 5-10 m. The resulting nanotube solution was highly homogeneous and stable

Liberación dirigida de fármacos

03

CONTENT in vaccines

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DIFFERENT TECHNOLOGIES

cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/overview-COVID-19-vaccin...

te de leer | hrv | Importados | IMPRESCINDIBLES | Coronavirus COVID... | niños | CONSP | 5G | router | »

Types of COVID-19 Vaccines Available

There are four approved or authorized vaccines in the United States.

- Pfizer-BioNTech and Moderna COVID-19 vaccines are mRNA vaccines.
- Novavax COVID-19 vaccine is a protein subunit vaccine.
- Johnson & Johnson's Janssen (J&J/Janssen) COVID-19 vaccine is a viral vector vaccine and can be given in some situations.

These vaccines are given as a shot in the muscle of the upper arm or in the thigh of a young child. COVID-19 vaccine ingredients are considered safe for most people. Nearly all of the ingredients in COVID-19 vaccines are ingredients found in many foods—fats, sugar, and salts. **None of the COVID-19 vaccines affect or interact with our DNA** and the following are **not** included in the vaccines:

- **No preservatives** such as thimerosal or mercury or any other preservatives.
- **No antibiotics** such as sulfonamide or any other antibiotics.
- **No medicines or therapeutics** such as ivermectin or any other medications.

DIFFERENT TECHNOLOGIES

3 elements

- Biology (mRNA / Protein)
- LIPID NP
- medium + stabilizers

PFIZER

Messenger ribonucleic acid (mRNA)	• Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2	Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.
Lipids (fats) **ALC-0159** **DSPC** **ALC-0315**	• 2[(polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide • 1,2-distearoyl-sn-glycero-3-phosphocholine • Cholesterol (plant derived) • ((4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate)	Work together to help the mRNA enter cells.

MODERNA

DSPC

		from getting sick with COVID-19 in the future.
Lipids (fats)	• PEG2000-DMG: 1,2-dimyristoyl-rac-glycerol, methoxypolyethylene glycol • 1,2-distearoyl-sn-glycero-3-phosphocholine • BotaniChol® (non-animal origin cholesterol) • SM-102: heptadecane-9-yl 8-((2-hydroxyethyl) (6-oxo-6-(undecyloxy) hexyl) amino) octanoate	Work together to help the mRNA enter cells.
Salt, sugar, acid stabilizers,	• Sodium acetate • Sucrose (basic table sugar) • Tromethamine	Work together to help keep the vaccine in good condition (molecules remain stable) while the vaccine is

Pfizer (ARNm)		Moderna (ARNm)		Janssen (Vector Viral)	
Ácido ribonucleico mensajero (ARNm)	• ARNm modificado con nucleósidos que codifica la glicoproteína del pico viral (S) del SARS-CoV-2	Ácido ribonucleico mensajero (ARNm)	• ARNm modificado con nucleósidos que codifica la glicoproteína del pico viral (S) del SARS-CoV-2	Una versión inofensiva de un virus no relacionado con el virus COVID-19	• Vector Ad26 recombinante, incompetente para la replicación, que codifica una variante estabilizada de la proteína SARS-CoV-2 Spike (S)
Lípidos (grasas)	• 2[(polietilenglicol (PEG))-2000]-N,N-ditetradecilacetamida • 1,2-diestearoil-sn-glicero-3-fosfocolina • Colesterol (derivado de plantas) • ((4-hidroxibutil)azanediil)bis(hexano-6,1-diil)bis(2-hexildecanoato)	Lípidos (grasas)	• PEG2000-DMG: 1,2-dimiristoil-rac-glicerol, metoxipolietilenglicol • 1,2-diestearoil-sn-glicero-3-fosfocolina • BotaniChol ® (colesterol de origen no animal) • SM-102: 8-((2-hidroxietil) (6-oxo-6-(undeciloxi) hexil) amino) octanoato de heptadecano-9-ilo	Azúcares, sales, ácidos y estabilizadores de ácidos	• Polisorbato-80 • 2-hidroxipropil-β-ciclodextrina • Citrato trisódico dihidrato • Cloruro de sodio (sal de mesa básica) • Monohidrato de ácido cítrico (estrechamente relacionado con el jugo de limón) • Etanol (un tipo de alcohol)
Estabilizadores de [illegible]	• Sacarosa (azúcar de mesa) • trometamina	Sal, azúcar, estabilizadores de ácido y	• Acetato sódico • Sacarosa (azúcar de mesa básico) • trometamina		

https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/Pfizer-BioNTech.html#ingredients
https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/Moderna.html#ingredients

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Google Patents

Vehículos para la administración controlada de diferentes agentes farmacéuticos

Abstract

Un nanolipogel que comprende (1) un núcleo de matriz polimérica que comprende una molécula hospedadora dispersa en el mismo seleccionada del grupo que consiste en polisacáridos tales como amilosas, ciclodextrinas y otros compuestos cíclicos o helicoidales que contienen una pluralidad de anillos de aldosa y disacáridos, criptandos, criptófanos, cavitandos, éteres corona, dendrímeros, resinas de intercambio iónico, calixarenos, valinomicinas, nigericinas, catenanos, policatenanos, carcerandos, cucurbiturilos, esferandos, nanotubos de carbono, fullerenos y materiales hospedantes a base de grafeno, y (2) una capa de lípidos.

ES2745211T3
Spain

Download PDF | Find Prior Art | Similar

Other languages: English

Inventor: Tarek Fahmy, Eric Stern, Richard Flavell, Jason Park, Alyssa Siefert, Stephen H Wrzesinski

Current Assignee : Yale University

Worldwide applications

2013 · US EP EP ES US EP WO PL CA WO 2015 · HK 2016 · US 2018 · US JP US 2019 · US JP US 2021 · JP

Application ES13718738T events

- Priority claimed from US201261623486P

Hydrophobic nanotubes and nanoparticles as transporters for the delivery of drugs into cells

Abstract

Methods and materials for delivering biologically active molecules to cells in vitro or in vivo are provided. The methods and materials use carbon nanotubes or other hydrophobic particles, tubes and wires, functionalized with a linking group that is covalently bound to the nanotubes, or, alternatively, to the biologically active molecule, such as a protein. The biologically active molecule is preferably released from the nanotube when the complex has been taken up in an endosome.

US8246995B2
United States

Download PDF | Find Prior Art | Simil

Inventor: Hongjie Dai, Nadine Wong Shi Kam, Paul A. Zhuang Liu

Current Assignee : Leland Stanford Junior University

Worldwide applications

2006 · 2012 · US

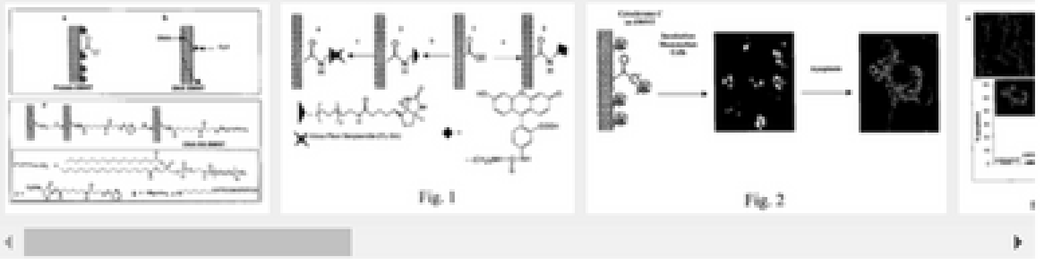
Application US11/431,346 events

2006-05-09 • Application filed by Leland Stanford J University

2006-05-09 • Priority to US11/431,346

2006-12-07 • Publication of US20060275371A1

Images (11)



Classifications

C12N15/87 Introduction of foreign genetic material using processes not otherwise provided

	INGREDENTES VACUNAS COVID	INGREDIENTES PATENTES
P/M	Polietilenglicol (PEG2000)	Polietilenglicol (PEG2000)
J	Polisorbato 80	Polisorbato 20 Y 80
M	Metoxipolietilenglicol	Metoxipolietilenglicol
P	Ditetradecilacetamida	Ditetra tetradecilamina
P/M	Trometamina	Trimetilamina
P/M	3-phosphocolina	3-phosphocolina
J	2-hidroxipropil-β-ciclodextrina	2-hidroxipropil-β-ciclodextrina
M	Octanoato ectadecano	Grupos alcanoatos
P	Hexano hexildecanoato	Hexadecanoiloxi octadecenoiloxi
M	Grupos oxo hexil undeciloxi	Grupos oxo hidroxil oxi
M	Hidroxietil	Hidroxietil
P/M	Grupos amina	Grupos amina
P/M	Colesterol	Colesterol
J	Etanol	Etanol
P/M	1,2-diestearoil sn glicero-3	1,2-diestearoil sn glicero-3
M	1,2-dimiristoil	1,2-dimiristoil
M	Glicerol	Glicerol
P	4-hidroxibutil	4-hidroxibutil

Methods Article | Open Access | Published: 15 March 2017

A versatile method for the preparation of particle-loaded microbubbles for multimodality imaging and targeted drug delivery

Joshua Owen, Calum Crake, Jeong Yu Lee, Dario Carugo, Estelle Beguin, Alexandre A Khrapitchev, Richard J Browning, Nicola Sibson & Eleanor Stride

Drug Delivery and Translational Research **8**, 342–356 (2018) | Cite this article

5520 Accesses | **32** Citations | **4** Altmetric | Metrics

Abstract

Microbubbles are currently in clinical use as ultrasound contrast agents and

Materials

1,2-Distearoyl-*sn*-glycero-3-phosphocholine (DSPC), 1,2-dipalmitoyl-*sn*-glycero-3-phosphocholine (DPPC), 1,2-dibehenoyl-*sn*-glycero-3-phosphocholine (DBPC), 1,2-distearoyl-*sn*-glycero-3-ethylphosphocholine (DSEPC), 1,2-distearoyl-*sn*-glycero-3-phosphoethanolamine-*N*-(polyethylene glycol)-2000 (DSPE-PEG(2000)) and 1,2-distearoyl-*sn*-glycero-3-phosphoethanolamine-*N*-[biotinyl(polyethylene glycol)-2000] (DSPE-PEG(2000)-biotin) were purchased from Avanti Polar Lipids, Inc. (Alabaster, AL, USA). Polyethylene glycol (PEG)-40 stearate, ethanol, chloroform, Dulbecco's phosphate-buffered saline, foetal bovine serum, glycerol, propylene glycol, avidin, fluorescein isothiocyanate (FITC) avidin, biotin and agarose powder were purchased from Sigma-Aldrich Ltd. (Gillingham, Dorset, UK). Phospholipid (phosphatidylcholine)-coated 50-nm magnetite nanoparticles

Polyethylene-Glycol-Modified Single-Walled Carbon Nanotubes for Intra-Articular Delivery to Chondrocytes

Cristiano Sacchetti[†‡], Ru Liu-Bryan[§], Andrea Magrini[∥], Nicola Rosato[⊥], Nunzio Bottini[*‡], and Massimo Bottini[*†‡⊥]

View Author Information

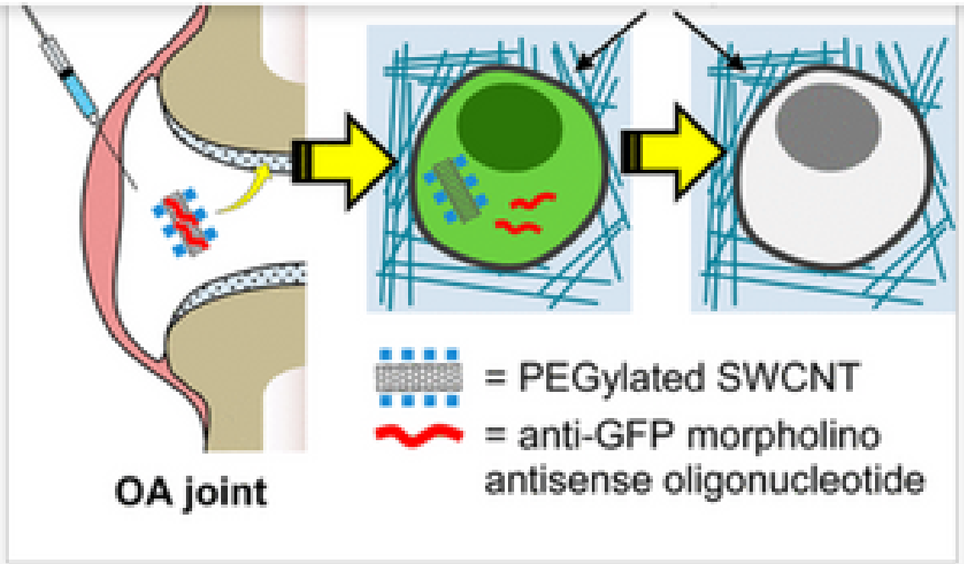
Cite this: *ACS Nano* 2014, 8, 12, 12280−12291
Publication Date: November 21, 2014
https://doi.org/10.1021/nn504537b

ACS Nano

Read Online | PDF (6 MB) | SI Supporting Info (1) »

SUBJECTS: Carbon nanotubes,

articular joints for which no disease-modifying medical therapy is currently available. Inefficient delivery of pharmacologic agents into cartilage-resident chondrocytes after systemic administration has been a limitation to the development of anti-OA medications. Direct intra-articular injection enables delivery of high concentrations of agents in close proximity to chondrocytes; however, the efficacy of this approach is limited by the fast clearance of small molecules and biomacromolecules after injection into the synovial cavity. Coupling of pharmacologic agents with drug delivery systems able to enhance their residence time and cartilage penetration can enhance the effectiveness of intra-articularly injected anti-OA medications. Herein we describe an efficient intra-articular delivery nanosystem based on single-walled carbon nanotubes (SWCNTs) modified with polyethylene glycol (PEG) chains (PEG-SWCNTs). We show that PEG-SWCNTs are capable to persist in the joint cavity for a prolonged time, enter the cartilage matrix, and deliver gene inhibitors into chondrocytes of both healthy and OA mice. PEG-SWCNT nanoparticles did not elicit systemic or local side effects. Our data suggest that PEG-SWCNTs represent a biocompatible and effective nanocarrier for intra-articular delivery of agents to chondrocytes.



ELSEVIER

Advanced Drug Delivery Reviews

Volume 65, Issue 15, December 2013, Pages 1964-2015

Carbon nanotubes for delivery of small molecule drugs ☆

Bin Sheng Wong [a], Sia Lee Yoong [b], Anna Jagusiak [c], Tomasz Panczyk [d], Han Kiat Ho [a], Wee Han Ang [e], Giorgia Pastorin [a b]

FACULTAD DE FARMACIA

Grado en Farmacia

NANOPARTÍCULAS EN EL SISTEMA NERVIOSO CENTRAL

Memoria de Trabajo Fin de Grado

Sant Joan d'Alacant

Junio 2015

Autor: **Miriam Clemente Pérez**

Modalidad: Revisión bibliográfica

Por otra parte, una de las limitaciones principales que presentan las nanopartículas es que pueden ser reconocidas por el sistema inmunitario del huésped cuando se administran por vía intravenosa y ser retiradas por los fagocitos de la circulación. Esta limitación se ha conseguido obviar mediante el recubrimiento de las nanopartículas con copolímeros biodegradables como el Tween 80 (Polisorbato) o el polietilenglicol PEG.

partículas constan de tres capas:

1. Un núcleo biodegradable de PGLA para fármacos poco solubles en agua.
2. Una monocapa lipídica que rodea al núcleo (proporciona estabilidad frente a la salida del fármaco al exterior).
3. Una corona exterior de lípidos PEG (proporciona un medio para unir ligandos).

selectividad en cuanto a la orientación hacia los tejidos tumorales. Las nanopartículas lipídicas sólidas además de contener lípidos también contienen surfactantes como el polisorbato 80 que ayudan a mejorar la penetración de los fármacos al cerebro[66]. El tamaño de las partículas es importante para encapsular al fármaco y además ser accesible al cerebro, por lo que se

REVIEW article

Front. Syst. Neurosci., 11 April 2018
Volume 12 - 2018 |
https://doi.org/10.3389/fnsys.2018.00012

This article is part of the Research Topic
Graphene and the Brain
View all 5 Articles >

Download Article

Interfacing Graphene-Based Materials With Neural Cells

 Mattia Bramini[1,2*], Giulio Alberini[1,3], Elisabetta Colombo[1,2],
Martina Chiacchiaretta[1,3], Mattia L. DiFrancesco[1,2],
 José F. Maya-Vetencourt[1], Luca Maragliano[1],  Fabio Benfenati
[1,2,3†] and  Fabrizia Cesca[1,2*†]

The scientific community has witnessed an exponential increase in the applications of graphene and graphene-based materials in a wide range of fields, from engineering to electronics to biotechnologies and biomedical applications. For what concerns neuroscience, the interest raised by these materials is two-fold. On one side, nanosheets made of graphene or graphene derivatives (graphene oxide, or its reduced form) can be used as carriers for drug delivery. Here, an important aspect is to evaluate their toxicity, which strongly depends on flake composition, chemical functionalization and dimensions. On the other side, graphene can be exploited as a substrate for tissue engineering. In this case, conductivity is probably the most relevant amongst the various properties of the different graphene materials, as it may allow to instruct and interrogate neural networks, as well as to drive neural growth and differentiation, which holds a great potential in regenerative medicine. In this review, we try to give a comprehensive view of the accomplishments and new challenges

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Journal of Neural Engineering

PAPER

Directed and enhanced neurite outgrowth following exogenous electrical stimulation on carbon nanotube-hydrogel composites

Mozhdeh Imaninezhad[1], Kyle Pemberton[2], Fenglian Xu[2], Kristin Kalinowski[1], Reetom Bera[1] and Silviya Petrova Zustiak[3,1]

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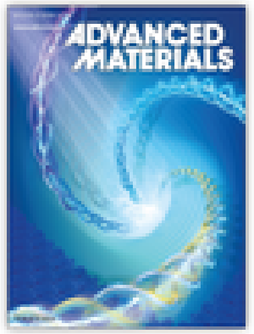
Journal of Neural Engineering, Volume 15, Number 5

Citation Mozhdeh Imaninezhad *et al* 2018 *J. Neural Eng.* 15 056034

DOI 10.1088/1741-2552/aad65b

References

ADVANCED MATERIALS



Volume 33, Issue 41
October 14, 2021
2102981

Research Article | Open Access

Carbon Nanotube–Hydrogel Composites Facilitate Neuronal Differentiation While Maintaining Homeostasis of Network Activity

Lijun Ye, Haichao Ji, Jie Liu, Chien-Hua Tu, Michael Kappl, Kaloian Koynov, Johannes Vogt, Hans-Jürgen Butt

First published: 27 August 2021 | https://doi.org/10.1002/adma.202102981 | Citations: 7

Recommended

Fabrication and Characterization of Soluble Multi-Walled Carbon Nanotubes Reinforced P(MMA-*co*-EMA) Composites

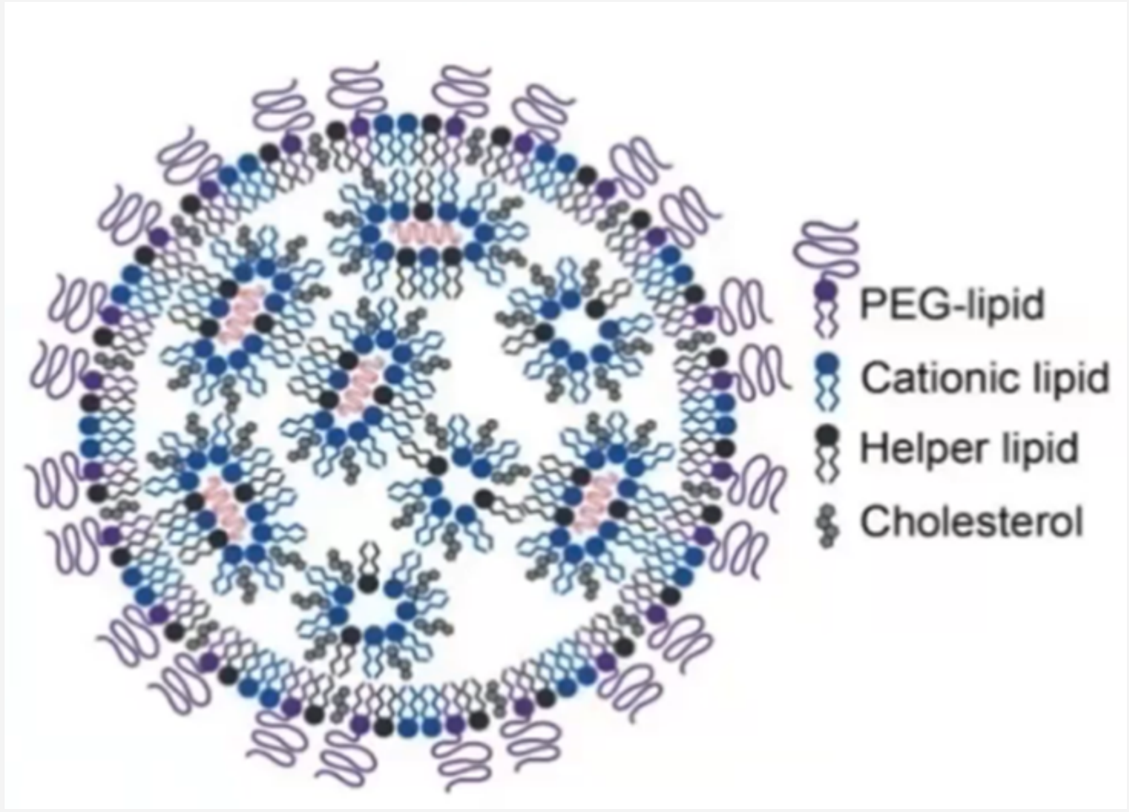
Junwei Yang, Jianhua Hu, Changchun Wang, Yujun Qin,

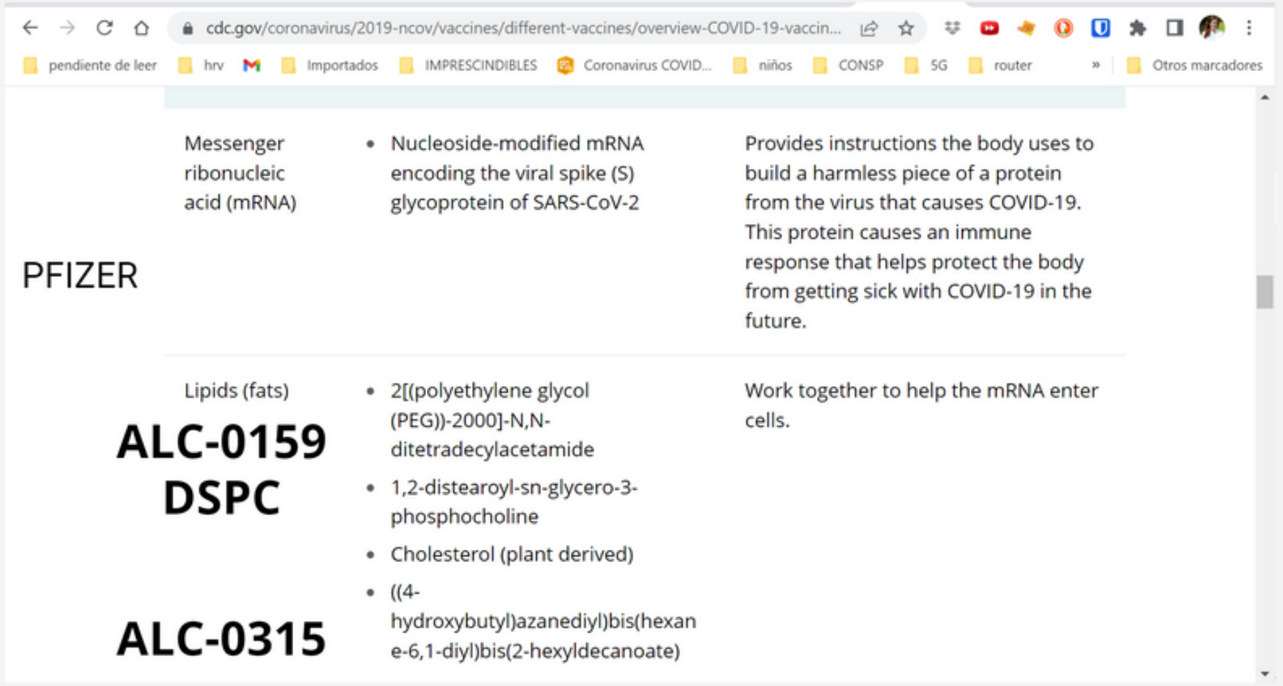
Abstract

investigated by whole patch-clamp measurements, pure P(3HB) led to changes in the action potential waveform and reduction in firing frequency, resulting in decreased neuronal excitability. However, the addition of GnP to the polymer matrix restored the electrophysiological parameters to physiological values. Interestingly, a low concentration of graphene was able to promote firing activity at a low level of injected current. The results indicate that the P(3HB)/GnP composites show great potential for electrical interfacing with primary neurons to eventually target central nervous system disorders.

Introduction

Smart neuronal interfaces are emerging as promising tools for neural tissue engineering, where scaffolds are required to provide cell support and stimulate network excitability (Lizarraga-Valderrama et al., 2019). Hence, the dynamic relation between neurons and scaffolds can be used





PFIZER	Messenger ribonucleic acid (mRNA)	• Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2	Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.
	Lipids (fats)	• 2[(polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide	Work together to help the mRNA enter cells.
	ALC-0159		
	DSPC	• 1,2-distearoyl-sn-glycero-3-phosphocholine	
		• Cholesterol (plant derived)	
	ALC-0315	• ((4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate)	

AbMole

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product Name: ALC-0315 (Liquid)

Catalog Number: M22500

CAS Number: 2036272-55-4

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: For research use only, not for human or veterinary use.

1.3 Details of the supplier of the safety data sheet

Company: Abmole Bioscience Inc.
8300 Cypress Creek Parkway, Suite 450
Houston, TX 77070, USA
www.abmole.com

1.4 Emergency telephone number

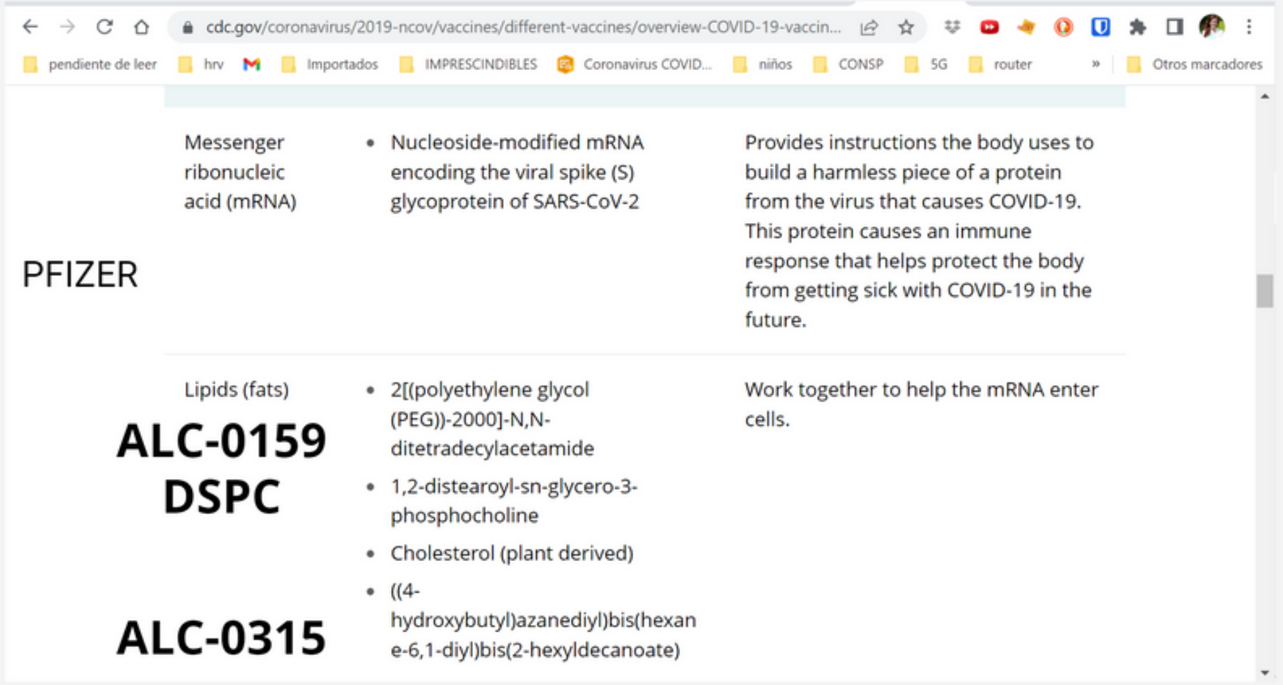
Emergency contact: +1 800-660-8580

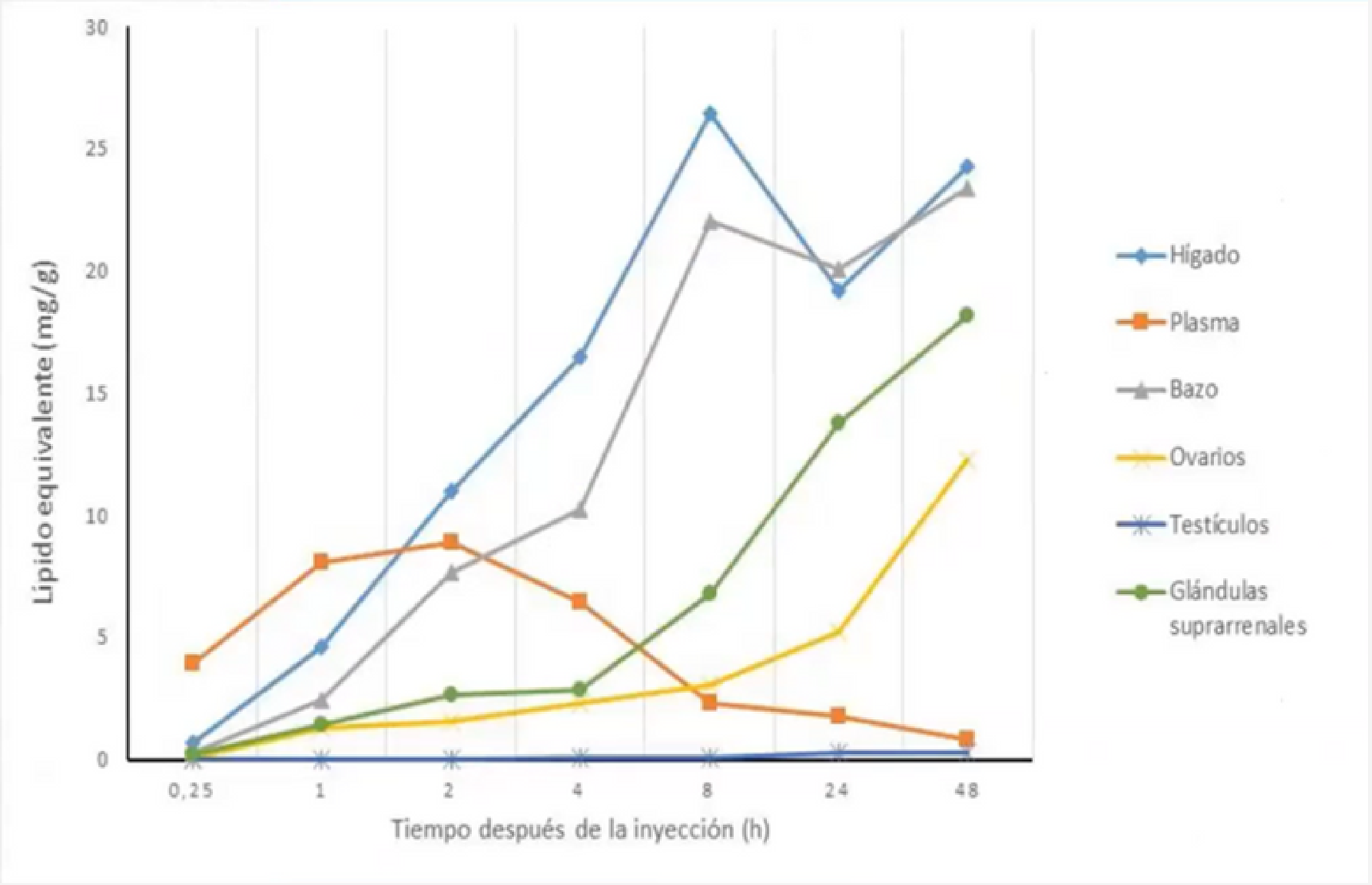
2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements





2.6.5.5B. PHARMACOKINETICS: ORGAN DISTRIBUTION CONTINUED **Test /**

Sample	Total Lipid concentration (µg lipid equivalent / g [or mL]) (males and females combined)						
	0.25 h	1 h	2 h	4 h	8 h	24 h	48 h
Lymph node (mandibular)	0.064	0.189	0.290	0.408	0.534	0.554	0.727
Lymph node (mesenteric)	0.050	0.146	0.530	0.489	0.689	0.985	1.37
Muscle	0.021	0.061	0.084	0.103	0.096	0.095	0.1
Ovaries (females)	0.104	1.34	1.64	2.34	3.09	5.24	12.3
Pancreas	0.081	0.207	0.414	0.380	0.294	0.358	0.599
Pituitary gland	0.339	0.645	0.868	0.854	0.405	0.478	0.694
Prostate (males)	0.061	0.091	0.128	0.157	0.150	0.183	0.170
Salivary glands	0.084	0.193	0.255	0.220	0.135	0.170	0.264
Skin	0.013	0.208	0.159	0.145	0.119	0.157	0.253
Small intestine	0.030	0.221	0.476	0.879	1.28	1.30	1.47
Spinal cord	0.043	0.097	0.169	0.250	0.106	0.085	0.112
Spleen	0.334	2.47	7.73	10.3	22.1	20.1	23.4
Stomach	0.017	0.065	0.115	0.144	0.268	0.152	0.2
Testes (males)	0.031	0.042	0.079	0.129	0.146	0.304	0.3
Thymus	0.088	0.243	0.340	0.335	0.196	0.207	0.331
Thyroid	0.155	0.536	0.842	0.851	0.544	0.578	1.00
Uterus (females)	0.043	0.203	0.305	0.140	0.287	0.289	0.456
Whole blood	1.97	4.37	5.40	3.05	1.31	0.909	0.420
Plasma	3.97	8.13	8.90	6.50	2.36	1.78	0.805
Blood: Plasma ratio a	0.815	0.515	0.550	0.510	0.555	0.530	0.540

Details

Science Immunology
Volume 6, Issue 60
Jun 2021

ARTICLE

COVID-19 vaccine side effects: The positives about feeling bad

View article page

Jonathan Sprent and Cecile King

CORONAVIRUS

COVID-19 vaccine side effects: The positives about feeling bad

Jonathan Sprent[1]* and Cecile King[2]*

Side effects of SARS-CoV-2 vaccines are often troubling but may merely reflect transient production of type I interferons, a normal immune reaction to contact with pathogens.

The development of multiple vaccines against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus, the cause of coronavirus disease 2019 (COVID-19), within 1 year of the epidemic is unprecedented and an immense accomplishment. The efficacy of many developed vaccines exceeded expectations, and there are high hopes that the epidemic will soon be in the past. Yet, several challenges remain. Vaccinations are far from complete in developed nations and have barely begun in many developing nations, suggesting that achieving worldwide herd immunity against the virus may take several years. There is also the growing problem of vaccine hesitancy, especially in the young who generally cope well with COVID-19, with minimal or even no symptoms. In addition, it is well documented that COVID-19 vaccines can have substantial side effects; indeed, fear of these side effects may approach that of SARS-CoV-2 infection itself in some populations. Therefore, what are the side effects of COVID-19 vaccines—and could they paradoxically be beneficial?

In keeping with their rapid development and production, the mRNA-based vaccines have received no attention. So what is the cause of these effects? As discussed here, most of the symptoms can likely be attributed simply to exuberant production of a cytokine that plays a vital role in potentiating early stages of the immune response, namely, type I interferon (IFN-I).

The features and functions of IFN-I have been considered elsewhere (*3*, *4*). In brief, IFN-I comprises a mixture of IFN-β, multiple subtypes of IFN-α, and several other IFNs. IFN-I together with closely related IFN-III (IFN-λ) are produced soon after contact with pathogens and have powerful antiviral effects, acting throughout the body for IFN-I and within the respiratory system for IFN-III. These effects suppress local viral replication and thereby prevent dissemination of virus elsewhere.

IFN-I is produced primarily by macrophages and dendritic cells (DC), including both conventional and plasmacytoid DC, and is elicited via interaction with pathogens

for mRNA-based vaccines, the PAMP (mRNA) is recognized by multiple PRRs, namely, TLR7, TLR8, and TLR9, RIG-I, and melanoma differentiation-associated protein 5 (MDA5).

The receptor for IFN-I, IFNAR, is expressed by all nucleated cells, and contact with its ligand induces a complex series of intracellular signaling events leading to production of a wide range of cytokines and other mediators that antagonize the pathogen concerned. In particular, early production of IFN-I is crucial for producing an optimal immune response. IFN-I induces activation of DC and thereby enables these cells to present antigen to naive $CD4^+$ and $CD8^+$ T cells (Fig. 1); activated $CD4^+$ cells then stimulate specific antibody production by B cells, whereas $CD8^+$ cells differentiate into cytolytic

SCIENCE IMMUNOLOGY | FOCUS

CORONAVIRUS

COVID-19 vaccine side effects: The positives about feeling bad

Jonathan Sprent[1]* and Cecile King[2]*

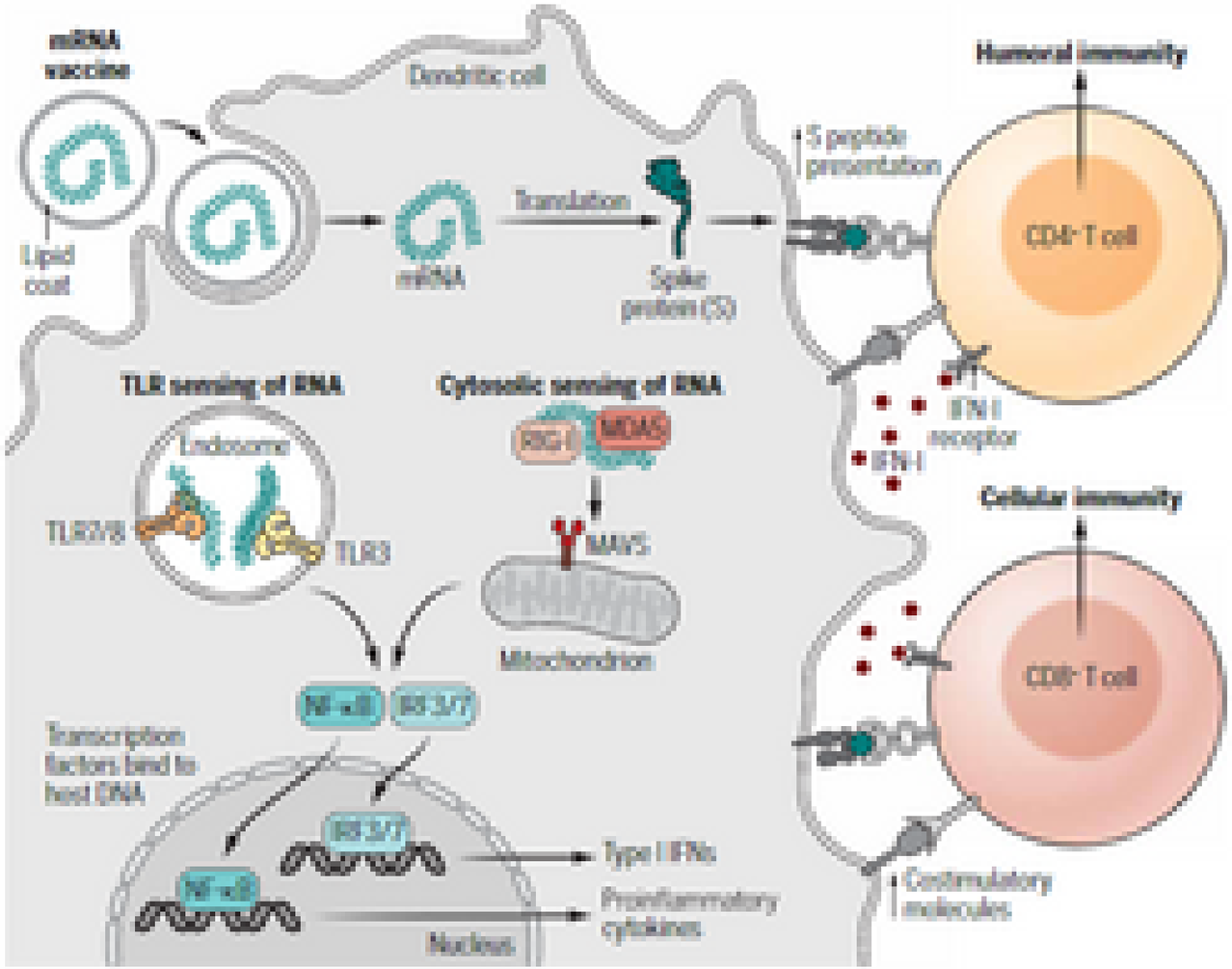
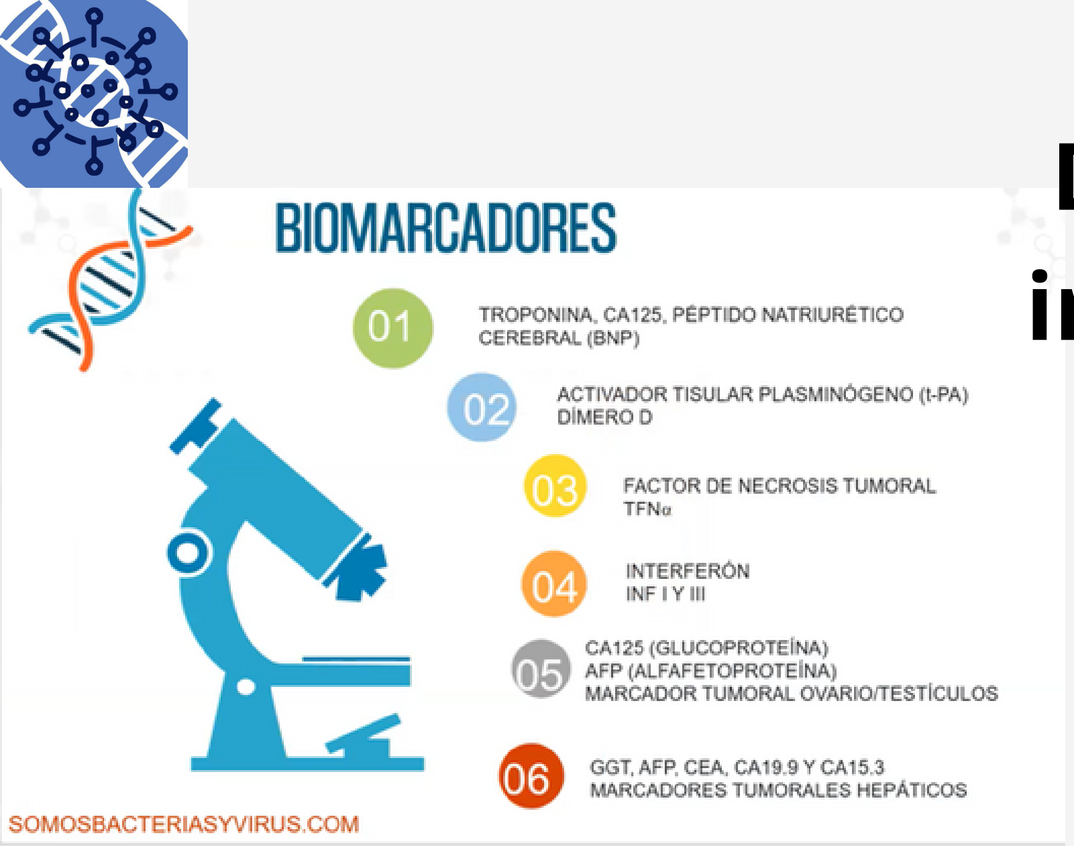


Fig. 1. mRNA vaccine activation of DC and induction of IFN-I. After uptake, mRNA is translated into spike protein and presented as cell-surface MHC-bound peptides to $CD4^+$ and $CD8^+$ T cells. Cytosolic sensing of RNA by RIG-I and MDA5 plus TLR binding within endosomes leads to activation of IFN regulatory factor 3/7 (IRF3/7) and nuclear factor κB (NF-κB), which bind to DNA inducing gene transcription, and production of IFN-I and proinflammatory cytokines, respectively. MAVS, mitochondrial antiviral-signaling protein. Through up-regulation of DC costimu-

EFECTOS ADVERSOS

- TROMBOSIS, ICTUS, A.C.VASCULAR
- DAÑOS CARDIACOS y GANGLIONARES.
- TURBOCANCER.
- PRODUCCIÓN DE GAMETOS.
- GLÁNDULAS SUPRARENALES.
- DAÑO Y TUMOR TIROIDES HASHIMOTO.
- HIPERTROFIA ÓRGANOS (BAZO, GANGLIOS) DAÑOS OCULARES.



Des-regulation of metabolism - immune pathologies - apoptosis The body does not read the mRNA - exocitosis (exosomes)

ACCUMULATION
INFLAMMATION
INFILTRATION
APOPTOSIS
NECROSIS

MÁS de 1200 ARTÍCULOS REVISADOS POR PARES

Lung squamous cell carcinoma with hemoptysis after vaccination with tozinameran (BNT162b2, Pfizer-BioNTech)

Toshiyuki Sumi [1 2], Yuta Nagahisa [1 2], Keigo Matsuura [1 2], Motoki Sekikawa [1 2], Yuichi Yamada [1], Hisashi Nakata [1], Hirofumi Chiba [2]

Affiliations + expand

PMID: 34612003 PMCID: PMC8590897 DOI: 10.1111/1759-7714.14179

Free PMC article

Original Investigation

January 25, 2022

Myocarditis Cases Reported After mRNA-Based COVID-19 Vaccination in the US From December 2020 to August 2021

Matthew E. Oster, MD, MPH[1,2,3]; David K. Shay, MD, MPH[1]; John R. Su, MD, PhD, MPH[1]; et al

Author Affiliations | Article Information

JAMA. 2022;327(4):331-340. doi:10.1001/jama.2021.24110

Rapid Progression of Angioimmunoblastic T Cell Lymphoma Following BNT162b2 mRNA Vaccine Booster Shot: A Case Report

Serge Goldman[1], Dominique Bron[2], Thomas Tousseyn[3], Irina Vierasu[1], Laurent Dewispelaere[4], Pierre Heimann[4], Elie Cogan[5] and Michel Goldman[6]

[1]Department of Nuclear Medicine, Erasme Hospital, Université Libre de Bruxelles, Brussels, Belgium, [2]Department of Hematology, Jules Bordet Institute, Université Libre de Bruxelles, Brussels, Belgium, [3]Department of Pathology, UZ Leuven Hospitals, Leuven, Belgium, [4]Laboratory of Hematology, LHUB, Université Libre de Bruxelles, Brussels, Belgium, [5]Department of Internal Medicine, CHIREC Hospital, Brussels, Belgium, [6]IDI Institute, Université Libre de Bruxelles, Brussels, Belgium

04

(MY) CONCLUSIONS

Living University of TERRAIN

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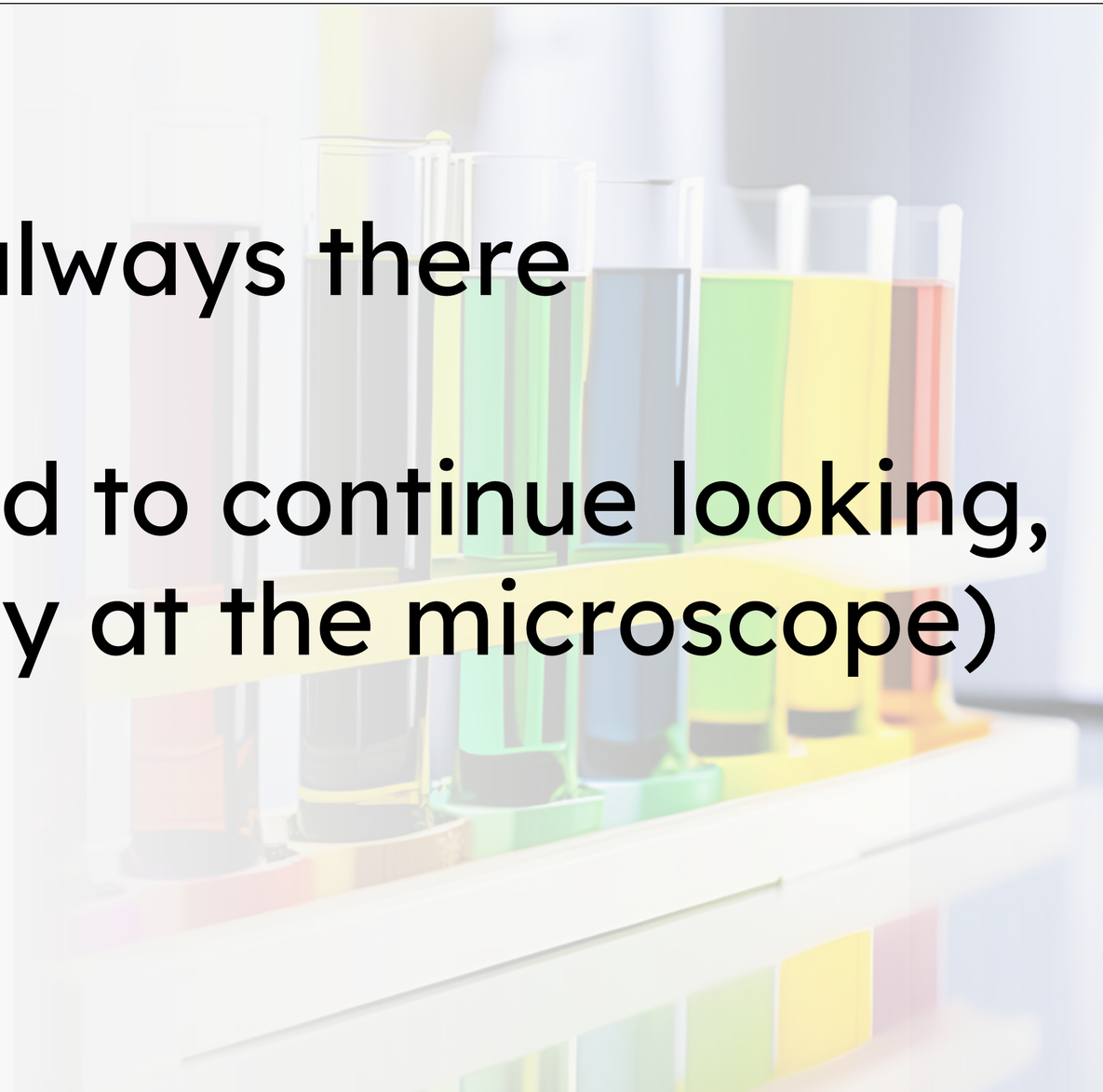
MY conclusions

it was always there

(no need to continue looking, specially at the microscope)



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04 CONCLUSIONS

MY conclusions

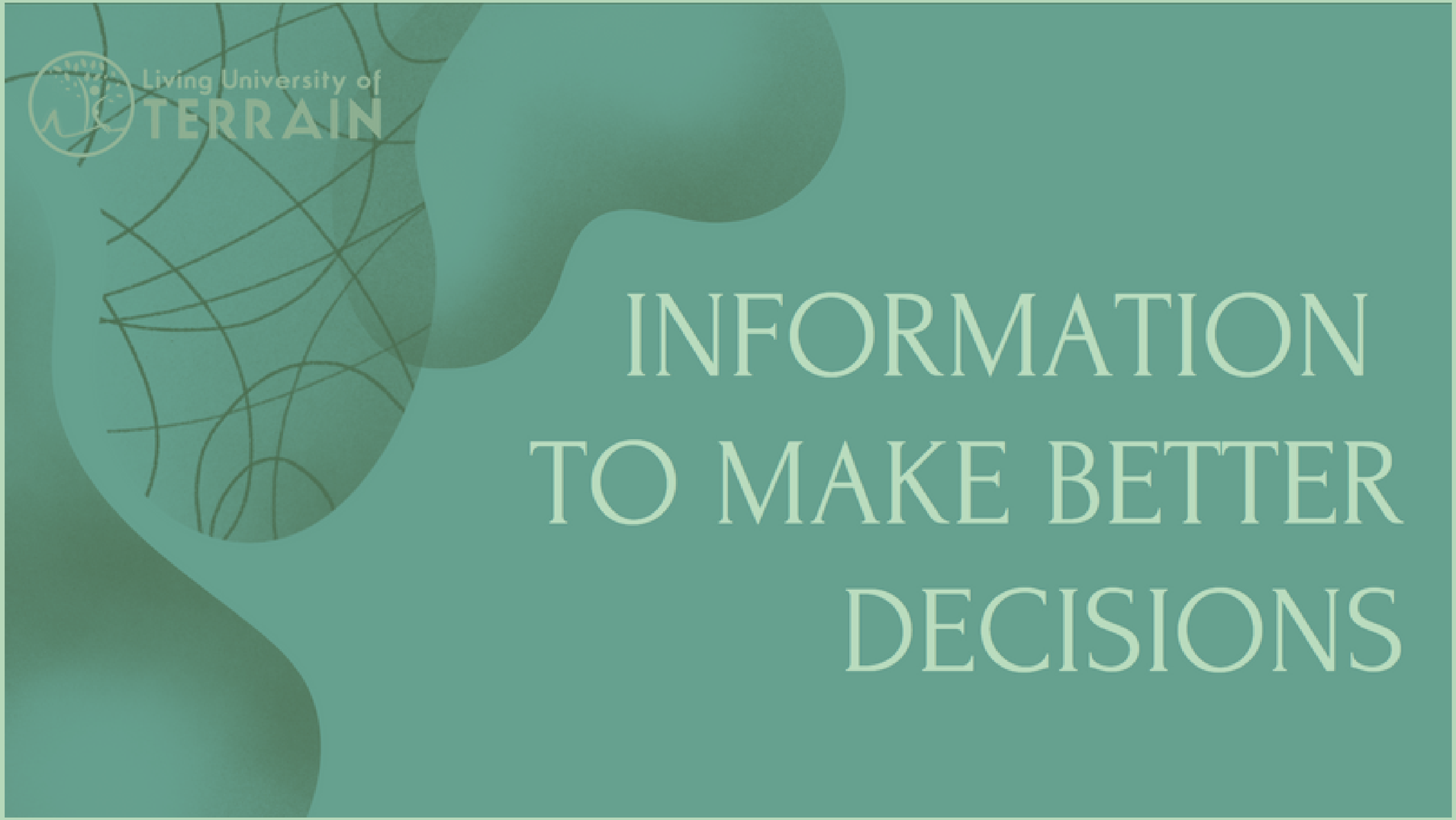
it was always there

3 elements: (pseudo)metal nanoparticles + DNA/RNA + Lipid Nanoparticles (glue) --(in a GO hidrogel)

They create hybrid (neural) interfaces (tissue engineering) + drug delivery system.

Creating many health problems

NOW WHAT???



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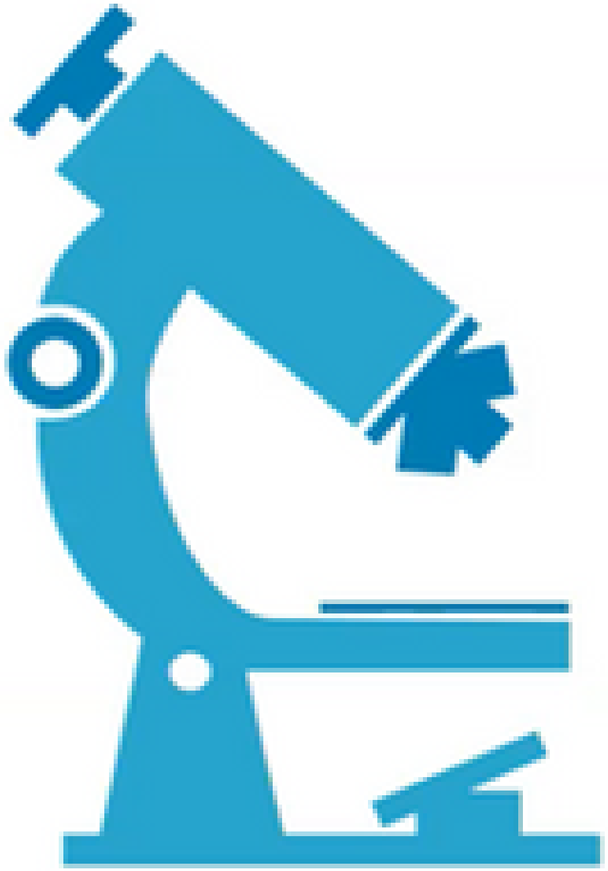
TERRAIN

BIOMARCADORES

IF YOU WANT TO HELP....



01 TROPONINA, CA125, PÉPTIDO NATRIURÉTICO CEREBRAL (BNP)

02 ACTIVADOR TISULAR PLASMINÓGENO (t-PA)
DÍMERO D

03 FACTOR DE NECROSIS TUMORAL
TFNα

04 INTERFERÓN
INF I Y III

05 CA125 (GLUCOPROTEÍNA)
AFP (ALFAFETOPROTEÍNA)
MARCADOR TUMORAL OVARIO/TESTÍCULOS

06 GGT, AFP, CEA, CA19.9 Y CA15.3
MARCADORES TUMORALES HEPÁTICOS

IF YOU WANT TO CHANGE REALITY...

Journal of Scientific Exploration, Vol. 9, No. 2, pp. 223–229, 1995

0892-3310/95

Psychokinetic Action of Young Chicks on the Path of An Illuminated Source[1]

RENÉ PEOC'H

4 rue des Genets, 44640 Saint Jean de Boiseau, France

Abstract — We tested the possible psychokinetic influence of 80 groups of 15 chicks on a randomly moving robot carrying a lighted candle in an otherwise darkened room. In 71% of the cases, the robot spent excessive time in the vicinity of the chicks. In the absence of the chicks, the robot followed random trajectories. The overall results were statistically significant at $p < 0.01$.

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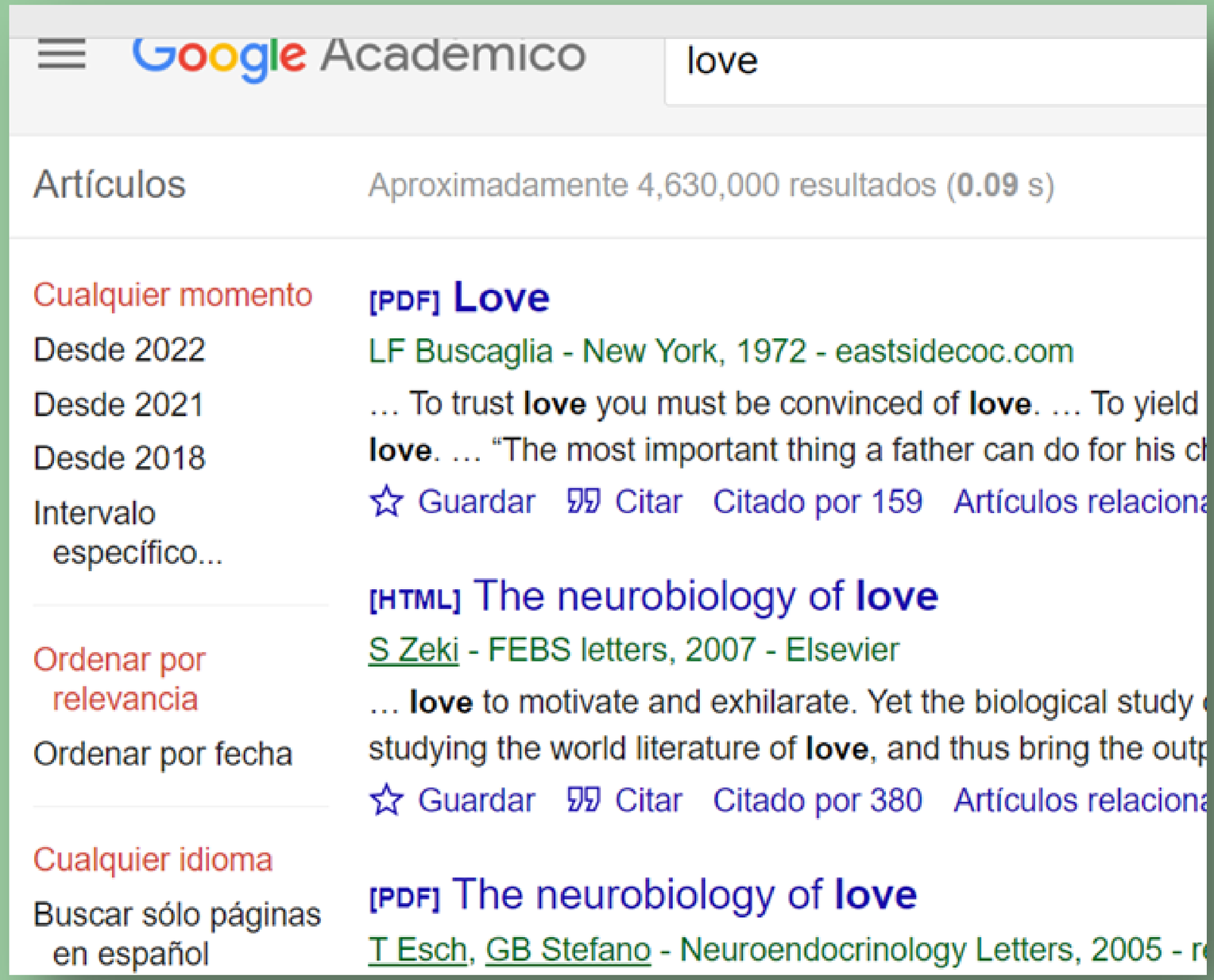

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INFORMATION
TO MAKE BETTER DECISIONS
(NOT TO CREATE FEAR OR
TO MAKE US VICTIMS)

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The Terrain is everything

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