

The Influence of Electromagnetic Fields of the Extra-Low Frequency on the Infectious Activity of the Influenza Virus and *Staphylococcus Aureus*

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The researches like that became possible with appearance of new class of devices allowing to registrate and reproduce weak electromagnetic fields (EMF) of extremely low power in very low frequency band. The hardware and software "SCS-BARS" is one of such devices. The registration of electromagnetic vibrations in "SCS-BARS" is carried out in low frequency band (less than 30kHz). The aim of this research was studying influence of own spectra of EMF of extremely low power in the very low frequency band on replication of influenza virus and on growth of *S.aureus*. Autospektral fields (ASF) of the objects were recorded and their impact on virus and bacterial agents carried out in vitro in the inverse mode (IM). With the "SCS-BARS" we influenced with the ASF of object, recorded right before influence on influenza virus A/Hong Kong/1/68(H3N2) in the IM during 30 min. The control is carried out similar to the test without treatment by «SCS-BARS». The qualities of infective viruses in experiment and control practically did not differ after 8hrs at 37°. After 24hrs viral infective titers in experiment were less on 1.0 log₁₀ TID₅₀ than in control. The greatest distinctions in growth of *S.aureus* were registered in 24hrs after the exposure and by the point of 48hrs the difference in microbial number between the control and experiment decreased. The average indices of optical density of control samples of *S.aureus* ATCC 25923 and *S.aureus* 2781 in 24 and 48hrs were lower than the control at average by 0.57 ± 0.10 and 0.75 ± 0.13 optical density units (ODU) by the McFarland. It corresponds to 4.1 ± 0.1 colony-forming units, ml (CFU/ml) and 4.7 ± 0.1 CFU/ml. This difference was more pronounced at *S.aureus* ATCC 25923 in 48hrs at exposure during 30min. The difference between the control and experiment averaged 0.87 ± 0.12 EOP or 5.1 ± 0.1 CFU/ml. So a single exposure of ASF on studied influenza virus and *S.aureus* strains inhibits their growth/replication in vitro. The obtained results prove a necessity of conducting further researches both for studying mechanisms of EMF on causative agents, and for development of new methods for anti-infection therapy

Control: A reference standard. In some examples, a control can be a known value indicative of a known concentration or amount of an analyte, such as a target analyte for example a biomolecule or microorganism of interest. In some examples, a control, or a set of controls of known concentration or amount can be used to calibrate a mass spectrometer. In some examples, a control is zero concentration of an analyte.

Corona: A current that develops from an electrode with a high potential in a neutral fluid, such as an inert gas, by ionizing that fluid so as to create a plasma around the electrode. The ions generated eventually pass charge to nearby areas of lower potential, such as a counter electrode. When the potential gradient is large enough at a point in the fluid, the fluid at that point ionizes and becomes conductive.

Corona discharge usually involves two electrodes.

Corona Discharge: If the field strength in front of a sharp point of a conductor exceeds the breakdown field strength for the medium (for example, an inert gas), a **corona** discharge will take place.

Descriptor Peak: A high mass ion that appears in a global mass spectrum of a microorganism sample.

Detect: To determine if an agent (such as a signal or target analyte) is present or absent. In some examples, this can further include quantification. In some examples, a mass signal is used to detect the presence, amount or concentration of an agent, such as an analyte, for example a microorganism.

Direct Impact Ionization: A technique used to ionize and volatilize a sample for mass spectrometric analysis. During direct impact ionization, an electrical discharge directly impacts the sample.

The effects of low-intensity extremely high-frequency electromagnetic radiation (EHF EMR; 42.2 GHz, 0.1 mW/cm² , exposure duration 20 min) on the fatty acid (FA) composition of thymic cells and blood plasma in normal mice and in mice with peritoneal inflammation were studied. It was found that the exposure of normal mice to EHF EMR increased the content of polyunsaturated FAs (PUFAs) (eicosapentaenoic and docosapentaenoic) in thymic cells. Using a model of zymosan-induced peritoneal inflammation, it was shown that the exposure of mice to EHF EMR significantly increased the content of PUFAs (dihomo- γ -linolenic, arachidonic, eicosapentaenoic, docosapentaenoic, and docosahexaenoic) and reduced the content of monounsaturated FAs (MUFAs) (palmitoleic and oleic) in thymic cells. Changes in the FA composition in the blood plasma were less pronounced and manifested themselves as an increase in the level of saturated FAs during the inflammation. The data obtained support the notion that MUFAs are replaced by PUFAs that can enter into the thymic cells from the external media. Taking into account the fact that the metabolites of PUFAs are lipid messengers actively involved in inflammatory and immune reactions, we assume that the increase in the content of n-3 and n-6 PUFAs in phospholipids of cellular membranes facilitates the realization of anti-inflammatory effects of EHF EMR.

Synthetic and Systems Biology Approaches to Microbiology

199

RCGC: Remote Control of Genetic Circuits

John Allan, Frank Sargent
University of Dundee, Dundee, UK

In the future, biotechnological processes may be absolved of chemical induction methods. Instead genes and biosynthetic processes could be controlled remotely by radio waves. To this end, we are developing an array of bacterially produced "aerials" and responsive elements for use in the remote control of gene expression.

Agrobacterium tumefaciens uses a temperature sensitive two-component system called VirAG that acts as the master regulator of its virulence plasmid. Using synthetic biology methods, a magnetic nanoparticle aerial could be attached and excited using radiofrequency electromagnetic waves, generating heat which could turn this sensor off. There are a wealth of bacterial ferritins and other proteins that produce and store magnetic iron. By fusing the temperature sensitive VirA with one of these a genetic remote control is generated.

E. coli is also capable of producing palladium nanoparticles using its hydrogenases. Bringing these nanoparticles in to proximity of VirA and exciting them using a resonance frequency at their diameter, heat may also be emitted again affecting its activity as a sensor.

Constructing these systems in *E. coli* opens up an array of existing useful biochemical processes to be controlled downstream. These methods could be applied in large biotechnological processes to produce valuable and useful products, or to communicate with and control bacteria from great distances.



ABSTRACT

FIGURES AND TOPICS

45 CITATIONS

9 REFERENCES

DOI: 10.1002/bem.21782 • Corpus ID: 1692858.oa

Combining near- and far-field exposure for an organ-specific and whole-body RF-EMF proxy for epidemiological research: a reference case.

[Oliver Lauer](#), [Patrizia Frei](#), +3 authors [Juerg Froehlich](#) • Published in Bioelectromagnetics 2013 • Biology, Medicine

A framework for the combination of near-field (NF) and far-field (FF) radio frequency electromagnetic exposure sources to the average organ and whole-body specific absorption rates (SARs) is presented. As a reference case, values based on numerically derived SARs for whole-body and individual organs and tissues are combined with realistic exposure data, which have been collected using personal exposure meters during the Swiss Qualifex study. The framework presented can be applied to any study region where exposure data is collected by appropriate measurement equipment. Based on results derived from the data for the region of Basel, Switzerland, the relative importance of NF and FF sources to the personal exposure is examined for three different study groups. The results show that a 24-h whole-body averaged exposure of a typical mobile phone user is dominated by the use of his or her own mobile phone when a Global System for Mobile Communications (GSM) 900 or GSM 1800 phone is used. If only Universal Mobile Telecommunications System (UMTS) phones are used, the user would experience a lower exposure level on average caused by the lower average output power of UMTS phones. Data presented clearly indicate the necessity of collecting band-selective exposure data in epidemiological studies related to electromagnetic fields. LESS

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The new disease caused by the coronavirus outbreak that began in Wuhan, China, in December now has an official name: **Covid-19**.

It may not be elegant, but its roots are pretty straightforward: **CO**rona**VI**rus **D**isease **2019**.

“Coronavirus” refers to the family of viruses that the disease belongs to and is named for its crown-like shapes under a microscope (“corona” comes from the latin word for “**crown**” and the Ancient Greek *korōnè*, meaning garland, or wreath). “2019” refers to the year it was first identified.



World Health Organization (WHO) ✓

@WHO



BREAKING 🚨

"We now have a name for the #2019nCoV disease:

COVID-19.

I'll spell it: C-O-V-I-D hyphen one nine – COVID-19"

-@DrTedros #COVID19

Corona Virus Disease
#COVID19





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2.—Deserted and uucart*ti for, in the luat stages of an attack of pneumonia. John Covide was discovered this morning by

Philadelphia Inquirer Newspaper Archives

August 03, 1900 Page 4



MOVED AWAY AND ' LEHTSICI^AN ALONE

"In the Last Stages of Pneumonia, John Covide is Found in a ' Vacant House

All August 3, 1900 Ne

JOHNSTOWN, Pa.. Aug. 2.—Deserted aud uucart*ti for, in the last stages of an attack of pneumonia. John Covide was discovered this morning by the Johnstown police In an unoccupied building on Power street, in Cambria.

Covide had been taken ill two weeks ago, and during the last few' days his condition bks been most critical. The family with whom he boarded left Johnstown lute last night, boarding a Pehnsylvania train for New' York, and left Covide lying on the bed. the only piece of furniture that renwiined in the building.

The sick man ia tonight Under the care of the Johnstown police.

~~Democrat, 18th—John R. Edie, Republican; 19th~~
~~—John Covide, Republican, 20th—John Knight,~~

Sacramento Daily Union, Volume 12, Number 1760, 15 November 1856

Turkish border guards have shot **dead 422**+ Syrian refugees

Department of Health

UPDATE on coronavirus

As of 9am on 24 March.

82,359 negative.

8,077 positive.

As of 1pm, 422 patients

The digital dashboard

suicide bomber kills himself and 42 family members from home due to **Corona**.

TheGothicLibrarian RIP Kerri

422 cases and 10 dead in my Canton



KMOV

Illinois officials: 3 more **dead**, 422 now positive

#KMOV

INI 3 Mar

and 422 people were injured.7

COVID-19: Alberta sees 42 new cases;

update
ve): 421,413 Cas
the number
rus
o > con
ronavir

Virus Outbreak: CECC announces 42nd COVID-

4 Mar 2020 - The Central Epidemic Command Center (CECC) yesterday announced the nation's 42nd confirmed case of COVID-19, a woman in her 50s ...

MichiKomTrikru 42% of people view coronavirus as a high or very high global threat

COVID-19: Cases rise to 42 in SLO County.

29,056 infected

118 dead

422 recovered



Coronavirus Update

Across the UK, there have been

of which 82,359 were confirmed negative, positive.

422 patients who tested positive for

Refugee List @refugee

2,422 dead #refugees

Lamal vincent @LamalVincent

Replying to @LamalVincent

In Europe : 3,422 dead...

WomenAgainstGunViol @WAGV 1 Oct 2019

The Vegas shooting, 2 years ago today, left 58 **dead** and 422 wounded,

Aghora @Aghora_ 23 Mar

It now stands at 26220 infected cases, 422 cured ;

The vaccine was created just 42 days after the genetic sequencer



INFO COVID-19 - EHMA

The situation on COVID-19 is rapidly evolving and

Ministry of Health, mzcrcz, (+420) 724 810 106; (

42 people at Illinois nursing home test positive for COVID-19 Fake Covid-19 prevention guide

COVID-19 update; 420 cases, 13 deaths in Georgia among 42 fake news cases

or Gainer in Top Stories

The cellular and molecular levels (41.95 or 42.2 GHz, 19.5 μ W/cm², 0, 1, 31.5 mW/cm²

For further information on the Bari-Matera 5G project, visit

www.barimatera5g.it.

BariMatera5G is the project with which TIM, Fastweb and Huawei have jointly won the MISE call for tenders for the trial of the new 5G technology in the two cities. By means of an investment of more than EUR 60 million over 4 years, Bari and Matera will be among the first "5G cities" in Europe, in which innovative services in sectors like healthcare, Industry 4.0, tourism, culture, the automotive industry and Public Safety will be tested. The project involves, in addition to the three leading companies, **52** partners of excellence, including **7** universities and research centres, **34** large corporations and **11** public authorities. The 5G network set up in Bari and Matera will allow a transmission capacity ten times greater than that of 4G and the trials will involve **70** use cases, bringing about a radical transformation of the territories involved.

Bari, Matera, **25** May **2018**

5×7

$2 \times 11(2)$

‘The people are not guinea pigs whose health I can sell at a profit.’

(Brussels environment minister, Céline Fremault, rejecting 5G, 2019)

**Matera is an intelligent guinea pig that can express the results of research.
It is a city that cannot live on tourism alone** (talking about 5G)

(Mayor of Matera, Raffaello de Ruggieri, 25 May 2018)

In the future, the potential for these tools will improve drastically thanks to augmented reality, the technology whereby digital information is overlaid on the real world. With the help of a smartphone or smart glasses, users can obtain information on a city's attractions in ways that are simpler, more intuitive and more immediate.

There are nevertheless some obstacles to overcome: for example, how can people's privacy be protected when all their movements are traced? This issue is already of fundamental importance but in the future it will become absolutely crucial. All things considered, however, one thing is certain: thanks to sensors, big data and georeferenced information we will be able to hold the whole city in our hands.

en.wikipedia.org › wiki › San_Francisco_plague_of_1900–1904 ▼

San Francisco plague of 1900–1904 - Wikipedia

The San Francisco **plague** of 1900–1904 was an epidemic of bubonic **plague** centered on San Francisco's Chinatown. It was the **first plague** epidemic in the continental United States. The epidemic was recognized by medical authorities in **March 1900**, but its ... In the newly formed US Territory of Hawaii, the city of Honolulu fell victim to ...

Shameless Exploitation
in Pursuit of the
Common Good.

Non vergognarti di nulla
quando persegui
una buona causa.

(Paul Newman)



★
AUCTION

Vanni Cuoghi and the kids of Dynamo Camp "I giorni del dragone" ink on paper and plexiglass 140x100 cm

Supporting [Dynamo Camp](#)



monocale



Wikiwand



Paul Newman - Wikiwand

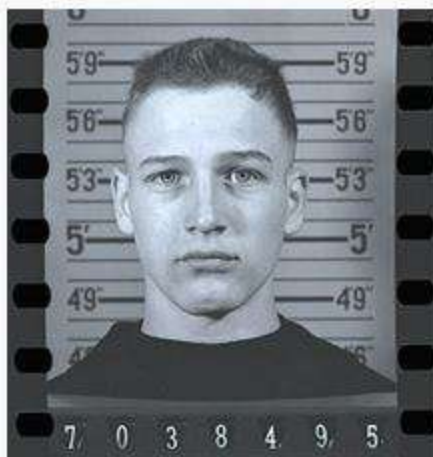
WHEN YOU CAN'T GO TO EPSTEIN ISLAND.

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 **TIM**







How many movie stars have mug shots in their past?

It might surprise you to learn that quite a few do, although few admit it. Some do but gloss over the circumstances that prompted the unflattering full frontal and profile photos, courtesy of one police department or another.

Here's one mug shot which surfaced recently.

Hello Everybody. **Joe Morella** and **Frank Segers**, your classic movie guys, betting that you — our most savvy audience — had absolutely no trouble identifying the callow-looking face pictured above just from the photo above without first peaking at our headline.

Joe and co-author, **Ed Epstein**, wrote a bio of **Paul Newman** and **Joanne Woodward** sometime back — 1989's *Paul and Joanne* — but hadn't unearthed the above arrest photo of what appears to be a late teenaged Newman. Thus the incident that prompted this shot is not covered in the book.



“I’m a supporter of gay rights. And not a closet supporter either. From the time I was a kid, I have never been able to understand attacks upon the gay community. There are so many qualities that make up a human being... by the time I get through with all the things that I really admire about people, what they do with their private parts is probably so low on the list that it is irrelevant.”

~PAUL NEWMAN

March 21

Replying to

@MinisteroSalute

Tell you with verified information the devastation that Lombardy is facing because I assure you that in Lazio and in the South people do not believe in what happens. Do you as the Ministry of Real News # Covid_19 #coronavirus there are still too many people unnecessarily

Giuseppe Tortorici

@ PinoTor64

March 21

Replying to

@MinisteroSalute

I inquire from the official channels, but the accounts do not come back to me and I would like more explanations regarding the data in Campania. From 19 to 20 the number of people hospitalized with symptoms decreased, but they were neither discharged healed nor died. What happened to them?

oxy

@lorepanci

Detection of viruses in used ventilation filters from two large public buildings.

Goyal SM¹, Anantharaman S, Ramakrishnan MA, Sajja S, Kim SW, Stanley NJ, Farnsworth JE, Kuehn TH, Raynor PC.

Author information

Abstract

BACKGROUND: Viral and bacterial pathogens may be present in the air after being released from infected individuals and animals. Filters are installed in the heating, ventilation, and air-conditioning (HVAC) systems of buildings to protect ventilation equipment and maintain healthy indoor air quality. These filters process enormous volumes of air. This study was undertaken to determine the utility of sampling used ventilation filters to assess the types and concentrations of virus aerosols present in buildings.

METHODS: The HVAC filters from 2 large public buildings in Minneapolis and Seattle were sampled to determine the presence of human respiratory viruses and viruses with bioterrorism potential. Four air-handling units were selected from each building, and a total of 64 prefilters and final filters were tested for the presence of influenza A, influenza B, respiratory syncytial, corona, parainfluenza 1-3, adeno, orthopox, enterovirus, Ebola, Marburg, Lassa fever, Machupo, eastern equine encephalitis, western equine encephalitis, and Venezuelan equine encephalitis viruses. Representative pieces of each filter were cut and eluted with a buffer solution.

RESULTS: Attempts were made to detect viruses by inoculation of these eluates in cell cultures (Vero, MDCK, and RK-13) and specific pathogen-free embryonated chicken eggs. Two passages of eluates in cell cultures or these eggs did not reveal the presence of any live virus. The eluates were also examined by polymerase chain reaction or reverse-transcription polymerase chain reaction to detect the presence of viral DNA or RNA, respectively. Nine of the 64 filters tested were positive for influenza A virus, 2 filters were positive for influenza B virus, and 1 filter was positive for parainfluenza virus 1.

CONCLUSION: These findings indicate that existing building HVAC filters may be used as a method of detection for airborne viruses. As integrated long-term bioaerosol sampling devices, they may yield valuable information on the epidemiology and aerobiology of viruses in air that can inform the development of methods to prevent airborne transmission of viruses and possible deterrents against the spread of bioterrorism agents.