Face Masks Contain Toxic Titanium Dioxide, plus What Fauci's Emails Reveal About Its Use

Description

 In February 2022, a study published in *Nature* revealed that levels of titanium dioxide that "systematically exceeded the acceptable exposure level" had been found in common face masks used during the Covid era. Below are some extracts from the abstract of the study:

> Although titanium dioxide (TiO2) is a suspected human carcinogen when inhaled, fibre-grade TiO2 (nano)particles were demonstrated in synthetic textile fibres of face masks intended for the general public. STEM-EDX analysis on sections of a variety of single use and reusable face masks visualised agglomerated near-spherical TiO2 particles in non-woven fabrics, polyester, polyamide and bi-component fibres.
>
> The estimated TiO2 mass at the fibre surface … systematically exceeded the acceptable exposure level to TiO2 by inhalation (3.6 µg), determined based on a scenario where face masks are worn intensively.
>
> No assumptions were made about the likelihood of the release of TiO2 particles itself, since direct measurement of release and inhalation uptake when face masks are worn could not be assessed.
>
> These results urge for in-depth research of (nano)technology applications in textiles to avoid possible future consequences caused by a poorly regulated use and to implement regulatory standards phasing out or limiting the amount of TiO2 particles, following the safe-by-design principle.
>
> *Verleysen, E., Ledecq, M., Siciliani, L. et al. Titanium dioxide particles frequently present in face masks intended for general use require regulatory control. Sci Rep 12, 2529 (2022). https://doi.org/10.1038/s41598-022-06605-w*

As *The Daily Sceptic* noted, this is concordant with an earlier study in *Water Research*, which found

lead, cadmium, antimony and various plastic and organic substances in face masks, and stated:

"The toxicity of some of the chemicals found and the postulated risks of the rest of the present particles and molecules, raises the question of whether [disposable face masks] are safe to be used on a daily basis and what consequences are to be expected after their disposal into the environment."

The discovery of titanium dioxide being used in face masks may somehow link to a curious email exchange found in Fauci's "smoking gun" emails. To put these emails in context, first, we look at what titanium dioxide is and the concerns regarding its use.

Titanium Dioxide Overview

Titanium dioxide (TiO2), also known as titanium (IV) oxide or titania, is the naturally occurring oxide of titanium.

We briefly glanced over the comprehensive information contained on the page for titanium dioxide on *ScienceDirect*'s website and extracted some information to give a general feel for what titania is and what it's used for. It is worth visiting the page for yourselves to put what we've extracted into context.

> 12.5.2.2 Nanocomposites with titanium dioxides
>
> Titanium dioxides has been renowned as one of the most favourable photocatalysts which can be expected to perform an important role in environmental remediation.
>
> 15.1 Properties of nano titania and chemical reactions in its preparation
>
> Nano titania is one of the earliest nano materials to be applied commercially. It has a number of superior properties, such as super strong scattering and anti-ultraviolet capabilities, special electromagnetism and catalysis characteristics, especially the photocatalysis ability decomposing microbes, and also extremely high surface activity; and can be used as active ingredients in high-grade coatings, anti-ultraviolet cosmetics, hygiene ceramics, self-cleaning glasses, composite polymer materials, photoelectric cells, electronic ceramics, semiconductors, catalysts, etc. The application of nano titania is still in the stage of initial development and a number of possible applications of great potential have not yet been put into practice, e.g., its use as a catalysis-active component, etc.
>
> 3.05.4.2.3 Titania NPs
>
> TiO2 NPs [nanoparticles] have been successfully used in environmental technology for the treatment of wastewater and groundwater, the removal of benzothiophene from diesel fuel, and the degradation of air pollutants, specifically nitrogen oxide, sulphur oxides, and volatile organic compounds (Toma et al., 2006; Yu et al., 2006).
>
> Apart from the applications of TiO2 as a catalyst support (Djenadic et al., 2007), semiconductor photocatalyst (Grätzel, 2001), and sensors (Ruiz et al., 2003), there is also a great interest in the development of synthetic methods to obtain TiO2 NPs with high morphological specificity such as nanofibers, nanowires, nanorods, and nanotubes (Wu et

al., 2006) due to their potential applications in solar energy conversion, photocatalysis, photovoltaic devices, and carrier for metallic NPs (Zhu et al., 2005).

TiO2 is used widely, as with ZnO [Zinc Oxide], in sunscreens, because of its ability to absorb UV radiation. However, its photoactivity, via reactive oxygen species (ROS) production, might result in harm to skin tissue.

Microorganisms in the presence of light (Oberdörster et al., 2007) are adversely affected by TiO2 NPs due to the production of ROS (Hirano et al., 2005). This experimental evidence suggests that these NPs can produce oxidative stress in aquatic organisms. This has been confirmed in rainbow trout, where inflammatory injury and respiratory distress were observed after the exposure to TiO2 NPs (Federici et al., 2007; Reijnders, 2008).

TiO2 particles of different sizes (10, 30, and 300 nm, as described by the manufacturer) were shown to inhibit algal growth, but the physiological mode of action is not yet understood (Hartmann et al., 2009).

Secondary Batteries – Lithium Rechargeable Systems – Lithium-Ion | Positive Electrode: Nanostructured Transition Metal Oxides

Titanium dioxide, which has been widely used in modern energy storage and sensing devices, e.g., dye-sensitised solar cell and biosensor, is also a favourable anode material for lithium-ion battery. [D.W. Liu, G.Z. Cao, Y. Wang, Encyclopaedia of Electrochemical Power Sources]

Titanium Dioxide, ScienceDirect, retrieved 1 September 2022

In 2013, Chinese researchers reviewed the toxicological data of titanium dioxide nanoparticles. The abstract of the study, published in *Particle and Fibre Toxicology*, stated:

Most of the literature cited here has focused on the respiratory system, showing the importance of inhalation as the primary route for TiO2 NP [nanoparticles] exposure in the workplace. TiO2 NPs may translocate to systemic organs from the lung and gastrointestinal tract although the rate of translocation appears low.

Oral exposure mainly occurs through food products containing TiO2 NP-additives. Most dermal exposure studies, whether in vivo or in vitro, report that TiO2 NPs do not penetrate the stratum corneum.

In the field of nanomedicine, intravenous injection can deliver TiO2 nanoparticulate carriers directly into the human body. Upon intravenous exposure, TiO2 NPs can induce pathological lesions of the liver, spleen, kidneys, and brain.

There is also an enormous lack of epidemiological data regarding TiO2 NPs in spite of its increased production and use. However, long-term inhalation studies in rats have reported lung tumours.

> *Shi, H., Magaye, R., Castranova, V. et al. Titanium dioxide nanoparticles: a review of current toxicological data. Part Fibre Toxicol 10, 15 (2013). https://doi.org/10.1186/1743-8977-10-15*

It is true that titanium dioxide is naturally found in nature, Dr. David Jockers wrote. Unfortunately, this naturally occurring particle is a metal which is attracted to impurities and researchers are becoming more cautious of recommending its safety for human consumption. Many organisations theoretically designed to protect the health of the public have ignored the possibility that titanium dioxide is a human carcinogen.

> Although greater depth of studies needs to be performed assessing the various factors in which nanoparticles create health complications, current evidence supports that nanoparticles pose enough of a health risk for such particles to be removed from products. Animals exposed to nanoparticles by various mechanisms such has inhalation, absorption through skin or ingestion, have increased risk of developing cancer in both the lungs and skin.
>
> Given the size of titanium dioxide particles as well as the electrical charge, exposure to the mineral has been linked to oxidative stress and chronic inflammation. An increase in oxidative stress in the body stimulates cellular and DNA damage.
>
> Animal studies have found that titanium dioxide particles are capable of being exchanged along the gastrointestinal tract. Storage of titanium dioxide has been found in various organs including the liver, spleen, kidneys and lung tissue.
>
> *Is Titanium Dioxide Dangerous? Dr. Jockers*

In May 2021, the European Food Safety Authority (“EFSA”) assessed that titanium dioxide (E 171) was no longer considered safe when used as a food additive.

> … more than 200 publications were identified and evaluated in which possible genotoxic effects of titanium dioxide were investigated. After evaluation of the available data, the concern regarding possible genotoxic effects of titanium dioxide could not be ruled out. Therefore, and due to numerous scientific uncertainties, the EFSA experts came to the conclusion that the use of titanium dioxide as a food additive can no longer be considered as safe. No acceptable daily intake was derived.
>
> *Titanium dioxide: Are there health risks? Berman Federal Institute for Risk management (BfR), Pg. 5*

Fauci’s “Smoking Gun” Emails

On 1 June 2021, *The Washington Post* and then *BuzzFeed News* published previously unreleased emails from the US government’s “top infectious-disease expert,” Anthony Fauci. The emails were obtained through the Freedom of Information Act (“FOIA”), which allows journalists to request internal

government emails.

By 3 June 2021, the emails had been cited all over conservative media, with commentators often labelling them “smoking guns” and GOP lawmakers including Sen. Rand Paul (R-Ky.) re-upping their calls for Fauci to be relieved of his duties.

There are references to the use of titanium dioxide within the Fauci emails received by *BuzzFeed News* and the context within which it is referred to is curious, to say the least. The more than 3,000 pages of these emails in the FOIA response can be found HERE.

To give the emails relating to titanium dioxide some context it’s worth watching a CNBC interview Dr. Richard Tubb gave on 14 February 2020. Dr. Tubb is a retired US Air Force brigadier general who served as White House physician for three US presidents. At the time of this interview Dr. Tubb was an advisor to ACT.Global, a Copenhagen-based technology company that develops and advises about Premium Purity.

> CNBC: Specialist explains disinfection techniques to stop the spread of coronavirus, 14 February 2020 (6 mins)

While reading the Fauci emails, bear in mind the toxicological effects of titanium dioxide. It’s curious, to say the least, that there is no indication Fauci considered or even questioned the health impacts of inhaling it.

In the text below, the page numbers enclosed in square brackets refers to the page the email can be found in the FOIA response to *BuzzFeed News*.

Ten days after his appearance on CNBC, on 24 February 2020, Dr. Tubb sent then US Secretary of State Stephen Biegun an email titled ‘ACT Additional reading material and developments’ [pgs. 452-453]. The details of this email to Biegen are not included in the FOIA response.

A couple of hours later, Biegen forwarded Tubb’s email to Anthony Fauci stating “I know nothing about the technologies involved, but I know this is a time to write off no good options.” Fauci immediately responded thanking Biegen for his “note” and told him “[Dr. Tubb] sent me similar material and I am going to connect him with our program people here at NIAID to see if we can help in any way.”

The next day Fauci asked Cristina Cassetti, Program Officer at NIH, to see if “we can engage Richard Tubb and see what he has to offer.”

Because the details of Tubb’s email of 24 February to Biegen are not included in the FOIA response, we’re not able to ascertain if an email sent by Tubb to Fauci a few weeks earlier, at the end of January 2020, is directly related, either partly or wholly, to titanium dioxide. But the January email trail is intriguing and sheds further details on the subject Tubb discussed in his CNBC interview.

The January email exchange is titled ‘Pandemic threat reduction’ [pgs. 2916 – 2934]. It begins with Fauci forwarding a 30 January 2020 email from Tubb to Cassetti, cc’d to Patricia Conrad, Federal Government at NIH. Fauci forwarded the email with the comment: “Similar e-0mail from Dr. Tubb.” Tubb’s email stated [emphasis our own]:

> Good morning Tony.
>
> Given your most recent appointment, I wanted to show you the courtesy of letting you know what I have already provided to senior leaders at the White House regarding a possible mitigating strategy until the definitive solution to the CoV is available and implemented.
>
> The string below includes additional information as to how **titanium dioxide can fit into both the White House and the National /International solutions**, and the open-source website for the company.
>
> Please keep in mind that **because this product is already approved and in use in the EU for a variety of commercial uses, the data provided does not specifically address the applications I, and you, are interested in**. However, with a deep understanding of the White House mission, I can say that there is not a big leap in that thought migration.
>
> Dr. Jackson has already provided the same material to some of your White House Commission colleagues. **I will also be reaching out to another friend of mine** from the Bush-now-Trump Administration, **Steve Biegun**.
>
> I encourage your representatives to meet with the company leadership and scientists while they are in the US next week. Please let me know if you have any questions that I can address. Thank you for once again stepping up to the plate for our Country.
>
> v/r
>
> Dick
>
> ps … I remembered this morning where you and I last spoke–Bush (41) funeral.
>
> *Leopold NIH FOIA Anthony Fauci eMails, [pg. 2916]*

The “string below” Tubb’s email consisted of two emails written by Tubb followed by what Tubb refers to as “the latest sitrep on the coronavirus.” The original recipients of the two emails are not shown. The first email, dated 30 January, contains the following [emphasis our own]:

> First, **the company’s joint venture partner in India is meeting with the Indian government as we speak.** It appears likely that in light of the news of India’s introduction to the corona virus the government will utilize their “National Catastrophe Budget” to expedite the funding necessary to secure and execute a contract with this company.
>
> Secondly, I will attach the open source web site for the company to provide you background information … It’s important to note a couple of things:
>
> This product is already proved and is in use in the EU with all the approvals appropriate for the same.

> Secondly, in our language, this is a “standoff productr” – I.e. **you apply it once and it continues to decontaminate and disinfect in the background for up to 1-5 years** before retreating. (Depending on the type of use, normal daily cleaning using their cleaning solution-that is cheaper and more effective than what the application normally would use, e.g. in a hotel-continues). **The chemical treats anything organic, I.e. bacteria, viruses, VOC, bio threats, etc.** because it is a catalyst, it is neither used up, nor does it produce microbial resistance or superbugs. It decontaminates and disinfects surfaces (e,g, airplanes and government critical infrastructures) and the air around the surface (and HVAC filters and air handlers).
>
> The leadership will be in DC next week. I highly encourage any and **all potential stakeholders make time to meet with them** while they are here. To that end,
> **I had already emailed Dr. Fauci … I will also reach out to an old friend and colleague Steve BIEGUN now that he is in the commission.**
>
> *Leopold NIH FOIA Anthony Fauci eMails [pgs. 2917-2918]*

The next email in the string is dated the 29 January, again from Tubb and no details of the recipients. Below are some extracts [emphasis our own]:

> This is Dick Tubb, writing on behalf of Admiral Jackson and Dr. Hofmann (both copied herein).
>
> In light of the current and evolving threat presented by the corona virus, I am writing to you as a courtesy to inform you of **a project that Admiral Jackson, Dr. Hofmann, and I have been consulting on**. We believe so strongly in the technology, people, and potential that we have been consulting pro bono and currently have no financial stake in the project.
>
> While not developed specifically designed for such purposes, I increasingly believe that until a vaccination and treatment for the corona virus is available, this technology may be the last best chance in containing, and eradicating the virus, thereby protecting the homeland, our economy, the Continuity of the Presidency, an Enduring Constitutional Government, our people and our Country.
>
> The technology that provides the solution, both now and in the future, involves a unique formulation of a **photo catalytic nano titanium dioxide solution** (the Air Force guys will, of course, understand what that means, so you non-Air Force folks, just buy them a beer and they’ll explain it to you) that is safer, more effective, and more cost effective than any other solution. It was **developed and approved in the EU**, and I have asked the senior leadership of the company to come to Washington DC next week.

Dr. Hofmann and I spent the day yesterday with a Chinese "titan" respected by and with access to the most senior government officials, academic and medical giants, and investment and industry captains. I have encouraged, and he has agreed in principal, to follow our recommendations as they relate to their largest airline, and their key facilities.

In short, our strategic priority is to first fortify the weak link in the pandemic chain: the airlines. Doing so will provide the time necessary to isolate, contain, and ultimately destroy the threat at its source (Wuhan), and in its home (China).

Once we have interrupted the threat supply chain, we can then shore up our critical infrastructure using the same technology and process, then assist the Chinese in addressing their challenges, and protect our international allies elsewhere. In that vein, in addition to the Chinese**, I have also discussed this technology and strategy** with senior proxies for another of my former patients, **His Royal Highness, the Crown Prince of Saudi Arabia**, and his father, the King.

As I noted above, I have asked the leadership of the company to come to Washington (from Germany and Denmark) next week for a variety of meetings.

Leopold NIH FOIA Anthony Fauci eMails, [pgs. 2918-2922]

Following the email above, Dr. Tubb attached "the latest sitrep on the coronavirus" which consisted of '*Shoreland's Travax News Alert Service – Abbreviated*' and a more detailed version titled '*2019 Novel Coronavirus Outbreak Report – comprehensive*'.

Travax News Alert items are incorporated into Shoreland's subscriptions. Travax content represents decision-relevant, expert synthesis of real-time data reconciled with new and existing available advice from authoritative national and international bodies.

For email service changes, please forward this message to service@shoreland.com with your request. If the change should apply to all email subscriptions (Content Changes, Literature Watch and News Alert), please specify that in your request. [Account: SI53213; Recipient: bg.richard.tubb@gmail.com]

Leopold NIH FOIA Anthony Fauci eMails [Pg.2924]

While the use of titanium dioxide as a disinfectant was in the pipeline, Fauci was alerted on 6 February 2020 that a study claiming the new coronavirus could be transmitted by people was flawed. However, according to Fauci, "the concept is correct" because China said so.

-----Original Message-----
From: Fauci, Anthony (NIH/NIAID) [E] <(b) (6)>
Sent: Wednesday, February 05, 2020 5:20 AM
To: Howard Bauchner <Howard.Bauchner@jamanetwork.org>
Subject: RE: Study+claiming+new+coronavirus+can+be+transmitted+by+people+without+symptoms+was+flawed

[Warning External Email]

The paper was flawed, Embarrassment for NEJM. However, the concept is correct. Spoke in detail to the Director of the Chinese CDC (confidential) and they are seeing asymptomatic transmission (low level) in China.

-----Original Message-----
From: Howard Bauchner <Howard.Bauchner@jamanetwork.org>
Sent: Wednesday, February 5, 2020 6:15 AM
To: Fauci, Anthony (NIH/NIAID) [E] (b) (6)>
Subject: FW: Study+claiming+new+coronavirus+can+be+transmitted+by+people+without+symptoms+was+flawed

Tony

Suspect you saw this. Big problem if true - rushing to publication - leads to big mistakes.

HCB

Leopold NIH FOIA Anthony Fauci eMails [pg. 2936]

In summary, titanium dioxide was developed and approved for use in the European Union. In his interview with CNBC, Dr. Tubb mentioned a Danish company. At the time he was advisor to ACT.Global so we can assume this is the Danish company and the company referred to in his emails to Fauci. By 30 January 2020, Tubb had already liaised with contacts close to the Indian, Chinese, Saudi and US Governments to promote a photo catalytic nano titanium dioxide solution as a disinfectant for “now and in the future.” Dr. Tubb only refers to spraying surfaces and there are no references to face masks.

The ACT.Global link provided on the internet search engine leads to the German company TerraNow which offers two products: CleanCoat and the ECA System. Its target customers are “industries where low germ environments and the highest air quality are key, e.g., B. healthcare, hospitality, food processing, beverage manufacturing and many more.” In September 2021, the company stated their products were “already being used with proven success on cruise ships, in hotels, for passenger transport and in the sports and wellness sector.”

Titanium Dioxide in Face Masks

The earliest reference we could find to the use of titanium dioxide in face masks was a report by the *Express*. In March 2020, the *Express* reported that “a cutting-edge nanotech company has released what it claims is the world’s coronavirus-resistant face mask …The coating on the face mask is a Japanese patented molecular nano technology of which the active ingredient was titanium dioxide.”

The Express was quoting Director of the Nanotera Group Saba Yussouf. The product she was referring to is called MVX Protex and is summarised as:

- A long-lasting disinfectant that lasts up to 5 years.
- A revolutionary spray that is guaranteed to completely sanitise home surfaces.

- Coats any hard or soft surface except human skin, and kills bacteria, fungi and viruses.
- Destroys the ability of viruses, bacteria and fungi to attach to a host cell, so that they can't spread.
- Can be used on various surfaces including furniture, digital devices and textiles.
- In mid-March 2020, just been licensed in the UK and increasingly used by dental practices in London.
- Developed in Japan by nanotechnology company Nanotera Group. Nanotera's head office is in Ireland. It provides "technology transfer" especially in the field of water. Technology transfer is achieved through their scientific and technical platforms either by way of, for example, licensing or manufacturing by networking academic scientists, independent inventors and technical consultants.

MVX Protex sounds similar to the product Dr. Tubb was promoting except, he said, the product was developed in Denmark. Perhaps ingredients other than titanium dioxide differ in the spray solutions and so distinguishes them apart?

by Rhoda Wilson

Category

1. Crime-Justice-Terrorism-Corruption
2. Disasters-Crisis-Depopulation-Genocide
3. Health-Wellness-Healing-Nutrition & Fitness
4. Main
5. NWO-Deep State-Dictatorship-Tyrrany

Date Created
09/04/2022