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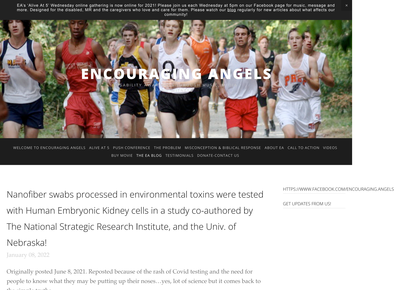

Nanofiber swabs processed in environmental toxins were tested with Human Embryonic Kidney cells in a study co-authored by The National Strategic Research Institute, and the Univ. of Nebraska!

January 08, 2022

Originally posted June 8, 2021. Reposted because of the rash of Covid testing and the need for people to know what they may be putting up their noses…yes, lot of science but it comes back to the simple truths…

By Stan Szymanski

Nanofiber swabs are designed to harvest nasopharyngeal specimens and are part of the RT-PCR test. We have recently seen that the inventor of the RT-PCR test has said "it's not fit for diagnostic purposes (https://anti-empire.com/the-inventor-of-the-pcr-technique-would-be-the-first-to-say-its-not-fit-for-diagnostic-purposes/)". It is the RT-PCR test that has been the test of choice by the powers that be to identify COVID-19, especially in the American population. I think that in what it appears to be an end times scenario (Please help us Jesus), we are learning things things that we are going to have a hard time dealing with that may cause us to reconsider -anything- the 'authorities' tell us about standards of care when it comes to the virus, the jab and concerning this writing, the nanofiber swabs used for 'testing'.

Before one logically looks at the RT-PCR test for its characteristics for things like reliability, efficacy and appropriateness of use, one should first take a look at the medium being used to collect the nasopharyngeal samples from an unsuspecting public. This discussion is not an all encompassing research study in and of itself, it is written to shed light on one variable in the swab-its creation, the nature of some of its ingredients and its potential (not empirically proven or disclosed) for involvement in technology/procedures that a reasonable individual receiving the swab would want to be advised about by a medical professional before receipt of said swab (The writer of this article is not a medical doctor and this is not medical advice. Please consult your medical doctor concerning any medical care directed towards a human being).

And that leads us to examine *'Ultra-Absorptive Nanofiber Swabs for Improved Collection and Test Sensitivity of SARS-CoV-2 and other Biological Specimens*(https://pubs.acs.org/doi/suppl/10.1021/acs.nanolett.0c04956/suppl_file/nl0c04956_si_001.pdf -1/5/22 this link is no longer operative-you can find this info at https://pubs.acs.org/doi/10.1021/acs.nanolett.0c04956 -Stan Szymanski 1/5/22) . This work was co-authored by researchers from various schools of the University of Nebraska and The National Strategic Research Institute. When you read what follows please ask the question: 'What does the National Strategic Research Institute, a DoD- designated University affiliated Research Center sponsored by U.S. Strategic Command have to do with the research and development of the use of Nanofiber swabs that are being used on tens if not hundreds of millions of Americans'?

Some might naively think that the swab used in the RT-PCR test is just a long cotton swab, like some sort of specialized 'Q-Tip'® designed for a nasopharyngeal application. When I read the research article mentioned above that the swab (and did some homework) it appears that nothing could be further from the truth. Let's take a look at some of the ingredients of this supposed means of specimen collection.

In *'Ultra-absorptive Nanofiber Swabs for Improved Collection and Test Sensitivity of SARS-CoV-2 and other Biological Specimens-Supporting information* (see link above to pdf file; we will henceforth refer to this work as 'the study'), the first ingredient is 'PCL'. It's funny that the authors don't spell out the nomenclature of what 'PCL' stands for as they do for the names of many (but not all) of the ingredients of their work. In fact, 'PCL' stands for 'Polycaprolactone' - sometimes referred to as 'poly(ε-caprolactone' https://www.sciencedirect.com/science/article/abs/pii/S0168365917306004 Sigma Aldrich (from whom the authors purchased numerous products for this experiment/writing) also sells a 'PEG-PCL' product (Poly ethylene glycol - Polycaprolactone) which is often used when PCL technologies are deployed in nanotechnology as they are copolymers (https://www.sciencedirect.com/topics/pharmacology-toxicology-and-pharmaceutical-science/copolymer). PEG-PCL nanomedicines are the hot ticket right now-Please see: *'PEG-PCL-based nanomedicines; A biodegradable drug delivery system and its application*(https://www.sciencedirect.com/science/article/abs/pii/S0168365917306004)." Since the authors did not denote the actual Sigma Aldrich catalog number for the product that they used, it would be possible that they used the 'copolymer' form of PCL (PEG-PCL).

'Polycaprolactone (PCL) is biodegradable polyester with a low melting point of around 60°C and a glass transition temperature of about −60°C. PCL is prepared by ring-opening polymerization of ε-caprolactone using a catalyst such as stannous octanoate.

From: **The Effect of Sterilization on Plastics and Elastomers (Third Edition), 2012.** (As seen at https://www.sciencedirect.com/topics/chemical-engineering/polycaprolactone) *'PCL is degraded by hydrolysis of its ester linkages in physiological conditions (such as in the human body) and has therefore received a great deal of attention for use as implantable biomaterial. In particular, it is especially interesting for the preparation of long-term implantable devices. A variety of drugs have been encapsulated within PCL beads for controlled release and targeted drug delivery. PCL is often mixed with starch to obtain a good biodegradable material at a low price.'* Originally from Laurence W. McKeen, in **Permeability Properties of Plastics and Elastomers (Third Edition)**, 2012 as seen at https://www.sciencedirect.com/topics/chemical-engineering/polycaprolactone) So PCL can be degraded by the human body, has garnered interest in the world of implantable devices and has been used in targeted drug delivery. If you think that this is going to be a simple cotton swab from your bathroom medicine cabinet, it may be time to reconsider that thought.

How was the PCL prepared-for the study? *'Fabrication of PCL nanofiber mats. PCL nanofiber mats were generated via electrospinning, following our previous studies.5−9 PCL pellets (Sigma-Aldrich) and Pluronic F-127 (0.5% w/v) were dissolved in a 4:1 (v/v) DCM:DMF solution. The resulting PCL/F-127 solution was electrospun at 16 mL/h at 25−C, 55% RH, and under 32 kV applied voltage using an LE-100 electrospinning machine with a circular 20 emitter array equipped with 21 gauge needles (each that each needle had a flow rate of 0.8 mL/h). The nanofibers were collected on a high-speed drum collector until an approximately 1 mm thick mat was obtained.*

So it is stated in the study that PCL and other materials were spun into 'nanofibers'. These are - not- standard cotton fibers. We saw that the *'...PCL pellets (10% w/v) and Pluronic F-127 (0.5% w/v) were dissolved in a 4:1 (v/v) DCM:DMF solution.'...* DCM' (Dichloromethane) and 'DMF' (Dimethylformamide) are apparently not environmentally friendly *'...the most widespread solventemployed are those with major regulatory issues such as chlorinated (DCM) dichloromethane, 1,2-dichloroethane or N,N-dimethylformamide (DMF).' For example, a survey of antidation reactions using SciFinder revealed that 83% of approximately 680,000 amidation reactions employed either CHCl2 (36%) or DMF (47%) as the reaction media.9 By contrast, the emerging green solvent* **2-methyltetrahydrofuran** *accounted for only 0.04% of this reaction set.9 Despite their utility, CHDCl2 and DMF are clearly not compatible with the current drive toward more sustainable and environmentally cognizant medicinal chemistry processes.10' ...*
(https://pubs.rsc.org/en/content/articlehtml/2013/gc/c2gc36900a). According to https://www.mushroomlinc.com/2015/02/28/is-dichloromethane-methylene-chloride-hazards-safety-information/ Dichloromethane is... *'classified as a toxic substance in the chemicals (DCM) dichloromethane, 1,2-dichloroethane or N,N-dimethylformamide (DMF). For example, a survey of antidation reactions using SciFinder revealed that 83% of approximately 680,000 amidation reactions employed either CHCl2 (36%) or DMF (47%) as the reaction media.9 By contrast, the emerging green solvent* **2-methyltetrahydrofuran** *accounted for only 0.04% of this reaction set.9 Despite their utility, CHDCl2 and DMF are clearly not compatible with the current drive toward more sustainable and environmentally cognizant medicinal chemistry processes.10' ...*
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(https://www.epa.gov/sites/production/files/2016-09/documents/n-n-dimethylformamide.pdf)'.

So the swab that is composed of nanofiber mats that were-dissolved in a DCM:DMF solution where DCM and DMF both carry significant warnings regarding human contact from the EPA are in contact with one of the most sensitive and receptive places in your body, the nasopharyngeal upper respiratory location deep in the nasal cavity. Kind of gives you a warm and fuzzy feeling, doesn't it (ok, time to turn off the sarcasm!) Or does it give you *'effects on the liver and digestive disturbances'?*

So, why in 'the study' are they using PCL (Polycaprolactone) and why does it have to be manufactured into nanofiber mats through the process of 'electrospinning'? Why not just use a Q-Tip®?

'Polycaprolactone (PCL) is a semi-crystalline, highly hydrophobic polymer that is easily soluble in most organic solvents, and has been approved by the Food and Drug Administration (FDA) in the USA for biomedical uses [8]. PCL has good miscibility properties, possesses mechanical stability and displays prolonged degradation. Moreover, it can be easily electrospun and can be used for long-term sustained delivery of pharmaceutical agents in the field of drug delivery and tissue engineering [9-13].
(https://pharmacologyimedpub.com/pclpeg-electrospun-fibers-as-drug-carriers-for-the-controlled-delivery-of-dipyridamole.php?aid=7148)'. The literature now likes the word 'effect' the fact that PCL is good for drug delivery and tissue engineering! (Ok, again, turn off the sarcasm!)

In 'the study' the writing discloses that the authors purchased HEK-293 (Human Embryonic Kidney) cells and employed them in 'cell swabbing'. This is where it gets potentially woo-woo and involves speculation because the authors lack of disclosure.

HEK-293 cells were purchased from ATCC. The ATCC website (ATCC.org) generates 61 hits when one searches for 'HEK293' (!HEK293' used in the search box at the ATCC website). 'The Study' did not specify which catalog number from the ATCC catalog that they purchased for use in 'the study'.

Eenny-meeny-miney-mo? Well, I guess that I'll just pick one that looks good to me since the authors of the study just left me to guess which HEK293 from the catalog that they used...oh, wait- here's one that looks interesting-it was the first hit in my search (!HEK293-CA9? -8 hits) on the ATCC website (I want to state that I do not know which HEK293 from the ATCC catalog that they used in 'the study' and that the following is just one possibility or speculation):

293[HEK-293] Cas9 (ATCC® CRL-1573Cas9™) (https://www.atcc.org/products/all/CRL-1573Cas9.aspx)

———

'293[HEK-293] Cas9 (

ATCC® **CRL-1573Cas9***) is a cell line that constitutively expresses Cas9 protein enables researchers to carry out CRISPR genome editing applications with high efficiency. CRL-1573Cas9 was created by knocking-in a Cas9 (from Streptococcus pyogenes) expression cassette into the AAVS1 safe harbor locus using CRISPR/Cas9 gene editing technology. In addition, this cell line also expresses RFP and neomycin resistance gene.* (https://www.atcc.org/products/all/CRL-1573Cas9.aspx)'.

The authors reported the results of their investigation regarding: SARS-CoV-2 detection, Material Characterization, Mass Loss and Protein Retention.

What happened to the 'Cell Swabbing' that was done in the study? Why was no report rendered as a 'result'? It is interesting to note that 'Cell Swabbing' was done in the study where the authors used the HEK-293 (along with DMEM + 10% + 1% PenStrep), grew HEK293 cells on a Petri dish, swabbed the HEK293, stained resuspended cells, counted the cells using a hemocytometer to get a total cell count with each of the swab types (cotton, flock, nanofiber). But they did -not- report their findings at the end of the study (results section). Maybe they just forgot. Maybe it was the proofreader's fault. Maybe it was only reported to a 'special' entity. Maybe the dog ate their human embryonic kidney CA59 cells...again, I want to say that I do not know if the authors used this ATCC catalog number or if they used a different catalog number; they did not disclose. Since PCL is apparently admitted for its possibilities in the areas of drug delivery and tissue engineering do you think that it is possible that '293[HEK-293] Cas9 (ATCC® CRL-1573Cas9™)' might have been chosen for its attributes to manipulate the human genome ?

If we are going to take a look at Human Embryonic Kidney cells, what do we know about the human that they came from?What kind of cell line did the 293[HEK-293] Cas9 (ATCC® CRL-1573Cas9™) come from? If you go to https://www.atcc.org/~/media/2D0FD5DF4E1A4685AAFC87950A3CBB55.ashx you can see for yourself. When you look at 'Tissue | Disease Source' you may get a shock when you see that the response is 'Carcinoma'. If (and I do reiterate -if-) the HEK293 product that was used in 'the study' was 293[HEK-293] Cas9 (ATCC® CRL-1573Cas9™) are you comfortable that the product from a cancerous cell line would be involved in the same study as a study regarding the development of a swab to be used across a broad swath of the American public? What would be the potential risk to those receiving a swab exposed to this?

Besides being potentially exposed to carcinogenically derived human cell source why would researchers use (and I am -not- saying that the authors of 'the study' definitively did-again no catalog number was given) a product designed to accomplish genome editing in a supposedly simple nasopharyngeal swab?

How does genome editing happen through the use of CA59 cells? *'Genome editing has recently been democratized by the development of RNA-guided programmable nucleases repurposed from the type II clustered regularly interspaced short palindromic repeats (CRISPR)/CRISPR-associated (Cas) adaptive immune system against invading genetic elements in eubacteria and archaea2. Cas9, the single effector protein component in the system, is combined with CRISPR RNA (crRNA) and trans-activating crRNA (tracrRNA) or with single-guide RNA (sgRNA) composed of essential portions of crRNA and tracrRNA to form a sequence-specific RNA-guided endonuclease (RGEN)3. A new RGEN with desired target specificity is readily prepared by replacing crRNA or sgRNA, which hybridizes with a target DNA sequence. Cas9 RGENs cleave chromosomal DNA in a targeted manner, enabling genetic modifications or genome editing in cells and whole organisms*3,4,5,6,7,8

(https://www.nature.com/articles/ncomms14500)'.

They just love to use that RNA to make you feel all fuzzy wuzzy don't they? (For the last time, turn off sarcasm!)

As a consumer, an American citizen and as a human being you have a right to know what the medical community is putting into your body. While PCL 'could' be non-toxic under the section on 'Information on toxicological effects' on the Safety Data Sheet at http://www.abmole.com/literature/polycaprolactone-msds.html it says, *'The toxicological effects of this product have not been thoroughly studied.'* We also know that the cotton swab used in 'the study' in the creation of the swab- DCM has been classified as a neurotoxin and DMF has documented side effects to human beings in both short term -and- long term exposure. Because the authors did not publish which catalog number of the HEK293 cells that they used processes we have are, at this point, conjecture. However, for the sake of discussion, the Human Embryonic Kidney cells from the catalog entry that we did illuminate is used in research for the purpose of genome editing!

If you are at all like me and won't buy a box of cereal without examining the ingredients, why in the name of all that is good under heaven would the powers that be allow the swabs that are used on the American people without proper animal and human testing (I don't know of any at the time of this writing)? Why would you allow this to be put in an incredibly sensitive and fragile area of your body as your nasopharyngeal area? Do you not deserve to have your medical professional at least inform you of the known and unknown risks of this medical device? What will happen to those exposed to this swab 1, 2 or 5 years from now? If you get a neurological disorder in 3 years, who's going to care enough to find out what's wrong with you? The question is not 'Is the cure worse than the disease?'; it should be 'Is the swab worse than the disease?'

Is it not the most primary of functions to government to protect its own people? With millions of nanofiber swabs already used on our population have the people of the United States been protected? Or have they been experimented on? Again we ask, why is the National Strategic Research Institute involved in a product like this?

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Stan Szymanski for Encouraging Angels) is not a medical doctor. This is not medical advice. In all matters pertaining to the health and care of a human being consult a medical doctor. This is not legal or financial advice. Consult appropriate professionals in those fields for that type of advice

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