

REFRAMING THE INFECTIOUS DISEASE PARADIGM

BY ALEC ZECK

I'LL ATTEMPT TO ANSWER...

Are we sure that viruses exist, or is it a conditioned belief?

Could the supposed effects of viruses be caused by something else?

What causes the contagion phenomenon (2+ people sick in the same space)?

Are temporary symptoms of illness bad, or is this also a conditioned belief?

Why is this important?

COVID DATA, U.S. CDC

Among 4,899,447 hospitalized adults in PHD-SR, 540,667 (11.0%) were patients with COVID-19, of whom 94.9% had at least 1 underlying medical condition. Essential hypertension (50.4%), disorders of lipid metabolism (49.4%), and obesity (33.0%) were the most common. The strongest risk factors for death were obesity (adjusted risk ratio [aRR] = 1.30; 95% CI, 1.27–1.33), anxiety and fear-related disorders (aRR = 1.28; 95% CI, 1.25–1.31), and diabetes with complication (aRR = 1.26; 95% CI, 1.24–1.28)

Anxiety and fear related disorders were the 2nd strongest risk factor for death related to COVID.

ORIGINAL RESEARCH

Underlying Medical Conditions and Severe Illness Among 540,667 Adults Hospitalized With COVID-19, March 2020–March 2021

Lyudmyla Kompaniyets, PhD¹; Audrey F. Pennington, PhD¹; Alyson B. Goodman, MD^{1,2}; Hannah G. Rosenblum, MD^{1,3}; Brook Belay, MD¹; Jean Y. Ko, PhD^{1,2}; Jennifer R. Chevinsky, MD^{1,3}; Lyna Z. Schieber, DPhil, MD¹; April D. Summers, MPH¹; Amy M. Lavery, PhD¹; Leigh Ellyn Preston, DrPH¹; Melissa L. Danielson, MSPH¹; Zhaohui Cui, PhD¹; Gonza Namulanda, DrPH¹; Hussain Yusuf, MD¹; William R. Mac Kenzie, MD^{1,2}; Karen K. Wong, MD^{1,2}; James Baggs, PhD¹; Tegan K. Boehmer, PhD^{1,2}; Adi V. Gundlapalli, MD, PhD¹

Accessible Version: www.cdc.gov/pcd/issues/2021/21_0123.htm

Suggested citation for this article: Kompaniyets L, Pennington AF, Goodman AB, Rosenblum HG, Belay B, Ko JY, et al. Underlying Medical Conditions and Severe Illness Among 540,667 Adults Hospitalized With COVID-19, March 2020–March 2021. *Prev Chronic Dis* 2021;18:210123. DOI: <https://doi.org/10.5888/pcd18.210123>.

PEER REVIEWED

Summary

What is already known about this topic?

Severe COVID-19 illness in adults has been linked to underlying medical conditions.

What is added by this report?

In this cross-sectional study of 540,667 adult hospitalized patients with COVID-19, 94.9% had at least 1 underlying medical condition. Hypertension and disorders of lipid metabolism were the most frequent, whereas obesity, diabetes with complication, anxiety disorders, and the total number of conditions were the strongest risk factors for severe COVID-19 illness.

What are the implications for public health practice?

Preventing COVID-19 in populations with these underlying conditions and multiple conditions should remain a public health priority, with targeted mitigation efforts and ensuring high uptake of vaccine, when available, in these individuals and their close contacts.

Abstract

Introduction

Severe COVID-19 illness in adults has been linked to underlying medical conditions. This study identified frequent underlying conditions and their attributable risk of severe COVID-19 illness.

Methods

We used data from more than 800 US hospitals in the Premier Healthcare Database Special COVID-19 Release (PHD-SR) to describe hospitalized patients aged 18 years or older with COVID-19 from March 2020 through March 2021. We used multivariable generalized linear models to estimate adjusted risk of intensive care unit admission, invasive mechanical ventilation, and death associated with frequent conditions and total number of conditions.

Results

Among 4,899,447 hospitalized adults in PHD-SR, 540,667 (11.0%) were patients with COVID-19, of whom 94.9% had at least 1 underlying medical condition. Essential hypertension (50.4%), disorders of lipid metabolism (49.4%), and obesity (33.0%) were the most common. The strongest risk factors for death were obesity (adjusted risk ratio [aRR] = 1.30; 95% CI, 1.27–1.33), anxiety and fear-related disorders (aRR = 1.28; 95% CI, 1.25–1.31), and diabetes with complication (aRR = 1.26; 95% CI, 1.24–1.28), as well as the total number of conditions, with aRRs of death ranging from 1.53 (95% CI, 1.41–1.67) for patients with 1 condition to 3.82 (95% CI, 3.45–4.23) for patients with more than 10 conditions (compared with patients with no conditions).



The opinions expressed by authors contributing to this journal do not necessarily reflect the opinions of the U.S. Department of Health and Human Services, the Public Health Service, the Centers for Disease Control and Prevention, or the authors' affiliated institutions.

THE IMPACT OF BELIEF ON OUR BIOLOGY

What happens when we're conditioned to believe in something that may not even exist?

What happens when we're conditioned to believe in something that is pathogenic and potentially deadly— something that could be anywhere but is invisible to the naked eye?

DOES SANTA CLAUS EXIST?

I'm a child. From the moment that I was able to conceptualize things, I've been told that Santa Claus exists. Countless things in my environment reaffirm (**or reify**) his existence, including but not limited to:

- All of the cartoons, movies, pictures and stories
- The decorations
- The half-eaten cookies and milk on Christmas morning
- The pieces of beard found in the fireplace
- The presents under the tree
- The Santa-Claus sleigh tracking app that I watch on Christmas Eve.

All of these things mean Santa Claus actually exists, right?

Kids behave as if Santa is real, experiencing measurable and observable effects in their body (for better or for worse).

A PING PONG BALL & A BRICK WALL

The beginning of Dr. Tom Cowan and Sally Fallon Morell's **The Contagion Myth** contains a perfect analogy to set the stage for what I'm presenting here. The following is a variation of that analogy.

If I told you that a ping-pong ball could break down a brick wall, of course you'd want to see proof of this.

So, in order to prove it to you, I poured a bunch of corrosive acid on the wall. Next, I smashed the brick wall several times with a giant mallet. Finally, I taped the ping-pong ball to a giant boulder, attached the boulder to a pulley system (of course, because it is too heavy for me to throw) and I swung it at the brick wall, knocking it down.

Voila! I've proven that a ping-pong ball broke down the brick wall, right?

Of course, any rational person would say "absolutely not; Everything else made the brick wall fall. The ping-pong ball had no effect!"

And of course, that is correct; the ping-pong ball obviously had little-to-no effect. And how could I possibly claim that it did, given that there were so many other confounding variables that I didn't account for?



This article is a preprint.

Preprints have not been peer reviewed.

To learn more about preprints in PMC see: [NIH Preprint Pilot](#).

Isolation and characterization of SARS-CoV-2 from the first US COVID-19 patient

[Jennifer Harcourt](#), Ph.D.,¹ [Azaibi Tamin](#), Ph.D.,¹ [Xiaoyan Lu](#),¹ [Shifaq Kamili](#),² [Senthil Kumar. Sakthivel](#),² [Janna Murray](#),² [Krista Queen](#), Ph.D.,¹ [Ying Tao](#), Ph.D.,¹ [Clinton R. Paden](#), Ph.D.,¹ [Jing Zhang](#),³ [Yan Li](#),¹ [Anna Uehara](#), Ph.D.,⁴ [Haibin Wang](#),³ [Cynthia Goldsmith](#), Ph.D.,¹ [Hannah A. Bullock](#), Ph.D.,⁵ [Lijuan Wang](#),⁵ [Brett Whitaker](#),¹ [Brian Lynch](#),² [Rashi Gautam](#), Ph.D.,¹ [Craig Schindewolf](#),⁶ [Kumari G. Lokugamage](#), Ph.D.,⁶ [Dionna Scharton](#),⁷ [Jessica A. Plante](#), Ph.D.,⁷ [Divya Mirchandani](#),⁶ [Steven G. Widen](#), Ph.D.,⁸ [Krishna Narayanan](#), Ph.D.,⁶ [Shinji Makino](#), Ph.D.,⁶ [Thomas G. Ksiazek](#), DVM, Ph.D.,^{7,9} [Kenneth S. Plante](#), Ph.D.,⁷ [Scott C. Weaver](#), Ph.D.,^{6,7,9} [Stephen Lindstrom](#), Ph.D.,¹ [Suxiang Tong](#), Ph.D.,¹ [Vineet D. Menachery](#), Ph.D.,^{7,9,+} and [Natalie J. Thornburg](#)^{1,+}

[Author information](#) [Copyright and License information](#) [Disclaimer](#)

The complete version history of this preprint is available at [bioRxiv](#).

Abstract

Go to:

The etiologic agent of the outbreak of pneumonia in Wuhan China was identified as severe acute respiratory syndrome associated coronavirus 2 (SARS-CoV-2) in January, 2020. The first US patient was diagnosed by the State of Washington and the US Centers for Disease Control and Prevention on January 20, 2020. We isolated virus from nasopharyngeal and oropharyngeal specimens, and characterized the viral sequence, replication properties, and cell culture tropism. We found that the virus replicates to high titer in Vero-CCL81 cells and Vero E6 cells in the absence of trypsin. We also deposited the virus into two virus repositories, making it broadly available to the public health and research communities. We hope that open access to this important reagent will expedite development of medical countermeasures.

"ISOLATION" OF SARS-COV-2

WEBSTER'S DICTIONARY, "ISOLATE":

**“TO SEPARATE FROM ANOTHER SUBSTANCE
SO AS TO OBTAIN IN A PURE OR FREE STATE”**

"ISOLATION" OF SARS-COV-2

Specimen collection

Virus isolation from patient samples was deemed to be non-human subjects research by CDC National Center for Immunizations and Respiratory Diseases (research determination 0900f3eb81ab4b6e) Clinical specimens from the first identified US case of COVID-19 acquired during travel to china, were collected as described (¹). Nasopharyngeal (NP) and oropharyngeal (OP) swabs in 2 to 3 mL viral transport media were collected on day 3 post-symptom onset for molecular diagnosis and frozen. Confirmed PCR- positive specimens were aliquoted and refrozen until virus isolation was initiated.

Cell culture, limiting dilution, and isolation

Vero CCL-81 cells were used for isolation and initial passage. Vero E6, Vero CCL-81, HUH 7.0, 293T, A549, and EFKB3 cells were cultured in Dulbecco's minimal essential medium (DMEM) supplemented with heat inactivated fetal bovine serum(5 or 10%) and antibiotic/antimycotic (GIBCO). Both NP an OP swabs were used for virus isolation. For the isolation, limiting dilution, and passage 1 of the virus, 50 µl serum free DMEM was pipetted into columns 2–12 of a 96-well tissue culture plate. One-hundred µl clinical specimens were pipetted into column 1, and then serially diluted 2-fold across the plate. Vero cells were trypsinized and resuspended in DMEM + 10% FBS + 2X Penicillin-Streptomycin + 2X antibiotic – antimycotic + 2 X amphotericin B at 2.5×10^5 cells / ml. One hundred µl of cell suspension were added directly to the clinical specimen dilutions and mixed gently by pipetting. The inoculated cultures were grown in a humidified 37°C incubator with 5% CO2 and observed for cytopathic effect (CPE) daily. Standard plaque assays were used for SARS-CoV-2 based on both SARS-CoV and MERS-CoV protocols (^{19, 20}).

When CPE were observed, the cell monolayers were scrapped with the back of a pipette tip. Fifty µl of the viral lysate were used for total nucleic acid extraction for confirmatory testing and sequencing. Fifty µl of virus lysate was used to inoculate a well of a 90% confluent 24-well plate.

BREAKDOWN OF THE METHODOLOGY

- fluids collected from sick patient
- added to viral transport medium
- sputum added to Vero E6/Vero CCL-81 alongside:
 - Dulbecco's Minimal Essential Medium (DMEM)
 - Trypsin
 - Gentamicin
 - Amphotericin B
 - Penicillin-Streptomycin
 - Fetal Bovine Serum
- Cell Experiences Cytopathic Effect (CPE)
- Sample is collected and prepared for Electron Microscopy
- Electron Micrograph Images are produced

3 MAJOR BRANCHES OF SCIENCE:

NATURAL SCIENCE

SOCIAL SCIENCE*

FORMAL SCIENCE*

FORMAL SCIENCE

the study of formal systems, such as those under the branches of **logic** and **mathematics**, which **use an a priori**, as opposed to **empirical, methodology**.

SOCIAL SCIENCE

sociology, anthropology,
archaeology, economics, human
geography, linguistics, management
science, communication science,
political science and psychology.

NATURAL SCIENCE

the study of natural phenomena.

Natural science tries to explain and predict nature's phenomena based on empirical evidence. In natural science, a hypothesis must be verified scientifically to be regarded as scientific theory.

THE SCIENTIFIC METHOD

A method of discovering knowledge about **the natural world** based in making falsifiable predictions (hypotheses), testing them empirically, and developing theories that match known data from repeatable physical experimentation.

HYPOTHESIS

a proposed explanation for a phenomenon.

STEPS OF THE SCIENTIFIC METHOD

- **Observe a natural phenomenon**
- **Formulate a hypothesis**
 - Independent Variable—the presumed cause (**X**)
 - Dependent Variable—the observed effect (**y**)
 - Controls Variables— (things that remain constant)
 - ALTERNATE HYPOTHESIS (**X CAUSES Y**)
 - NULL HYPOTHESIS (**X DOESN'T CAUSE Y**)
- **Test/Experiment**
- **Analyze the observations and data**
- **Validate/Invalidate the hypothesis**

OBSERVE A NATURAL PHENOMENON

Naturalistic Observation: Observation of a behavior in a natural setting without any attempt to intervene.

-the situation is not manipulated or controlled by the investigator.

-the situation has not been initiated or created by the investigator.

Example: Observe several people getting sick with respiratory symptoms (coughing) in the same space

FORMULATE A HYPOTHESIS

Example: "I think a particle in the fluids of these people is causing them to become sick."

Okay. Good. In order to proceed, you need to show that these particles (the independent variable) exist.

SCIENTIFIC EXPERIMENT

A test under controlled conditions that is made to demonstrate the validity of a **hypothesis**.

3 parts of an experiment:

Independent Variable (X)

Dependent Variable (Y)

Control Variables

VARIABLES

Independent Variable (X):

- The thing you **think** is the cause of the observed phenomenon. In order to proceed with the experiment, the **IV** needs to exist. This is what the researcher manipulates and varies.

Dependent Variable (Y):

- The effect under study (the observed phenomenon). You must have a DV in order for anything to be scientific.

VARIABLES

Control Variables:

- Variables that are kept constant (i.e. room temperature, food, lighting, environment)
- It is **EXTREMELY** challenging to maintain true constants.

Control Group:

- The group that receives all of the same experimental treatment aside from the independent variable itself. This provides more insight into whether the independent variable has an effect.

VARIABLES

Example:

IV: the particle in the fluids.

(Have to be shown to exist. Have to be isolated completely by themselves to see if they produce an effect).

DV: respiratory symptoms.

Controls: food, environment, sleep, temperature.

Control Group: receives the same experimental treatment aside from the IV.

PSEUDOSCIENCE

Pseudoscience consists of statements, beliefs, or practices that claim to be both scientific and factual but are incompatible with the scientific method.

Is virology "science"?
I don't think so...

SCIENTIFIC THEORY

An explanation of an aspect of the natural world and universe that has been repeatedly tested and corroborated in accordance with the scientific method.

**Is germ "theory" a proper theory?
I don't think so...**

PROBLEMS WITH OUR EXAMPLE: VIROLOGY

- Virus not shown to exist in nature.
- Assume virus is in the fluids.
- Assume virus has an effect.
- Cell culture contains too many confounding variables.
- Assume confounding variables don't have an impact on the culture.
- The culturing process itself is unnatural.
- No proper control experiments.
- Virology does not adhere to the scientific method.

**CAN WE DO A SCIENTIFIC
EXPERIMENT ON SANTA CLAUS?**

WHY? WHY NOT?

WHY “VIRUSES” CANNOT BE ISOLATED ACCORDING TO THE EXPERTS

1. “The virus is too weak to isolate/purify directly from the fluids.”
2. “There’s not enough virus present in the fluids to isolate/purify it.”
3. “A virus needs a host in order to replicate, so that’s why we use the cell culture.”
4. “You’re not a virologist, you don’t get to determine what isolation is.”

OTHER COMPONENTS OF CULTURE MEDIA

AMPHOTERICIN B

- Antifungal drug. Mechanism is the formation of aqueous pores.
- **Acute renal failure is the most serious complication.**
- Used to prevent fungal growth in cell cultures.

PENICILLIN/STREPTOMYCIN

- Combination antibiotic drug. Used to prevent bacterial growth.

GENTAMICIN

- Broad spectrum antibiotic.
- Used to prevent bacterial growth.
- **Can cause kidney damage.**

HEPES

- Zwitterionic sulfonic acid buffering agent.
- Used to buffer the media and control pH. Toxic to cells.

L-GLUTAMINE

- Critical amino acid for cell culture. Rapidly degrades producing toxic compounds.

TRYPsin-EDTA

- Protease from porcine pancreas.
- Used to detach adherent cells from a flask.
- **One study claimed treatment with trypsin was required to get “spikes”.**

AMPHOTERICIN B

"Our results indicate that the use of AmB may facilitate influenza virus isolation and production in Vero cells."

In other words, AmB is very toxic and increases cellular breakdown



Journal of
Virology®

[J Virol.](#) 2011 Nov; 85(21): 11139–11145.

doi: [10.1128/JVI.00169-11](https://doi.org/10.1128/JVI.00169-11)

PMCID: PMC3194987

PMID: [21849438](https://pubmed.ncbi.nlm.nih.gov/21849438/)

Antimycotic-Antibiotic Amphotericin B Promotes Influenza Virus Replication in Cell Culture [▽]

[Elisabeth Roethl](#),¹ [Manuela Gassner](#),¹ [Brigitte M. Krenn](#),¹ [Ekaterina A. Romanovskaya-Romanko](#),² [Helena Seper](#),¹ [Julia Romanova](#),¹ [Sabine Nakowitsch](#),¹ [Sanda Sturlan](#),^{†,1} [Markus Wolschek](#),¹ [Alexej Sirotkin](#),² [Oleg Kiselev](#),² [Thomas Muster](#),¹ and [Andrej Egorov](#)^{1,*}

▶ [Author information](#) ▶ [Article notes](#) ▶ [Copyright and License information](#) [Disclaimer](#)

ABSTRACT

[Go to: ▶](#)

In general, antibiotics are not rated as substances that inhibit or support influenza virus replication. We describe here the enhancing effect of the polyene antibiotic amphotericin B (AmB) on influenza virus growth in Vero cells. We show that isolation rates of influenza A and B viruses from clinical samples can be dramatically enhanced by adding AmB to the culture medium. We demonstrate that AmB promotes the viral uptake and endocytic processing of the virus particles. This effect is specific for Vero and human nasal epithelial cells and was not observed in Madin-Darby canine kidney cells. The effect of AmB was subtype specific and more prominent for human seasonal influenza strains but absent for H5N1 human viruses. The AmB-enhancing effect seemed to be solely due to the viral hemagglutinin function. Our results indicate that the use of AmB may facilitate influenza virus isolation and production in Vero cells.

INTRODUCTION

[Go to: ▶](#)

Until recently, influenza virus isolation from clinical samples and vaccine manufacture was almost entirely based on the infection of 9- to 11-day-old embryonated chicken eggs (CE). However, CE as a production substrate have serious restrictions because of the limited availability of high-quality eggs, especially in the case of an impending pandemic. In addition, some of the human strains of influenza virus do not replicate in eggs and require adaptation passages and/or a reassortment with a well-adjusted donor virus for improved growth. Moreover, the cultivation of human-derived influenza viruses in a host such as CE might lead to the selection of host range mutant variants that are characterized by structural changes in the hemagglutinin (HA) molecule, which, in turn, might have a negative effect on receptor specificity and the immunogenicity of egg-derived vaccines ([1](#), [9](#), [25](#), [28](#)).

GENTAMICIN

"Our data reveal that GENT has a significant cytotoxic and adverse effect on the cell viability."

In other words, GENT is very toxic and increases cellular breakdown



DE GRUYTER
OPEN

ADVANCED RESEARCH IN LIFE SCIENCES
1(1), 2017, 111-116

www.degruyter.com/view/j/arls



DOI: 10.1515/arls-2017-0018
Research Article

***In Vitro* Assessment of Gentamicin Cytotoxicity on the Selected Mammalian Cell Line (Vero cells)**

Anton Kovacik^{1*}, Eva Tvrda¹, Diana Fulopova², Peter Cupka¹, Eva Kovacikova³,
Katarina Zbynovska¹, Peter Massanyi¹

¹Department of Animal Physiology, Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture in Nitra, 949 76-Nitra, Tr. A. Hlinku 2, Slovak Republic

²Institute for State Control of Veterinary Biologicals and Medicines, 949 01-Nitra, Biovetska 34, Slovak Republic

³Research Centre AgroBioTech, Slovak University of Agriculture in Nitra, 949 76-Nitra, Tr. A. Hlinku 2, Slovak Republic

Accepted December, 2017

Abstract

The aim of this study was to evaluate the *in vitro* cytotoxicity of different concentrations (500-7500 µg/mL) of gentamicin - GENT (aminoglycoside antibiotic) on the selected mammalian cell line (Vero - cell line from African green monkey kidney). Analysis of the cell morphological changes was microscopically evaluated (magnification x 400). Quantification of Ca, Mg and total proteins was performed using spectrophotometry on device Rx Monza (Randox). Quantification of Na, K and Cl was performed on the automatic analyzer EasyLyte. The cell viability was assessed using the metabolic mitochondrial MTT test. Vero cells were able to survive at concentrations of 500 (89.21 %), 1000 (79.54 %) and 2000 µg/mL (34.59 %). We observed statistically significant decrease of vital cell content at concentrations of 2000, 4500, 7500 µg/mL against control group. Vero cell line slightly reacted to the presence of GENT but total proteins and mineral parameters were not significantly affected. Vero cells were highly sensitive to GENT with a significant decrease of viability at concentrations of 2000 and 4500 µg/mL (P < 0.001). Our data reveal that GENT has a significant cytotoxic and adverse effect on the cell viability.

Keywords: cytotoxicity, gentamicin, mitochondrial activity, Vero cell line.

Introduction

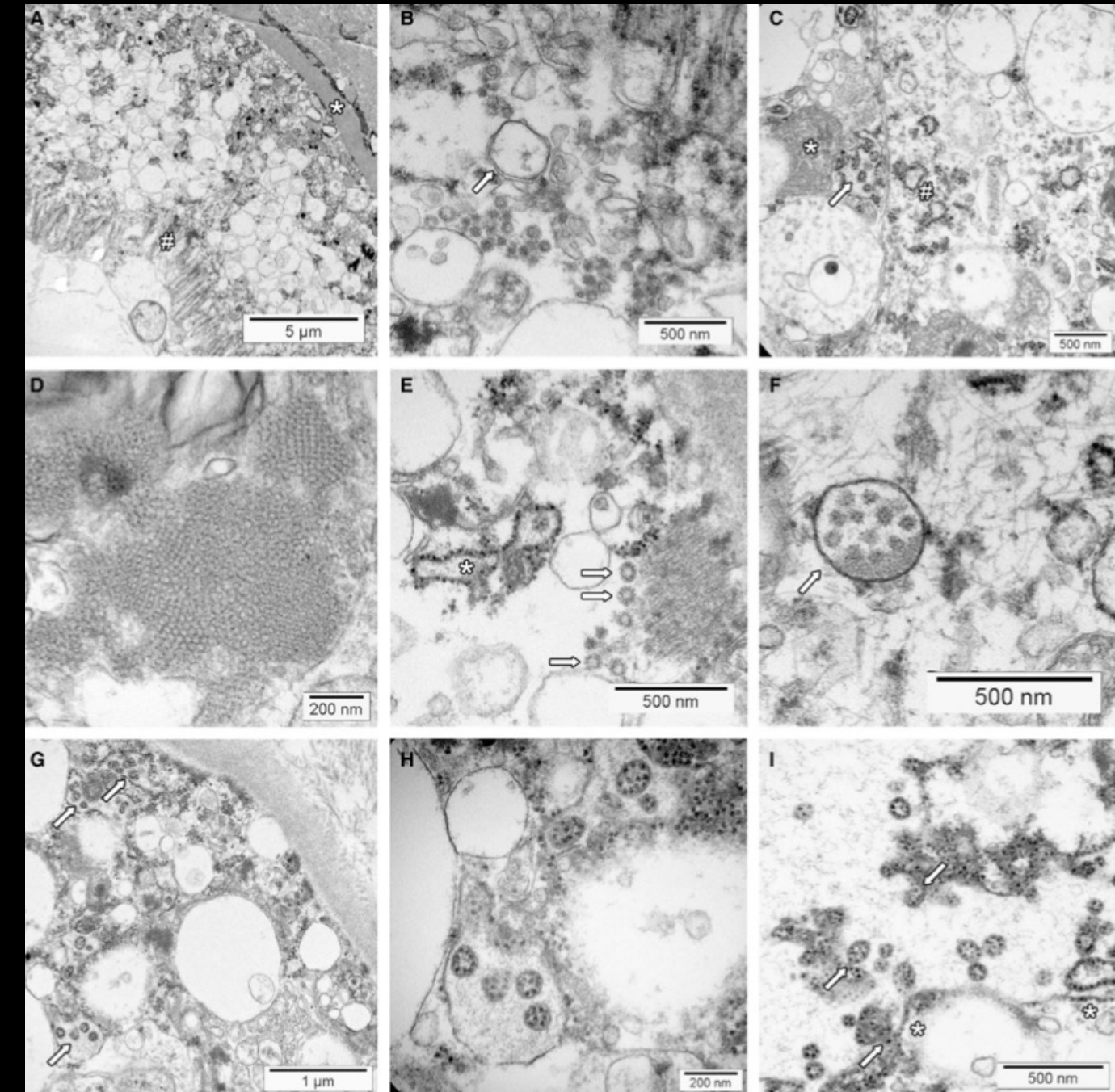
Aminoglycoside antibiotics were discovered in the middle of last century. Their antimicrobial effects

Micromonospora spp. with glycosidic linkages at positions 4 and 6 [3] and is active against a broad range of bacterial infections, especially Gram-

LIMITATIONS OF ELECTRON MICROSCOPY

C. Microscopy

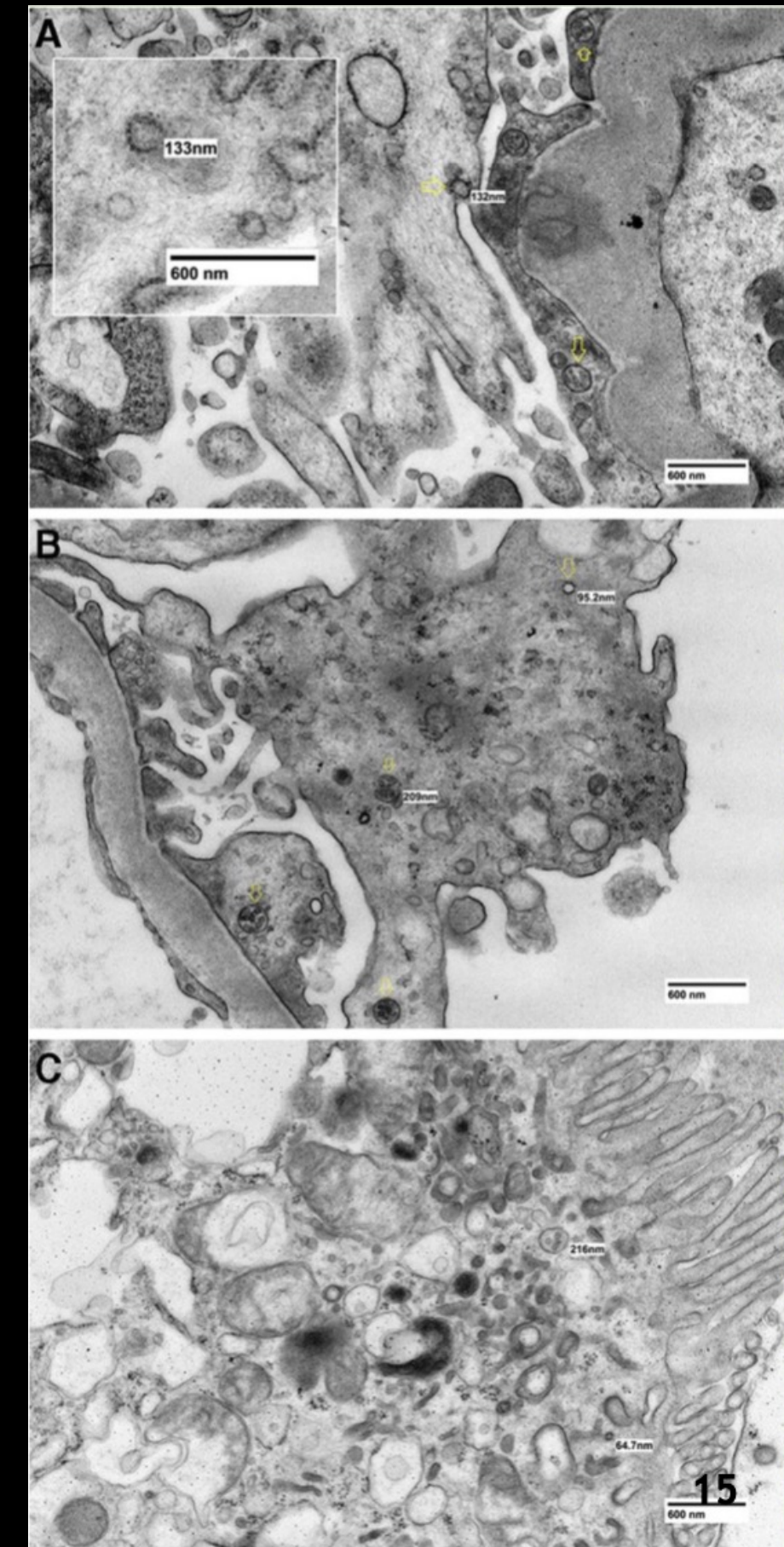
When a tissue is prepared for histology, histochemistry, electron microscopy, or immunocytochemistry, an animal is killed; the tissue is excised; it is fixed or frozen; it is embedded; it is sectioned; it is rehydrated; it is stained; it is mounted; it is radiated by light, or bombarded by electron beams. Living tissue could not survive the dehydration, low pressure, x-irradiation and electron bombardment, which occur in the electron microscope. So, heavy metal salts of osmium, tungsten, manganese, uranium or lead, are deposited on fixed tissue, and these deposits are examined. When one studies unfixed tissues in physiological media, one is looking at cells, which exchange approximately normally with their environments. In histological sections, one is examining tissue *plus* reagents used in the preparation, *minus* constituents of the tissue (including water), dissolved in or extracted by, the reagents used. The electron microscopists look at heavy metal salts, *plus* other reagents used in the preparation, *minus* substances extracted by the reagents. Virtually nothing is seen if heavy metal salts are not used for staining, as was shown by Weakley in an elegant illustration in her book, 'Beginners Handbook of Electron Microscopy', (1972). In addition, one does not see any cellular structures, which do not react with or dissolve in reagents, including ethanol and acetone.



APPEARANCES CAN BE DECEIVING...

“we have observed **morphologically indistinguishable** inclusions within podocytes and tubular epithelial cells both in patients negative for coronavirus disease 2019 (COVID-19) as well as in renal biopsies from the pre- COVID-19 era.”

Source: (Appearances Can Be Deceiving-Viral-like Inclusions in COVID-19 Negative Renal Biopsies by Electron Microscopy. Kidney360. <https://kidney360.asnjournals.org/content/1/8/824>)



APPEARANCES CAN BE DECEIVING...

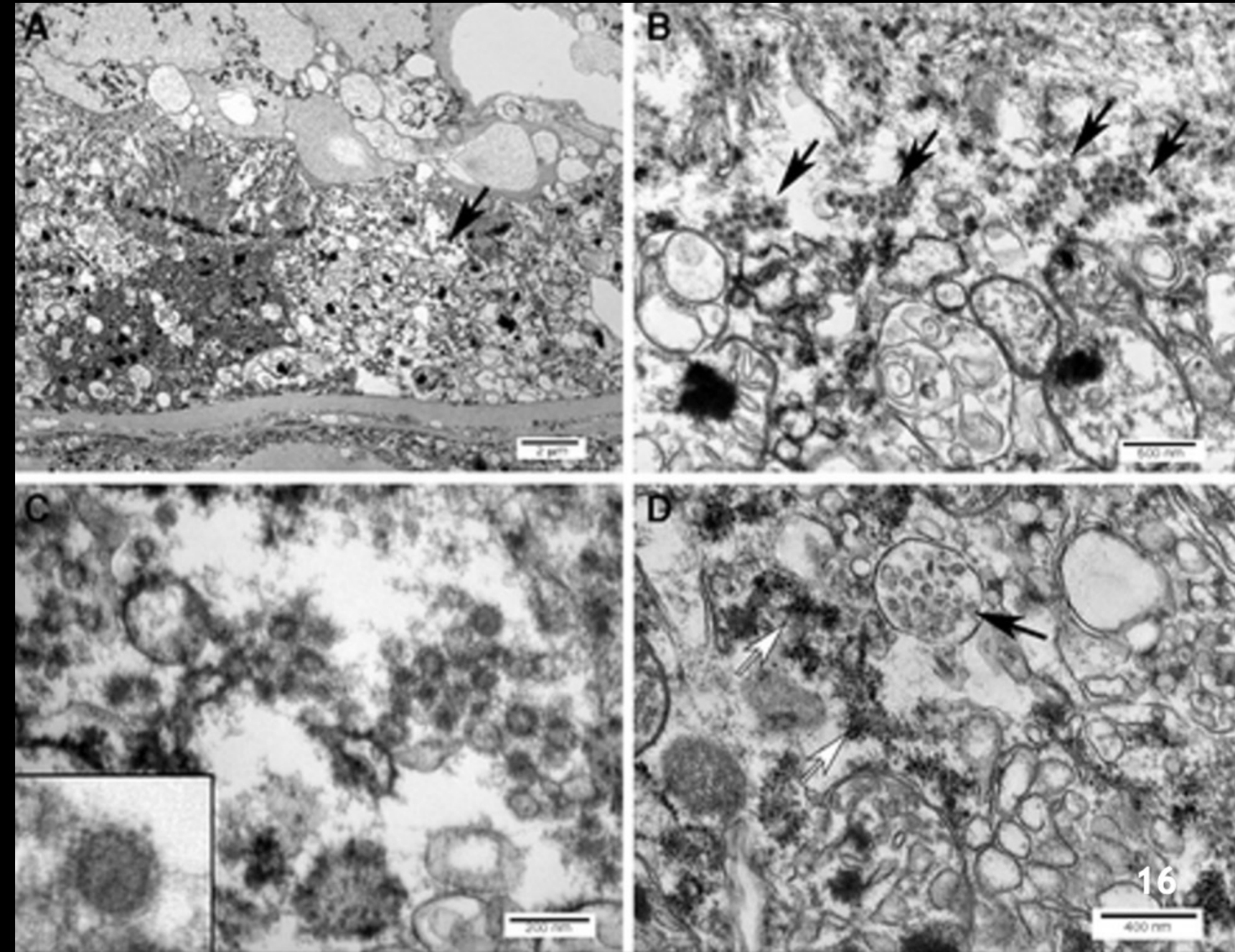
“The evidence provided in the article by Farkash et al.⁸ in JASN likewise does not confirm the presence of SARS-CoV-2 in kidney tissue.

In the article by Farkash et al., the electron microscopic images in their **Figure 3, A–C do not demonstrate coronaviruses. Rather, the structures described as virus are clathrin-coated vesicles (CCVs),** normal subcellular organelles involved in intracellular transport.

Additionally, Farkash et al. document their findings by referring to an article by Su et al. that purports to have identified coronavirus in kidney. **Likewise, that article shows only normal cell structures that, to the non-electron microscopist virologist, may resemble coronavirus.** Their interpretation has been refuted in Letters to the Editor of Kidney International.

Identification of viruses is not always straightforward. Consideration should be given to the mechanism of virus production, including the location inside of cells, as well as the appearance (size, shape, internal pattern of the nucleocapsid, and surface spikes). Care should be taken to prevent mistaking cell organelles for viral particles.”

Source: (Caution in Identifying Coronaviruses by Electron Microscopy | American Society of Nephrology. asnjournal.org)



APPEARANCES CAN BE DECEIVING...

“Recent publications in *Kidney International* used electron microscopy (EM) to detect the virus in autopsy or biopsy specimens of the kidney. **Most of the published images depicting the suspected virus are very similar, if not identical, to multivesicular bodies (MVBs).** MVBs have been well-known since the 1960s and their appearance and occurrence is detailed in the classic monograph of Feroze Ghadially; however, their exact significance and function is unclear. We suspect that the EM images of SARS-CoV-2 published to date are in fact MVBs.”

Source: (Multivesicular bodies mimicking SARS-CoV-2 in patients without COVID-19 - *Kidney International*. kidney-international.org)

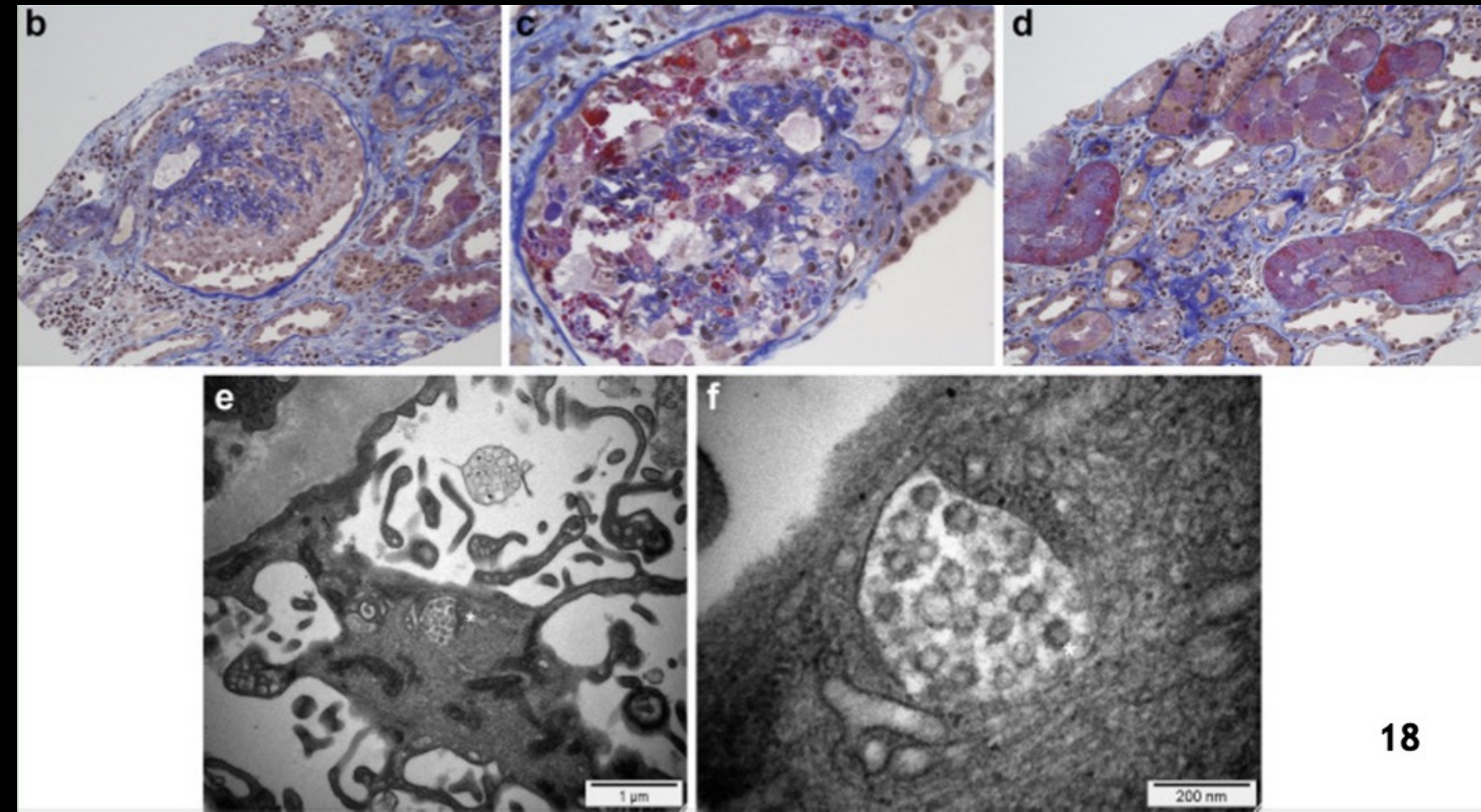


APPEARANCES CAN BE DECEIVING...

“We read with interest the Correspondence by Zsuzsanna Varga and colleagues on the possible infection of endothelial cells by SARS-CoV-2 using electron microscopic (EM) images as evidence. However, **we believe the EM images in the Correspondence do not show coronavirus particles but instead show cross-sections of the rough endoplasmic reticulum (RER).**”

Just recently, there have been two additional reports, in which structures that can normally be found in the cytoplasm of a cell have been misinterpreted as viral particles. EM can be a powerful tool to show evidence of infection by a virus, but care must be taken when interpreting cytoplasmic structures to correctly identify virus particles.”

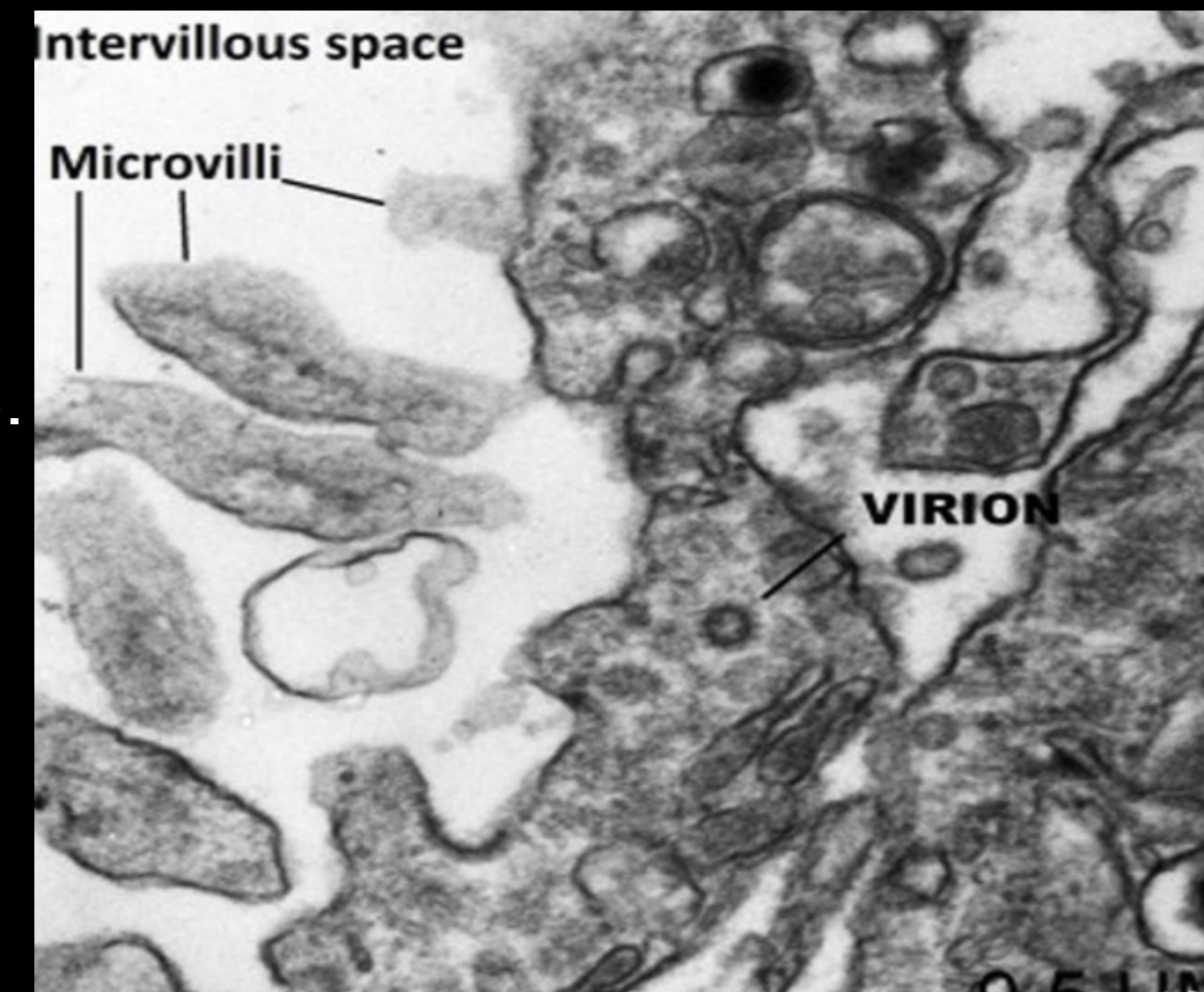
Source: (Electron microscopy of SARS-CoV-2: a challenging task – The Lancet)



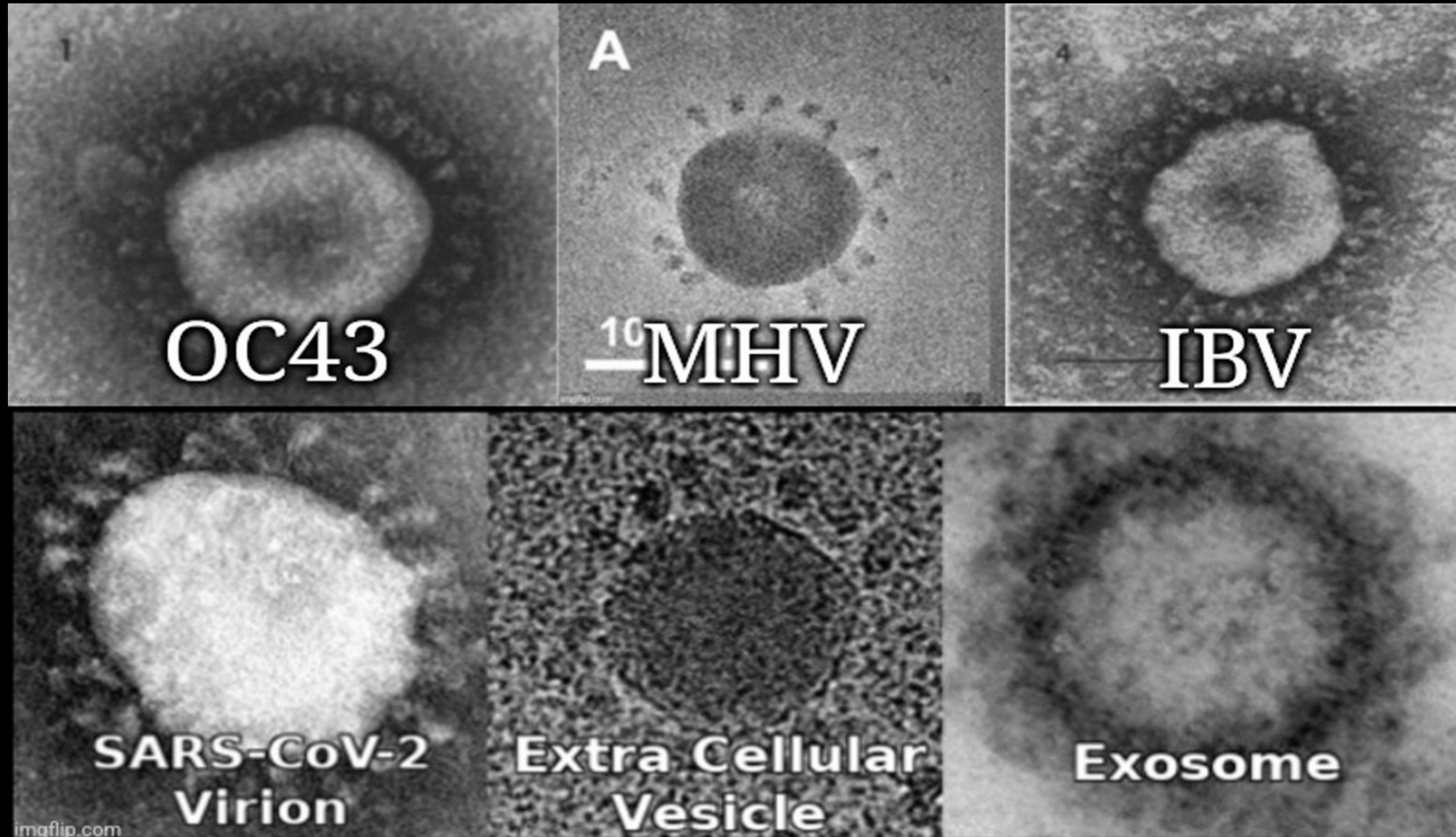
APPEARANCES CAN BE DECEIVING...

“The report of virus-like inclusions in syncytiotrophoblast is intriguing and thought-provoking. However, I respectfully offer an alternative interpretation of the data. **The structures identified as SARS-CoV-2 virions look exactly like clathrin-coated pits or vesicles.** Clathrin-coated vesicles are spherical structures employed by trophoblasts and other cell types to internalize cargos from the extracellular space. Coated vesicles and coated pits derive their name from the external scaffold coat composed of clathrin triskelions that decorate the surface of the structure. In transmission electron micrographs in which tissue-thin sections are stained with uranyl acetate and lead citrate, coated vesicles have an electron-dense studded surface that appears identical to the “corona” comprising the spike protein that decorates all coronaviruses, including SARS-CoV-2 virions. It is this studded surface or corona that gives the genus Betacoronaviridae its characteristic morphology and name.

Source: (Alternative interpretation to the findings reported in visualization of severe acute respiratory syndrome coronavirus 2 invading the human placenta using electron microscopy - American Journal of Obstetrics & Gynecology. ajog.org)



APPEARANCES CAN BE DECEIVING...



FORMAL SCIENCE

the study of formal systems, such as those under the branches of **logic** and mathematics, which use an a priori, as opposed to empirical, methodology.

WHAT **ISN'T** LOGIC?: LOGICAL FALLACIES 101

WHAT IS A LOGICAL FALLACY?

(1) A FAILURE IN REASONING WHICH
RENDERS AN ARGUMENT INVALID

(2) FLAWED, DECEPTIVE, OR FALSE
ARGUMENTS THAT CAN BE PROVEN
WRONG WITH REASONING.

APPEAL TO AUTHORITY

In an appeal to authority, the arguer claims a perceived authority figure's position to either support a claim, or to support the entirety of the argument.

Examples:

- "If you want to be healthy, get the vaccine. Dr. Fauci says so."
- "Robert Malone is a vaccinologist, and he says the virus has been isolated, so you're wrong."

BANDWAGON FALLACY

A bandwagon fallacy is one in which the arguer attempts to validate their position by referring to the majority's stance on the position

Example:

- "The overwhelming majority of experts believe the virus has been isolated."
(this is a two for one- what other fallacy is used here?)

BURDEN OF PROOF REVERSAL FALLACY

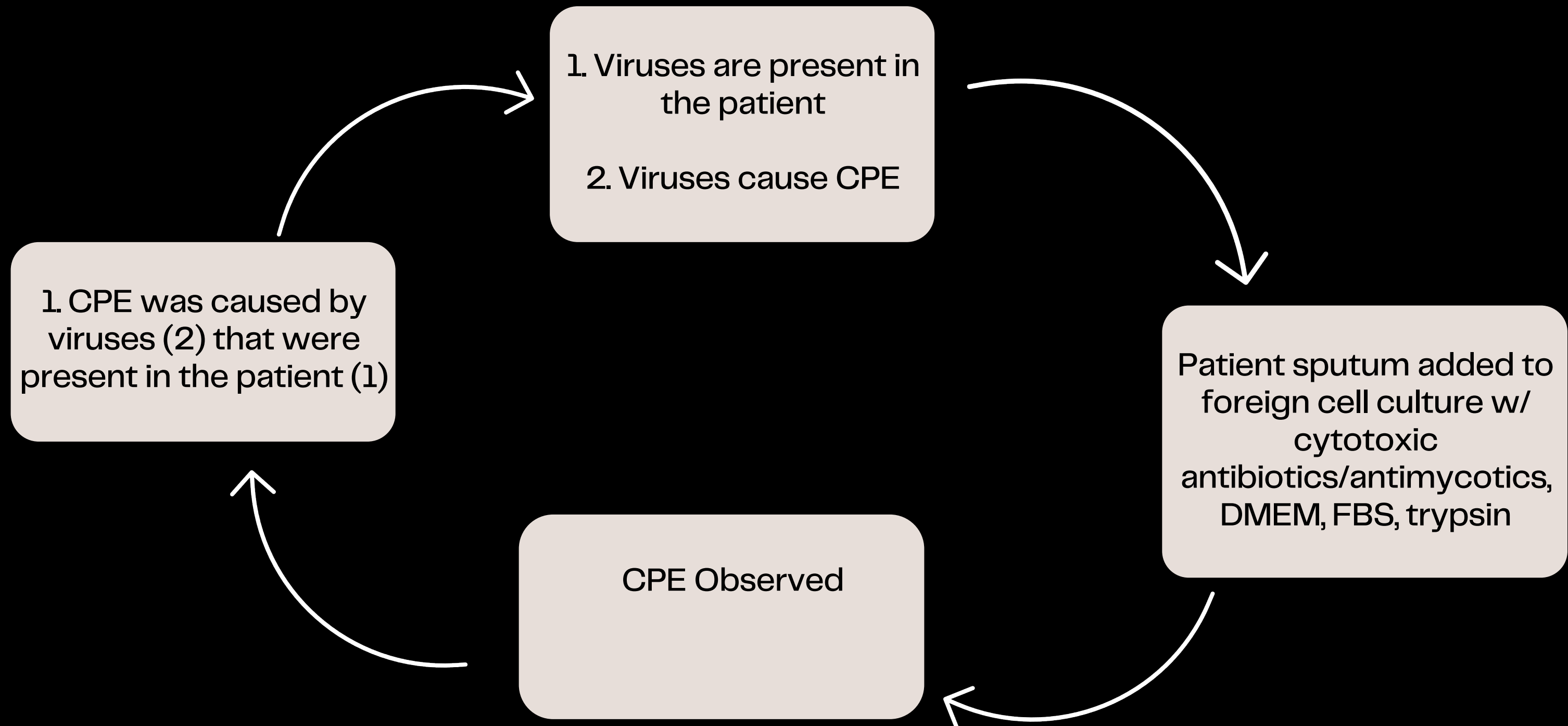
A burden of proof reversal fallacy occurs when the arguer makes a claim that needs justification, then demands that the opponent justifies the opposite of the claim.

Example:

"Well where's your proof that viruses don't exist?"

BEGGING THE QUESTION/CIRCULAR REASONING

A begging the question fallacy occurs when the arguer's conclusion is assumed in one of the premises.



GRAPHIC: CREDIT TO DR. ANDY KAUFMAN

AFFIRMING THE CONSEQUENT

An affirming the consequent fallacy occurs when an arguer claims the antecedent is said to be true because the consequent is true.

Essentially, "if X, then Y. Y, therefore X."

Example:

- "Viruses make people sick.
I am sick, so it must've been a virus."

REIFICATION FALLACY

When an abstraction (abstract belief or hypothetical construct) is treated as if it were a concrete, real event or physical entity.

Example:

- Assigning any characteristics or attributes to viruses

SO IF NOT A VIRUS, WHAT'S MAKING US SICK?

perpetual fear

poor nutrition
herbicides and pesticides
stress
overuse of pharmaceuticals
poor sleep
poor gut health
heavy metals
toxic skin products
EMF exposure
dental procedures
toxic air fresheners
toxic cleaning products
lack of community
overuse of antibiotics
overconsumption of sugar
pasteurized, inorganic dairy

fast food
processed foods
refined grains
lack of time in nature
lack of exercise
poor detox pathways
unhealed trauma
seed oils
toxic tap water
lack of minerals
soda
overconsumption of alcohol
smoking
poor oral hygiene
chemtrails
vaccines
and so many other things!

WHAT ABOUT CONTAGION VIA FLUIDS FROM A SICK PERSON?

THE ROSENAU EXPERIMENTS, 1918-1919

- experiments conducted by the Public Health Service and the U.S. Navy at quarantine stations in Boston Harbor and Angel Island in San Francisco
- 100 volunteers from the Navy who had no history of influenza
 - A portion of volunteers received first one strain and then several strains of Pfeiffer bacillus by spray with atomizer and swab into their noses and throats and then into their eyes.
 - Others were inoculated with mixtures made from mucous secretions taken from the mouth, nose, throat and bronchi of influenza patients
 - Next, some volunteers received injections of blood from influenza patients.
 - 13 of the volunteers were taken into an influenza ward and exposed to 10 influenza patients each. Each volunteer was to shake hands with each patient and get as close as possible, to talk with the patient at close range for 5 minutes, and to permit the patient to breathe and cough directly into his face while he breathed in. This process was repeated 5 times with each of the 10 patients.

WHAT ABOUT CONTAGION VIA FLUIDS FROM A SICK PERSON?

THE ROSENAU EXPERIMENTS, 1918-1919

NONE OF THE VOLUNTEERS IN THESE EXPERIMENTS DEVELOPED INFLUENZA.

“We entered the outbreak with a notion that we knew the cause of the disease, and were quite sure we knew how it was transmitted from person to person. Perhaps, if we have learned anything, it is that we are not quite sure what we know about the disease.” -Milton Rosenau

WHAT ABOUT CONTAGION VIA FLUIDS FROM A SICK PERSON?

MORE EXAMPLES:

A set of 8 experiments were conducted in December of 1919 by McCoy et al. in 50 men to try and prove contagion.

Once again, all 8 experiments failed to prove people with influenza, or their bodily fluids cause illness.

0/50 men became sick.

In 1919, Wahl et al. conducted 3 separate experiments to infect 6 healthy men with influenza by exposing them to mucous secretions and lung tissue from sick people.

0/6 men contracted influenza in any of the 3 studies.

Source:

(https://www.jstor.org/stable/30082102?seq=1#metadata_info_tab_contents)

WHAT ABOUT CONTAGION VIA FLUIDS FROM A SICK PERSON?

MORE EXAMPLES:

In 1920, Schmidt et al conducted two controlled experiments, exposing healthy people to the bodily fluids of sick people.

- Of 196 people exposed to the mucous secretions of sick people:
 - 21 (10.7%) developed colds and three developed grippe (1.5%).
- In the second group, of the 84 healthy people exposed to mucous secretions of sick people:
 - five developed grippe (5.9%) and four colds (4.7%).
- Of 43 controls who had been inoculated with sterile physiological salt solutions:
 - eight (18.6%) developed colds.
 - **A higher percentage of people got sick after being exposed to saline compared to those being exposed to the “virus”.**

Source: (<https://pubmed.ncbi.nlm.nih.gov/19869857/>)

WHAT ABOUT CONTAGION VIA FLUIDS FROM A SICK PERSON?

MORE EXAMPLES:

In 1921, Williams et al. tried to experimentally infect 45 healthy men with the common cold and influenza, by exposing them to mucous secretions from sick people. **0/45 became ill.**

Source: (<https://pubmed.ncbi.nlm.nih.gov/19869857/>)

In 1924, Robertson & Groves exposed 100 healthy individuals to the bodily secretions from 16 different people suffering from influenza. **The authors concluded that 0/100 became sick as a result of being exposed to the bodily secretions.**

Source: (<https://academic.oup.com/jid/article-abstract/34/4/400/832936?redirectedFrom=fulltext>)

In 1937 Burnet & Lush conducted an experiment exposing 200 healthy people to bodily secretions from people infected with influenza. **0/200 became sick.**

Source: (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2065253/>)

THE APPEARANCE OF CONTAGION

First and foremost, the burden of proof lies on those making the claims. **Falsification does not require a replacement.**

Most Likely

- Exposure to similar toxins
- Similar eating habits
- Shared emotional trauma
- **FEAR/BELIEF**
- Shared exposure to non-native EMFs

Other possibilities

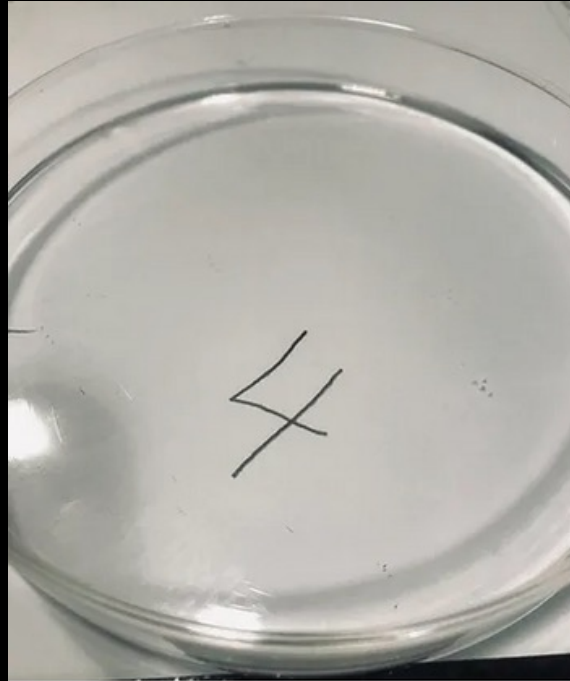
- Mirror Neurons
- Pheromones
- Bio-resonance

VEDA AUSTIN'S WORK WITH WATER

My good friend Veda Austin studies the impact of written words, music, pictures, thoughts, feelings, frequencies, dreams, etc. on water and other natural, water-dense liquids.

She is showing, conclusively, that water holds memory, reflects our reality back to us, has its own symbol-based language, and that water communicates with us and through us.

VEDA AUSTIN'S WORK WITH WATER



Written number 4



Ice response



Photo of braid



Ice response



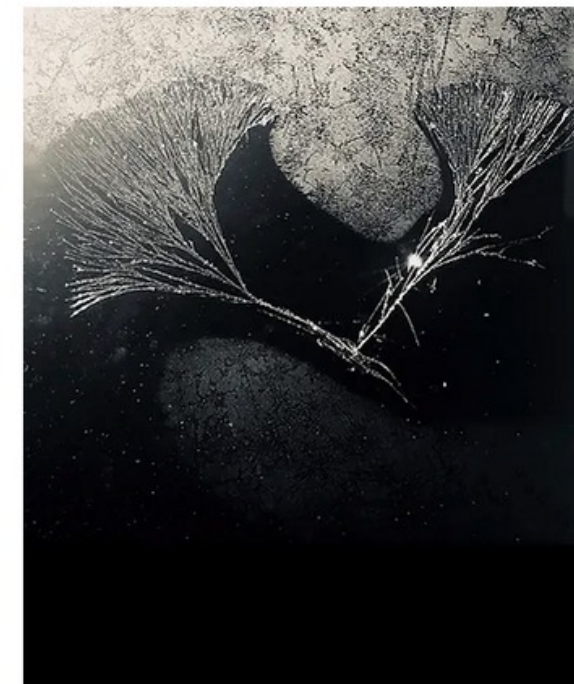
Photo of a face



Ice response



Ginkgo leaves



Ice response

VEDA AUSTIN'S WORK WITH WATER



Spiral placemat



Ice response



Amethyst pyramid



Ice response



My sons hands



Ice response



Vineyard photo



Ice response to a ph...

VEDA'S WORK, BIORESONANCE



Common crystallography of chicken egg albumen seen in barn laid & battery farmed eggs.



Crystallography of free range chicken egg albumen from organic/ bio dynamic farm.



Crystallography of battery farmed chicken egg after sitting beside healthy free range eggs over night.



VEDA'S WORK, BIORESONANCE

Top left: free range egg

From left to right: caged
eggs in order of closest
to furthest in proximity
to free range egg

Bottom right: caged egg



VEDA AUSTIN'S WORK WITH WATER

Human beings are made up of nearly $2/3$ water in weight, and over $9/10$ molecules in our body are water. Like the egg, is it possible that when someone is experiencing symptoms, the water in their body communicates with the waters of others who are in need of detoxification?

Nature seeks balance, harmony, and what is natural. One free range egg impacted 9 caged eggs, not the other way around. **Why would humans be any different?**

We aren't. Our conditioned beliefs get in the way.

SYMPTOMS OF ILLNESS AND OUR BELIEFS

Are symptoms bad?

Are they something to fear?

Is our body simply doing what it was designed to do?

“SO WHAT? WHY IS THIS IMPORTANT?”

Truth is important. Reality is important.

The lockdowns, the social distancing, the masking, the experimental vaccines, the mandates, the business closures, the job loss, the severe depression, the economic impact, the censorship, the centralization of power, the increased government control, the segregation, the discrimination, the harmful hospital protocols, the unnecessary death, and every other piece of the official COVID-19 narrative rests on the shoulders of the **completely unproven concept of pathogenic disease causing particles that are passed from person-to-person.**

Our conditioned beliefs are making the effects of this unproven belief real. We need to work to dissolve this conditioned belief.

Symptoms are not something to fear.

Your body is doing what it's supposed to do.

We fear and/or try to manipulate or suppress our body's innate intelligence and we only perpetuate our own suffering.

THE PRESENTER: ALEC ZECK

Daniel Alexander Zeck was born on July 15, 1992 in Lawrence, KS. He received his B.S. in Systems Engineering from the United States Military Academy at West Point. He is a speaker, writer, podcaster, and former Army Captain. He is the former Executive Director and Founder of Health Freedom for Humanity and is the founder of The Way Forward. He is a husband to Kylee, and a father to two beautiful children, Grayson (5) and Charlotte (2).

More on Alec: thewayfwr.com

