

# Exhibit 520

## What I Believe About COVID Denis G. Rancourt, PhD

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Member scientist, PANDA ([pandata.org](http://pandata.org))  
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<https://denisrancourt.substack.com/p/what-i-believe-about-covid>

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[Editor's Note](#): mirrored from its source at: <https://activistteacher.blogspot.com/2021/01/what-i-believe-about-covid.html>

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## What I believe about COVID

By Denis G. Rancourt, PhD

Researcher, Ontario Civil Liberties Association ([ocla.ca](http://ocla.ca))

Member scientist, PANDA ([pandata.org](http://pandata.org))

[ See section about the author's expertise, [at the end](#) ]

Opinion/Belief (not submitted for journal publication)

This is purely my personal beliefs. I do not speak on behalf of OCLA or PANDA.

4 January 2021

At this time, I hold the following beliefs about COVID.

- In 2020, no respiratory disease virus or viruses (the postulated SARS-CoV-2 included) caused any anomaly (total or incremental) in all-cause mortality.
- All-cause mortality by month, week or day has the clear signature of localized mass deaths caused by the measures purportedly intended to reduce transmission (response-induced deaths).
- The said signature of response-induced deaths, in all-cause mortality, includes:
  - i. Global synchronicity of sudden onsets immediately following the 11 March 2020 WHO declaration of a pandemic and recommendation to “prepare your hospitals”.
  - ii. Unprecedented lateness in the seasonal cycle of the sudden onsets.
  - iii. Extreme granularity of the intensities of the sudden onsets, from jurisdiction to jurisdiction, from zero to very large, down to regional levels.
- Unprecedented tight lockdowns of care homes, following transfers from hospitals of sick and infected patients, caused deadly epidemics in care homes.
- Deadly epidemics in care homes in themselves are not new, and have been amply documented in the pre-2020 scientific literature.
- Many respiratory disease viruses acted concomitantly in 2020, in association with bacterial pneumonias, as is always the case in heightened winter-season transmission and infection.
- Assignment of cause of death as being due to SARS-CoV-2 is worthless. It is pure propaganda enabled by captured institutions.
- No certified uncontaminated samples of the purported pathogen (SARS-CoV-2) were or are available for scientific study and biotech development. The genetic sequence was concocted in the absence of a purified sample of the presumed pathogen, using indirect methods.

- The RT-PCR test that was devised for COVID-19 has no clinical or epidemiological value whatsoever. It is one of the greatest scandals in public health history.
- The USA is a special case because it has a large population that is particularly vulnerable to great harm from large-scale societal measures. Relevant factors include: obesity, poverty, social class oppression, precarious workforce, substandard universal health care, high social tensions, large income disparity, large homeless and working poor underclasses, aggressive Big Pharma capture, high seasonal vaccination rate, high pharma and illegal drug use, high density of atomized or socially isolated individuals, poor nutrition, low physical activity rates, high rate of psychological depression, high rates of built environment air-conditioning without ventilation, and so on.
- Transmission of viral respiratory diseases is not by contact. It is overwhelmingly by aerosol particles in air. Surface cleaning and hand washing are virtually useless for slowing transmission.
- Masks do not work to reduce transmission, and cause significant harm to school children, and to society.
- The magical “one way mask”, which does not protect the wearer but acts as “source control”, is an invention for propaganda. It is contrary to the physics of breathing aerosol particles suspended in the fluid air. It is a ridiculous fantasy.
- Vaccine trials funded, run, documented, and reported by Big Pharma are at best untrustworthy. They should not be allowed, and they are probably falsified.
- Vaccines for seasonal viral respiratory diseases are a bad idea. They are dangerous, harmful, and unnecessary. They are driven by profit, not by actual public health.
- By far, the main determinants of disease severity for seasonal viral respiratory diseases are: psychological stress, social isolation, individual health status, obesity, and immunological history (including vaccination challenges).

## **My competence to develop beliefs about COVID**

Links to my articles about COVID are listed here:

<http://activistteacher.blogspot.com/2020/07/links-to-denis-rancourt-articles-and.html>

I am retired and a former tenured Full Professor of Physics, University of Ottawa. Full Professor is the highest academic rank. During my 23-year career as a university professor, I developed new courses and taught over 2000 university students, at all levels, and in three different faculties (Science, Engineering, Arts). I supervised more than 80 junior research terms or degrees at all levels from post-doctoral fellow to graduate students to NSERC undergraduate researchers. I headed an internationally recognized interdisciplinary research laboratory, and attracted significant research funding for two decades.

I have been an invited plenary, keynote, or special session speaker at major scientific conferences some 40 times. I have published over 100 research papers in leading peer-reviewed scientific journals, in the areas of physics, chemistry, geology, biogeochemistry, measurement science, soil science, and environmental science.

My scientific h-index impact factor is 40, and my articles have been cited more than 5,000 times in peer-reviewed scientific journals (profile at Google Scholar: <https://scholar.google.ca/citations?user=1ChsRsQAAAAJ>).

My personal knowledge and ability to evaluate the facts in this article are grounded in my education, research, training and experience, as follows:

- i. Regarding environmental nanoparticles. Viral respiratory diseases are transmitted by the smallest size-fraction of virion-laden aerosol particles, which are reactive environmental nanoparticles. Therefore, the chemical and physical stabilities and transport properties of these aerosol particles are the foundation of the dominant contagion mechanism through air. My extensive work on reactive environmental nanoparticles is internationally recognized, and includes: precipitation and growth, surface reactivity, agglomeration, surface charging, phase transformation, settling and sedimentation, and reactive dissolution. In addition, I have taught the relevant fluid dynamics (air is a compressible fluid), and gravitational settling at the university level, and I have done industrial-application research on the technology of filtration (face masks are filters).
- ii. Regarding molecular science, molecular dynamics, and surface complexation. I am an expert in molecular structures, reactions, and dynamics, including molecular complexation to biotic and abiotic surfaces. These processes are the basis of viral attachment, antigen attachment, molecular replication, attachment to mask fibers, particle charging, loss and growth in aerosol particles, and all such phenomena involved in viral transmission and infection, and in protection measures. I taught quantum mechanics at the advanced university level for many years, which is the fundamental theory of atoms, molecules and substances; and in my published research I developed X-ray diffraction theory and methodology for characterizing small material particles.
- iii. Regarding statistical analysis methods. Statistical analysis of scientific studies, including robust error propagation analysis and robust estimates of bias, sets the limit of what reliably can be inferred from any observational study, including randomized controlled trials in medicine, and including field measurements during epidemics. I am an expert in error analysis and statistical analysis of complex data, at the research level in many areas of science. Statistical analysis methods are the basis of medical research.

- iv. Regarding mathematical modelling. Much of epidemiology is based on mathematical models of disease transmission and evolution in the population. I have research-level knowledge and experience with predictive and exploratory mathematical models and simulation methods. I have expert knowledge related to parameter uncertainties and parameter dependencies in such models. I have made extensive simulations of epidemiological dynamics, using standard compartmental models (SIR, MSIR) and new models.
- v. Regarding measurement methods. In science there are five main categories of measurement methods:
1. spectroscopy (including nuclear, electronic and vibrational spectroscopies),
  2. imaging (including optical and electron microscopies, and resonance imaging),
  3. diffraction (including X-ray and neutron diffractions, used to elaborate molecular, defect and magnetic structures),
  4. transport measurements (including reaction rates, energy transfers, and conductivities), and
  5. physical property measurements (including specific density, thermal capacities, stress response, material fatigue...).

I have taught these measurement methods in an interdisciplinary graduate course that I developed and gave to graduate (M.Sc. and Ph.D.) students of physics, biology, chemistry, geology, and engineering for many years. I have made fundamental discoveries and advances in areas of spectroscopy, diffraction, magnetometry, and microscopy, which have been published in leading scientific journals and presented at international conferences. I know measurement science, the basis of all sciences, at the highest level.

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