



## THE BRUSSELS DECLARATION ON SCIENTIFIC INTEGRITY

In the global crusade against alcohol, tobacco, and “unhealthy” foods, health politicians have drawn on alleged scientific evidence that does not adequately meet minimal scientific standards. The following Declaration reminds us of these standards. The Declaration also calls upon politicians to avoid abusing questionable statements by selected and sometimes quite biased “experts” in order to deprive people of their free lifestyle choices. A prohibitionist society cannot be a free society!

**Whereas** science and the scientific method have been responsible for the unprecedented progress of knowledge about the physical world during the last few centuries, and for the consequent unabated progress in the material, intellectual, and social conditions of humankind.

**Whereas** objective evidence is the key for the success of science and the scientific method, and whereas this paramount feature of science imposes a new ethical standard of objective evidence in the assessment and presentation of material evidence in social human affairs.

**Whereas** in free societies the policies and regulations pertaining to physical realities must be objectively validated according to the requirements of the scientific method.

**Whereas** conjectural statements wrongly claimed to be based on objective and validated scientific evidence are increasingly made to encroach on public opinion, government policies and regulations, legal proceedings, educational curricula, and individual choices and behaviors.

**Whereas** this trend gravely compromises the integrity of science, and is the harbinger of dire consequences for the intellectual progress, the material welfare, and ultimately for the individual freedom and the physical and mental health of people on this planet.

**It is thus resolved that we**, the signatories of this declaration, pledge ourselves to defend and promote the objective scientific integrity of public statements presented as being scientific representations of events in the physical world, and that affect government policies and actions, the media and public opinion, legal proceedings, educational curricula, and other activities of individual and social significance.

**To this end we**, the signatories of this declaration, highlight here certain fundamental concepts that characterize the nature and the integrity of science and of the scientific method, which we hold to be true and self-evident principles for the identification of authentic, objective, testable, and valid scientific statements.

### **Principles of scientific integrity**

1. Science and the scientific method move from observations to the formulation of cause-and-effect hypotheses, leading to study designs that objectively and honestly test the validity of those hypotheses.
2. Science and the scientific method rely on the language of numbers and mathematics in order to attain the needed quantitative precision.
3. Science and the scientific method do not claim to obtain absolute truths, but rather best estimates within the probability limits of explicit margins of error.
4. The quantitative precision of science and the scientific method depends on measurements that are accurate and precise with margins of error small enough to be inconsequential.
5. Science and the scientific method depend on measurements that are relevant to the task at hand, and that warrant to be authentic representations of what it is said to have been measured.
6. Scientific observations and experiments must ensure that observations and effects are specific and internal to the matters at hand, and are not confounded, corrupted, or biased by spurious externalities or by financial and political interests.
7. Valid observations and cause-and-effect conclusions must be reproducible by independent investigators.
8. Studies should be properly published and open to peer and public scrutiny before their results are released to the press for political purposes.

**We, the signatories of this declaration and its annexes pledge ourselves to publicize detailed examination of the scientific validity of public policies and statements, to suggest remedies compatible with valid science where possible and appropriate, and to act politically to ensure that only scientifically validated statements and policies are promulgated by governments and other public institutions.**

## **ANNEXES (part of the Declaration)**

### **Annex 1 – The Fallibility of Multi-factorial Epidemiology**

The fundamental evidentiary problem of multi-factorial epidemiology has at least three roots:

- A) There is a pervasive impossibility of a clean measurement of authentic primary data with testable and narrow margins of error,
- B) There is a pervasive impossibility of sufficiently accounting for the meaning and impact of the many factors that could have a causal role for the conditions being studied, and
- C) There is almost always a lack of consistently replicable results, given the instability of primary data, and the shifting composition and influences of potential causal factors and of biases from study to study.

### **Annex 2 – Toxicology and the Costly Illusion of Regulating Unknowable Risks**

Cancer risk assessment uncertainties of animal tests have been swept under the rug by adopting arbitrary assumptions of corresponding human validity that have no foundation in fact or science. These assumptions have become the central determinants of regulatory decisions in many countries around the world.

Regulatory decisions should be based upon scientific evidence at hand. We are dismayed that a succession of regulators and politicians has thrown restraint to the wind, leaning more and more toward the “precautionary principle” presently fashionable in regulatory circles around the world.

### **Annex 3 – The Imaginary Risks of Environmental Tobacco Smoke**

The absence of credible and defensible primary data on lifetime ETS doses or exposures is *prima facie* evidence that the claimed risks of ETS are false in any sense of having been proven. Lung cancer develops slowly and generally manifests at advanced ages after cumulative lifetime experiences. This means that even if ETS exposure could predict risk – and it cannot – it should be measured as the sum-total of exposure episodes over the lifetime of individual non-smokers. Yet, as noted, the myriad momentary changes of exposure over lifetimes would be impossible to track, and therefore cumulative assessments of individual exposures are materially impossible. Still, this is what ETS studies falsely claim to have done.

Epidemiological studies of ETS have produced statistical estimates of risk based not only on improper exposure data, but also on exposure data that are indisputably illusory. Of the 75 published studies of ETS and lung cancer, some 70 percent did not find a statistically significant increase in risk, and several actually found statistically significant decreases in risk among those with lifelong exposures to ETS. On the whole the overall conclusion of these studies cannot be interpreted as conclusively supporting even a reliable statistical association, much less a truly causal association.

#### **Annex 4 – The False Premises of the Obesity Crusade**

The crusade on what is called overweight and obesity now expanding worldwide is poised to change drastically traditional ways of life in most developed countries that nevertheless have witnessed a near doubling of life expectancy in little more than a century, parallel to a steady increase in average body weight. A crusade on overweight and obesity that focuses primarily on dietary changes and restrictions ignores a vast array of other social and environmental changes in a century has seen unprecedented advances in food quality, safety, and availability, paralleling fast declining mortality rates.

Even if sweeping governmental impositions of dietary changes were effectively implemented no one could objectively justify drastic changes in diets and lifestyles that have allowed billions of people to reach levels of health and longevity unprecedented in human history.

#### **Annex 5 – Corrupted Alcohol Science**

The crusade against alcohol use has used corrupted science to minimize the health benefits, both psychological and physical, of moderate alcohol consumption while simultaneously exaggerating its health risks. Health benefits of such consumption are consistently downplayed in governmental statements while on the risk side of the equation we have seen a steady movement to emulate the “no safe level” dogma that has proven so powerful in the crusade against smoking.

Laws in some countries even disallow brewers, vintners and distillers to make any claims – including truthful and scientifically correct ones – about the benefits of using alcohol, thus denying consumers the opportunity to make truly informed and free choices about the risks and benefits of its consumption.