Assessing health risks –

a view from the front lines

Atlantic Legal Foundation

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Papers

Environmental tobacco smoke and tobacco related mortality in a prospective study of Californians, 1960-98

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Abstract

Objective To measure the relation between environmental tobacco smoke, as estimated by smoking in spouses, and long term mortality from tobacco related disease.

Design Prospective cohort study covering 39 years.

Association, the California Environmental Protection Agency, and the US surgeon general have concluded that the increase in coronary heart disease risk due to environmental tobacco smoke is 30% (relative risk 1.30).[1-3] Meta-analyses of epidemiological studies have reported summary relative risks (95% confidence intervals) of 1.30 (1.22 to 1.38), 1.25 (1.17 to 1.32), and 1.25

BMJ

California law requires the posting of the following message:

This area may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. California Health Safety Co...

Passive smoking may not kill

Surprising results from a Californian study p1057, p1048

Non-smoker's actual exposure

Oak Ridge study & Covance labs study showed that:

Exposure of a non-smoker to cigarette smoke is on the order of **8-10** cigarettes per year.

A smoker of 1 pack per day consumes **7,300** cigs/year.

"Science" in the area of public health and health risks

Controversies

vaccines

genetically-modified (GM) crops

pesticides/herbicides (glyphosate)

electromagnetic fields (EMF)/cell phones

BPA (bisphenol-A)

coffee

alcohol

salt

sugar

diet

e-cigarettes/vaping

air pollution

"fracking" to extract natural gas

mammography

Essay

Why Most Published Research Findings Are False

John P. A. Ioannidis

Summary

There is increasing concern that most current published research findings are false. The probability that a research claim is true may depend on study power and bias, the number of other studies on the same question, and, importantly, the ratio of true to no relationships among the relationships probed in each scientific field. In this framework, a research finding is less likely to be true when the studies

factors that influence this problem and some corollaries thereof.

Modeling the Framework for False Positive Findings

Several methodologists have pointed out [9–11] that the high rate of nonreplication (lack of confirmation) of research discoveries is a consequence of the convenient, yet ill-founded strategy of claiming conclusive research findings solely on

is characteristic of the field and can vary a lot depending on whether the field targets highly likely relationships or searches for only one or a few true relationships among thousands and millions of hypotheses that may be postulated. Let us also consider, for computational simplicity, circumscribed fields where either there is only one true relationship (among many that can be hypothesized) or the power is similar to find any of the

Observational studies
Extra-scientific factors
Cognitive biases
Weak science
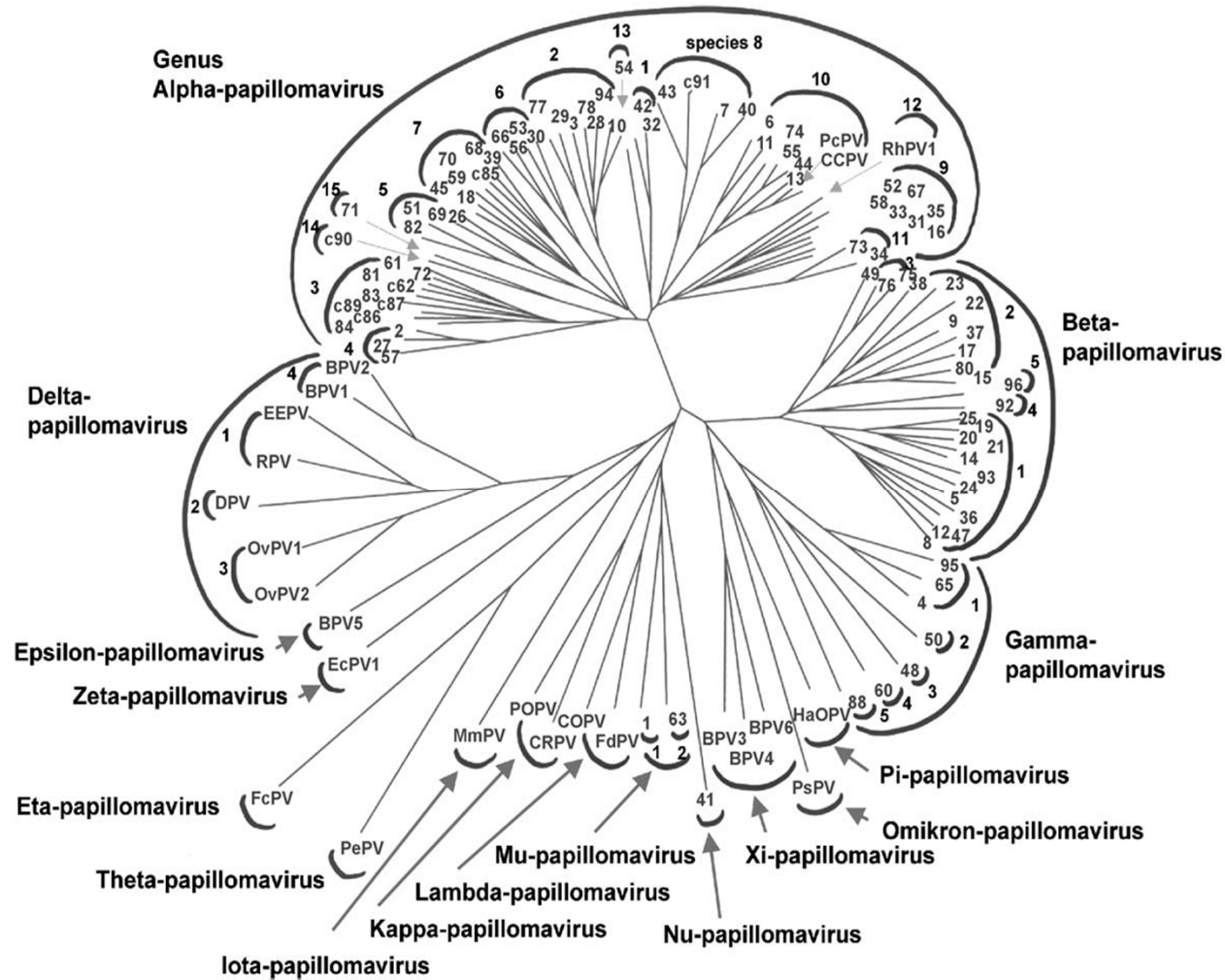How do we distinguish?
Productive or strong science

BPA

BPA (Bisphenol A) - Effects

- Endocrine disruptor, strongest effects during early development
- Estrogen mimic
- Obesity
- Neurological disorders
- Thyroid function
- Cancer risk: breast, prostate, neuroblastoma
- Reproductive anomalies - ovarian development, …
- DNA alterations related to estrogen
- Heart disease, diabetes
- Growth, reproduction, development of aquatic organisms, including fish, invertebrates, amphibians.

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Human papillomavirus subtypes

Human papillomavirus & cervical cancer

GARDASIL.9

Human Papillomavirus 9-valent Vaccine
(Recombinant, adsorbed)

LIGO experiment