

EDM 22 contains straight pseudoscience

“...all studies measuring the claimed ability of animals to predict human responses expose a low success rate in the region of 31 per cent”



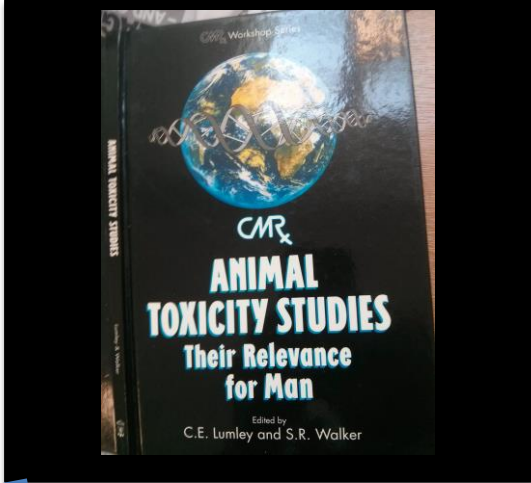
It derives from this fellow, Ray Greek

At around the 12 minute mark of the video on the FLOE website, he reveals his source: An out-of-print book of essays from 1990.

<http://vimeo.com/30357037>



I found mine in a second-hand book store in Maryland, USA

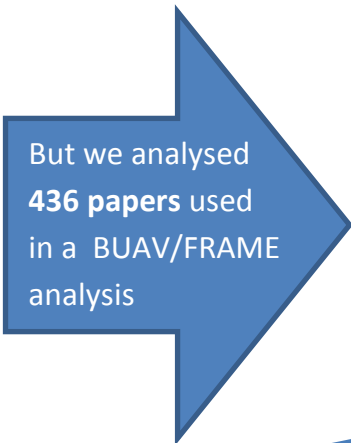


false positive findings (adverse effects in animals but not in patients), false negative findings (no effects in animals but in patients). Although the correct prediction of the absence of adverse effects is important, their numerical assessment is not possible, and therefore not considered in Table 1.

Table 1. Prediction of effects made for 6 Sandoz drugs in repeated dose animal studies

Category	Hyderygine	Parlotel	Sandimmun	Zaditen	FK 33-824	Leporex	Total findings
correct +	0	2	8	2	4	6	22
false +	6	10	7	9	12	10	48
false -	1	6	2	3	6	2	20

As can be seen from Table 1, for all 6 drugs 22 side-effects were correctly predicted in standard animal investigations (correct results). However, many more positive results (incorrect results) were observed in



But we analysed 436 papers used in a BUAV/FRAME analysis

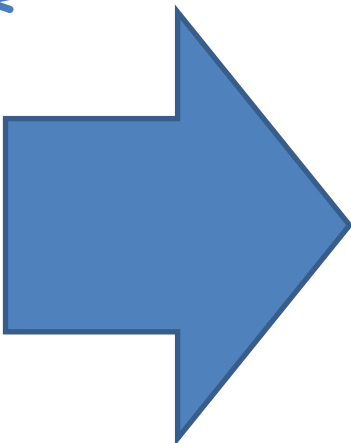
PPV descriptive stats		NPV uncorrected	
Mean	0.669487607	Mean	0.900681299
Standard Error	0.009011864	Standard Error	0.004791825
Median	0.7	Median	0.936830267
Mode	0.5	Mode	0.990681914
Standard Deviation	0.18817325	Standard Deviation	0.100056233
Sample Variance	0.035409172	Sample Variance	0.01001125
Kurtosis	-0.480084945	Kurtosis	2.523442273
Skewness	-0.585344802	Skewness	-1.63932533
Range	0.844484629	Range	0.520404275
Minimum	0.142857143	Minimum	0.477054429
Maximum	0.987341772	Maximum	0.997458704
Sum	291.8965968	Sum	392.6970463
Count	436	Count	436

The 30% claim is based on just 6 compounds (p 73)

30%? Try 70% and 90% PPV and NPV respectively.

But of course, that's only one species. Combine it with another to increase predictive value.

Lowest PLR	Pre test probability	Pre test odds	Post test odds	Post test probability
	0.1	0.11	3.16	76%
	0.2	0.25	7.11	88%
	0.3	0.43	12.18	92%
	0.4	0.67	18.95	95%
	0.5	1.00	28.43	97%
	0.6	1.50	42.65	98%
	0.7	2.33	66.34	99%
	0.8	4.00	113.72	99%
	0.9	9.00	255.87	100%



The claim that “all studies” relating to animals predicting human responses show 31% is **bunkum**. FLOE isn't a science-led organisation. You cannot base such claims of inefficacy on such flimsy evidence as 6 compounds. If you would like to discuss these data, please contact Chris Magee at cmagee@uar.org.uk.