

## Welcome to Bioscience Hypotheses

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### ABSTRACT

Bioscience Hypotheses has been created to provide a rigorous, regulated forum for new ideas in the life sciences. The hypotheses that we will published are not ‘theories’ or ‘laws of nature’. They are logical, self-consistent, factually supported and testable, but are still tentative explanations of the world, or descriptions of how to alter the world. Hypotheses should be testable, and because testing new ideas can mean new approaches, we include in our remit new *ways* to test hypotheses.

We accept, even welcome, that many of the hypotheses published here will turn out to be wrong. Our aim is to push knowledge forward, not merely chronicle what has been proved to be true. If reading a paper in Bioscience Hypotheses stimulates new theory or new experiment, then our work has been successful. If you want to contribute to science with new, testable ideas, based on fact but pushing forward understanding, then we welcome you as a contributor or reader.

### TEXT

Hypothesis is as much a part of scientific publishing as tables of data and pictures of samples. Karl Popper, the philosopher of science that most scientists think got it about right, put hypothesis alongside experimentation as the core of the scientific method. And in the practice of science, that is how it is. Every scientist knows the excitement of looking at the data and thinking ‘You know, I wonder if ... .’

Bioscience Hypotheses has been founded to encourage the development of such ideas. It is a spin-off from Medical Hypotheses, founded by the late David Horrobin as a forum for those concepts that no-one else would publish, which might be wrong, were certainly unfashionable, but might, just might, have something in them. Bioscience Hypotheses intends to extend this philosophy outside the purely medical arena. Hypotheses are not ‘theories’ or ‘laws of nature’. They are logical, self-consistent, factually supported and testable, but are still tentative explanations of the world or (in our definition) descriptions of how to alter the world. We insist that hypotheses should be testable, and because testing new ideas can mean new approaches, we include in our remit new *ways* to test hypotheses – new approaches to biology, new concepts for technology. But they are not yet ‘fact’.

So the object of Bioscience Hypotheses is to put thought-provoking new ideas into the scientific arena so that others can test them. To this end, papers are selected by editorial review, not peer review. We want a forum that is mediated but not censored; it is not the intellectual Wild West of the Blogosphere but equally it does not demand the levels of certainty that the conventional peer review process often requires. This is not merely intentional: it is critical. Ultimately, new ideas are useful to the scientific community, and to the wider society that supports it, only if others take them up and

expand them, test them, and if they are correct, apply them, and this means that others must be able to read and evaluate them before they are fully worked out and backed by data.

Incidentally, it also means that I do not necessarily think that every paper here is 'right'. Papers can be wrong, indeed can be devastatingly, obviously wrong, but still be valuable as a description of a concept or an approach. Our aim is to push knowledge forward, not merely chronicle what has been proved to be true.

Hypotheses typically mature from an initial idea through a well worked argument, being subject to argument, counter-argument and debate along the way. Bioscience Hypotheses would like to cater to all stages of development of a good hypothesis. Thus our Short Communications section is for initial ideas, concepts that can be stated in one or two sentences in the abstract and are expanded and explained in no more than two pages (and ideally just one) with a handful of references. Full Papers are for hypotheses that are better developed, with the counter-arguments met and disposed of, the examples from the literature referenced, and maybe some very preliminary data. And Correspondence (for which there is no page charge) is for responses, comments and extensions of ideas put in previous papers.

Why should you read it? Why should you contribute to it?

I hope it is because you are a scientist. You, like me, are fascinated by new ideas, new intellectual challenges, that are based in the hard reality of fact. You may be a career lab worker, or a manager of lab workers, or you may not now, and may never have been, someone who does life science research or development. But you are a scientist, in the sense of being someone who believes that the world can be explained by reference to fact, and that explanations based on fact, and the consistent theoretical structures that other scientists have built to explain fact, are important and worth working for.

For you, welcome to Bioscience Hypotheses.