

## Letter to the Editor

# Nitrogen: An Utter Disregard?

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## Letter to the Editor

The article “Alzheimer’s disease: A Gas Model” [1] suggested that Alzheimer’s disease (AD) was the result of a nitrogen invasion of parts of the brain.

As an emergency doctor, I used to be called several times a day to the bedsides of patients with Alzheimer’s disease, whose numbers are growing constantly. I had the privilege of examining more than a thousand of them in their own environment, allowing me to establish my hypothesis and to clinically validate it. This allowed me to include, without any difficulty, symptoms such as high blood pressure, underweight, or depression that often occur concomitantly (hypertension and AD [2], body mass index and AD [3], depression and AD [4]). These links with my model are speculative and cannot be published.

Some patients are bedridden, hunched up in bed, unable to communicate, or even unable to eat or drink on their own. The spouses and children of these patients are in despair as they witness the physicians’ helplessness.

Unfortunately for Alzheimer’s disease patients, preventive and curative treatments keep failing [2]. At the same time, the Popperian hypothesis of the gas model for AD has been neither refuted nor confirmed, while researchers are looking for inspiration. My model proposed that Beta-amyloid emulsifies air bubbles that would accumulate behind the blood brain barrier but nobody has bothered to check. I ask the research community: why?

In my article, for the first time an author questioned the meaning of the word ‘inert’ in the phrase ‘inert gas’. When a substance is said to be inert, it means that it cannot be biochemically transformed. As a result, it becomes highly likely that it is involved in a number of diseases if no pathway is described to eliminate it. This is the biggest paradox in Medicine: it is absurd to say that a substance is chemically inert without giving oneself the means to support its accumulation in a diseased tissue. Now, biologists have not identified any purifying system for air bubbles, or any nitrogen eradicating system, while the scientific community agrees that nitrogen is inert. Nitrogen is a disregarded gas for merely epistemological reasons, which is very questionable scientifically speaking.

Nitrogen is the most abundant inert gas, both in the atmosphere and in blood. The presence of air bubbles in a tissue or on a vascular endothelium is highly likely, especially in the brain. I think that inert gases could be involved in all autoimmune diseases, such as diabetes

mellitus, heart failure, kidney disease or AD. The proposed explanation in this paper was particularly simple, strong and revolutionary. NO constitutionally produced by inflammation resident cells and endothelial cells merges with the gas phase (nitrogen or air bubbles) situated in its radius of diffusion. This triggers the following chain of events: reduced amount of NO, reduced guanylate cyclase activity, reduced cGMP production, non-closure of intracellular calcium channels, inflammatory phenomena and increased motility. I believe that this novel idea has raised little interest amongst researchers. The view that nitrogen is inert and cannot be responsible for a disease does not make any sense. Nitrogen is not physically inert, as I have demonstrated with the concept of gathering phase.

I believe that my hypothesis on inert gases should have called for the mobilisation of the community. To say that inert gases could be responsible for most diseases should have triggered an earthquake one way or another: either a full refutation of this “unreasonable” idea through experimentation, or on the contrary an abrupt and extended halt of all medical publications, demonstrating an effort to incorporate what I consider to be reality and could have been demonstrated by experimentation. I was expecting to see an uproar or a collective realization. Instead, research continued as if nothing had happened. Am I too ingenuous or naive? Who is right?

Since the description of the first case by Dr. Alzheimer in 1906, the amount spent on research and care for AD is astronomical, well above a trillion dollars throughout the world (extrapolating the figures given by Fagnani [5])! Is it right to spend several trillion dollars over more than a century without even starting to point towards an explanation of such a widespread disease? Could researchers have overlooked the truth since 1906 or even before? I have proposed that the error could be epistemological (*in the phrase ‘inert gas’, inert does not mean inactive*).

Huge costs, increasing numbers of ill people and no available treatment, the lack of reliable preventive methods, over a century of research in all directions: I feel that medical research on AD is the biggest fiasco of all times. It is, therefore, inconceivable to postpone the confirmation or refutation of my model. As a physician and on behalf of all the patients and their families, I call for an URGENT solution, so that millions of human beings, for some our own parents, may not end their lives in an unthinkable decline. My model works on paper. Fully equipped laboratories are the only ones that can carry out these confirmations. How many more years and deaths before this model can be confirmed? The responsibility lies with the heads of laboratories and research centres.

Scientific peer review journals that publish theories and hypotheses in the field of biology are extremely rare, compared to the number of journals dedicated to scientific facts. After all, this rarity should benefit authors, since their papers should systematically be examined thoroughly by the leading research centres. In that sense, physics research is a model for me. Articles in the field of theoretical physics take centre stage amongst experimenters. I regret that

biology, let alone medicine, has not acquired this certainty that an accumulation of experimental facts has no value and does not lead anywhere without theory.

This does not challenge the talent or the quality of its researchers.

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