

Alzheimer's might not actually be a brain disease



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The pursuit of a cure for Alzheimer's disease is becoming an increasingly competitive and contentious quest with recent years witnessing several important controversies.

In July 2022, Science magazine reported that a key 2006 research paper, published in the prestigious journal Nature, which identified a subtype of brain protein called beta-amyloid as the cause of Alzheimer's, may have been based on fabricated data, according to ScienceAlert.

Some physicians believe aducanumab never should have been approved, while others maintain it should be given a chance.

With millions of people needing an effective treatment, why are researchers still fumbling in this quest for a cure for what is arguably one of the most important diseases confronting humankind?

For years, scientists have been focused on trying to come up with new treatments for Alzheimer's by preventing the formation of brain-damaging clumps of this mysterious protein called beta-amyloid.

In fact, the scientists have arguably got themselves into a bit of an intellectual rut concentrating almost exclusively on this approach, often neglecting or even ignoring other possible explanations.

Regrettably, this dedication to studying the abnormal protein clumps has not translated into a useful drug or therapy. The need for a new "out-of-the-clump" way of thinking about Alzheimer's is emerging as a top priority in brain science.

The laboratory at the Krembil Brain Institute, part of the University Health Network in Toronto, is devising a new theory of Alzheimer's disease.

Based on its past 30 years of research, scientists working there no longer think of Alzheimer's as primarily a disease of the brain. Rather, they believe that Alzheimer's is principally a disorder of the immune system within the brain.

The immune system, found in every organ in the body, is a collection of cells and molecules that work in harmony to help repair injuries and protect from foreign invaders, and the exact same processes are also present in the brain.

The brain is a very special and distinctive organ, recognized as the most complex structure in the Universe. In the new model of Alzheimer's, beta-amyloid helps to protect and bolster our immune system, but unfortunately, it also plays a central role in the autoimmune process that may lead to the development of Alzheimer's.

Where were you when Iraqi-imposed war began?

Amir-Masoud Eqdam, Air Force F-4 pilot

Some Iranian military personnel were asked this question. This is a series of writings of their responses.

On September 22, 1980, at 2 p.m., loud blasts of several explosions were heard throughout the base. No one knew exactly what had happened. Some people were running here and there, while some others had gathered to discuss and argue with each other.

It seemed that no one could offer a reliable interpretation of what had happened. Someone said that the U.S. had attacked Iran. Another said that there was a coup going on; everyone had their own rendering of the incident. I couldn't bear being in the dark anymore, so I went to the flight squadron. When I arrived there I saw a number of fighter pilots sitting on the floor, devising a plan for a retaliatory operation. "What happened?" I asked. "The Iraqis have attacked us. The alert is raised and we must respond to their insolence," replied Alireza Yasini, who was later martyred.

That very same day the plan for a retaliatory operation was quickly devised



and approved. The Iraqis felt relieved at the thought of having hit our airports and airbases, and that we cannot do anything to hurt them.

We started the operation only a few hours after their fighters attacked. Since the enemy was not expect-

ing us to retaliate at such short notice, we reached our targets without the least resistance and disturbance, and bombed them. Then we returned to our base without even a single bullet fired at us, and all of us landed safely at the base.

On the first day of the war, just a few hours after the enemy attacked, we gave them something to cry about.

This series is excerpted and translated from a piece previously published by hawzah.net in 2019.



On the second day of the war, the IRIAF launched Operation Kaman 99, one of the biggest airstrikes in military history by deploying 140 fighter bombers to Iraq, targeting strategic military infrastructure.

● ATLANTIC COUNCIL

Daniel Pink writes about the power of regret: Positive power of negative emotions



● ROSTYSLAV SAVCHYN/UNSPASH

In the early 1950s, a University of Chicago economics graduate student named Harry Markowitz conceived an idea so elementary it now seems obvious

– yet so revolutionary it earned him a Nobel Prize. Markowitz's big idea came to be known as "modern portfolio theory." What he figured out – if I may oversimplify in the service of getting on with the story – were the mathematics that underlie the adage "Don't put all your eggs in one basket." Before Markowitz came along, many investors believed the route to riches was to invest in one or two high-potential stocks. After all, a few stocks often produced humongous returns. Choose those winners and you'd make a fortune. Under this strategy, you'd end up picking lots of duds. But, hey, that's just the way investing worked. It's risky. Markowitz showed that instead of following this recipe, investors could reduce their risk, and still produce healthy gains, by diversifying. Invest in a basket of stocks, not just one. Broaden the bets across a variety of industries. Investors wouldn't win big on every pick, but over time they'd make a lot more money with a lot less risk. Powerful as Markowitz's

insight is, we often neglect applying its logic to other parts of our lives. For example, human beings also hold what amounts to a portfolio of emotions. Some of these emotions are positive – for example, love, pride, and awe. Others are negative – sadness, frustration, or shame. In general, we tend to overvalue one category and undervalue the other. Heeding others' advice and our own intuitions, we stuff our portfolios with positive emotions and sell off the negative ones. But this approach to emotions – to jettison the negative and pile on the positive – is as misguided as the approach to investing that prevailed before modern portfolio theory. Positive emotions are essential, of course. We'd be lost without them. It's important to look on the bright side, to think cheerful thoughts, to detect light in darkness. Optimism is associated with better physical health. Emotions like joy, gratitude, and hope significantly boost our well-being. We need plenty of positive emotions in our portfolio. They should

outnumber the negative ones. Yet overweighting our emotional investments with too much positivity brings its own dangers. The imbalance can inhibit learning, stymie growth, and limit our potential. That's because negative emotions are essential, too. They help us survive. Fear propels us out of a burning building and makes us step gingerly to avoid a snake. Disgust shields us from poisons and makes us recoil from bad behavior. Anger alerts us to threats and provocations from others and sharpens our sense of right and wrong. Too much negative emotion, of course, is debilitating. But too little is also destructive. A partner takes advantage of us again and again; that snake sinks its teeth into our leg. You and I wouldn't be here today if we lacked the capacity, occasionally but systematically, to feel bad. And when we assemble the full lineup of negative emotions – sadness standing next to contempt perched beside guilt – one emerges as both the most pervasive and most powerful. Regret.



Daniel H. Pink is an American author, who has written seven books, five of them New York Times bestsellers. He was a host and a co-executive producer of the 2014 National Geographic Channel social science TV series *Crowd Control*. Following is an excerpt from his latest book *The Power of Regret: How Looking Backward Moves Us Forward* (2022).