

Raymond Vahan Damadian: Inventor of the MRI

Ingenious innovators since antiquity, contributing to some of the world's most significant and impactful inventions have been Armenian. The introduction of an emerging idea into society in the form of a new product, service, or an improvement in structure and procedure, is what describes an innovation. Armenians as a whole, through triumphs and tumult, have taken the necessary steps to bestow what we have to offer to the world. Armenian inventions and innovations began with simple notions which grew and evolved into the most recent inventions of today that are incredibly complicated and intricate. The notable aspect is that these inventions are focused on inventing products that improve and ease the way society functions. Obviously, there are countless innovations that Armenians have contributed to a society that we may not even be aware of. The automated teller machine (ATM), the first oil refinery, and the solar power radio are a few examples of spectacular inventions by Armenians. Such innovations come from truly innovative thinkers and these inventors have brought a sense of true pride to our nation. Such technological inventions have been effective in modern-day society while exemplifying our high intellect to an astounding degree. Without any doubt, the most profound and impactful Armenian invention has been the Magnetic Resonance Imaging Machine (MRI).

Raymond Vahan Damadian was born on March 16, 1936, in New York City, New York. He spent the majority of his youth in Forest Hill, Queens where he grew to become a young prodigy. He was exceptionally gifted with the violin at a young age and later received a full scholarship to the University of Wisconsin when he was just fifteen years old. He earned his medical degree from Albert Einstein College of Medicine, where he examined the electric voltages generated by sodium and potassium in the human body. Damadian received a phone call in 1969 from a doctor asking him to participate in a potassium measurement in bacteria.

They placed developed bacteria in a nuclear magnetic resonance machine, which assessed the rate of potassium decay in real-time (“Who Invented the MRI?”). Damadian got the concept for the MRI machine from this experiment. He demonstrated the feasibility of scanning cancer tissue on rats in 1970. In 1977, he finished the machine and successfully tested it on a colleague.

Damadian founded his company Fonar in 1978, and in 2001, he developed the first upward MRI scanner, which provides more accurate scans of different sectors of a human's body. MRI imaging has become an important modern tool in clinical practice and medical research because of its high picture resolution, tissue characterization, and functional assessment of diverse organs and systems (“Who Invented the MRI?”).

I am a proud Armenian knowing the machine that saved numerous lives, including mine when I was a child, was invented by an Armenian. The MRI scanner had an impact on me and many others since it was able to easily diagnose the ailment I had. Many tests had been performed on me in an attempt to determine what was wrong, but none of them were successful. I grew worried about the potential outcome at first. However, because of Damadian's efforts, my condition was discovered immediately thanks to an MRI scan and treatment began much sooner than any other prior efforts that had been attempted. Damadian's efforts have significantly inspired me to pursue a profession in medicine with the same goal in mind as Damadian: to give back to our communities and society. I aspire to use my intelligence, abilities, and enthusiasm to help others in the medical field. Damadian has motivated me in countless ways, one being to always remain determined throughout any challenging endeavor. He persisted even when other huge firms stole his idea. He won cases against these corporations, allowing him to build his company, which grew to be highly successful. The degree to which the MRI machine has diagnosed and monitored such threatening conditions such as tumors, brain abnormalities, and

other illnesses is immense. Many people believe that an MRI machine is simply a piece of technology, but it is much more than that. It has the capability to save lives.

Because MRI is one of the most essential medical technologies, it has had a wide-ranging impact on society. Prior to its development, doctors were unable to effectively diagnose certain ailments. The MRI scan revolutionized the medical field and transformed how doctors treat patients. Prior to its creation, it was extremely difficult to be cured of a condition like cancer. The MRI changed that by making it easier to detect malignancies, making it indispensable in hospitals. Advanced X-Rays can sometimes miss fractured bones and damaged tissues, but an MRI can swiftly identify the issue. It assists medical professionals in testing and imaging biological components in order to gain an image of the afflicted organs. The MRI scans several areas of the body and can identify cancer. “If we can afford it, I personally think we should keep giving people MRIs a lot, so we can spot everything early. Our taxes should keep going towards healthcare so that people can be getting scanned regularly and checked over regularly” (“11+ Astounding MRI Quotes That Will Unlock Your True Potential”). Newman describes the importance of supporting the development and advancement of the MRI machine as a national obligation.

Contemporary ideas and innovative revolutions are key components in establishing a robust and diverse foundation for Armenian economic, social, and intellectual advancement. Armenians are inspired and motivated people, with a heart and desire for what we do. We have a long history of developing and inventing a wide range of technologies that are now utilized all over the world. This brings prominence to the Armenian community and is seen by people all throughout the world. Armenian inventions have the potential to help the world, both economically and socially having a significant impact on our pride as a nation. The sense of

pride that we may feel refers to both a person's pride or sense of dignity for one's nation as well as the pride or self-esteem that a person derives from one's national identity. Many benefits accrue from technological advancement and innovations. It boosts production and provides inhabitants with new and improved goods and services, raising their overall standard of living while also creating many novel career opportunities. Raymond Vahan Damadian successfully contributed in various far-reaching ways to society. He is without any dispute one of the most influential inventors of the twentieth century. His work on the MRI scanner was a watershed moment in the healthcare profession, having a far-reaching impact on society. Many subsequent devices were inspired and created based on similar processes used by the MRI machine. What began as a speculative proposal with little possibility of success ended up saving millions of lives, including mine. Because of Mr. Damadian's work, diseases were discovered and treated sooner, and it's no surprise that he was admitted into the National Inventors Hall of Fame in 1989. He has shed a true sense of content and dignity on the Armenian community by displaying incredible strength, tenacity, and wisdom throughout his journey. Damadian made one of the most significant contributions to the field of medicine by designing an MRI scanner that was so effective that it could detect many illnesses in seconds. The MRI revolutionized medicine, and I am very delighted to write that it was conceived by a fellow Armenian with a wonderfully remarkable tale. Without the brilliant efforts of Raymond Vahan Damadian, the medical field would be very different today than the advanced level we see today. The level at which it has advanced society and directly saved numerous lives is absurd. The invention of the MRI will go down in history as one of the most impactful innovations on society that truly marked a milestone in the medical field.

Works Cited

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