Jamie Garcia Chemist and Inventor

The Story of Jamie Garcia

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Jamie was born on 16 June 1982 in Seattle, U.S.A.

As a child she loved discovering new things — once, she took apart a remote control to understand how its circuits worked.



Her parents encouraged her to talk about the world using numbers, like 'it's 26 degrees today' rather than 'it's hot outside'. This made her realise that she could use maths and science to explain the world around her.



Jamie grew up in a beautiful area surrounded by the ocean, mountains and wildlife, and was inspired to use her natural curiosity and love of science to help preserve that beauty for the future.

Plastics are all around us in many everyday objects, including computer parts. Different types of plastic are useful for different things. Some types can be recycled and some can't.

It is important to recycle as much plastic as possible, as it can take up to 1,000 years to break down once it has been discarded, causing terrible problems for the environment.



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Jamie's curious nature took her to university, where she studied. Chemistry and had the opportunity to do research in a lab she was hooked!

After finishing university, Jamie got a job as a chemist for IBM, one of the biggest computer companies in the world.

Jamie's job was to research new ways that we can recycle the plastics used in computers, so that we can use them again and again. Helping to reduce the damage done to the environment by discarded plastics.

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Jamie was determined to find a solution to this problem, but after testing lots of different chemicals, nothing seemed to be working.

Then one day Jamie decided to mix together three chemicals. She started by heating up two of them together in a glass bottle called a flask. She left them heating and walked away to weigh the third chemical. When she came back, the mixture had become hard. So hard, in fact, that she had to use a hammer and break the flask to free it!

It looked like the experiment had gone badly wrong. But rather than leave it there, Jamie's curiosity got the better of her — so she decided to find out what had happened.

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She kept on doing tests and found that the new material was light, strong and very resistant, which meant it didn't break easily.

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Another amazing thing was that the new material was fully recyclable — if she dropped it in acid it turned into a powder. She called this new material Titan, after the name of a strong giant in Greek mythology.

She kept testing the mixture and found a second new material, which was elastic and 90% liquid, like a gel. She called it Hydro, which means water in Greek.



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Jamie continues with her research today and hopes to come up with a way to reuse the plastic that just sits as rubbish in landfill by making it recyclable too.

Jamie's work on plastics means that in the future, we could have recyclable aeroplanes and rockets, much less crowded landfill and less polluted oceans.

This could help us preserve the environment for future generations by solving our plastic problem.

