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**Globally responsible careers 2019 competition**

**500 word essay**

**The dynamical medical industry and the knock-on effects this is having on the environment worldwide**

In the future, I aspire to be at the forefront of the medical industry, be it working to manufacture new drugs or working to design equipment or even working alongside patients on a daily basis. I long to be able to help people through the application of scientific knowledge to a variety of scenarios to design, apply and create innovative scientific techniques and discoveries. In an idealistic world, my dream job would comprise of working alongside teams of scientists to help design and uncover cures to some of the worlds most life threatening diseases such as cancer and be able to see my research applied to help save lives. The medical industry is one, which is constantly evolving and will always be required so it will become increasingly key that it becomes more sustainable.

My future job could impact on the environment in a variety of ways. The impact of pharmaceutical and medical products is beginning the process of being investigated through toxicology studies. Indeed, it is often a side of science by which the scope of the potential environmental threats are wrongly underestimated. For example, large numbers of drugs such as antibiotics and statins are produced in the tons per year. These drugs require manufacturing, prescribing and degrading. With each stage along the process arises new environmental issues.

Studies have shown that many pharmaceutical products are degraded through natural processes when they reach the environment but can actually possess the same level of toxic features after being broken down as before. This can be damaging not only to the soil and water that these products find themselves in, but also the biodiversity of animals and plants which feed and inhabit the areas where this occurs. An example of this effect in action is the effect, which antibacterials can have on soil microbes. This effect is often extremely detrimental as soil microbes play a key role in the breakdown of pesticides used by farmers etc. on the land. This could have a knock on effect and stem into lots industries in an unexpected manner. It is difficult for scientists to be able to find the balance through environmentally friendly drugs and safe and working drugs for humans, which is I am sure an issue which will span into my job in the future.

There are many other ways in which the medical industry overlaps with the environment. This includes production of prosthetic limbs to surgeries. However, lots has been done so far to try and cecum to an environmentally friendly stage within the entire industry. Through becoming successful along my career path I will have the ability to meet people, work with products and corporations and be able to apply first-hand opinions to scenarios. I would like to end my essay on a quote from the 'Environmental Sustainability in Hospitals: The Value of Efficiency study', which states 'Environmental sustainability is also good business, as it helps lower operational costs and allows hospitals to direct more resources to patient care'.