**Should limited research funds be allocated to basic or applied research projects?**

Scientific research can be conducted as basic or applied, basic research is more general and includes learning about topics such as insect behaviour whereas applied research is instead performed with a more specific goal in mind to solve particular problems such as how to prevent the spread of malaria with different kinds of drugs in areas affected by malaria. Both research types are different but both are important for improve human quality of life.

Basic research is very important becase without building a foundation of knowledge it is very hard to tackle specific problems in the world. For example, basic research like people investigating the manifold ways in which chemical compounds react and bind with one another in solutions and how these ways are affected by the molecular structure of the compounds is very important. Deadly diseases have been responsible for huge numbers of deaths in years gone by but the field of medicine has successfully developed medicines that treat and cure many of these. All treatments must be tested carefully in applied testing trials before it is used to save lives, however it is very rare that it could be developed at all without there being prior knowledge about how it might be made to specifically tackle the disease agent which is why it is so important to have deon the initial applied work. So it is very important that basic research is performed, that can show things such as in what conditions the drug might be good, whether there might be similar compounds from other sources that might do the same thing etc. Applied research builds on this detailed, broad knowedge in a more specific way. A good example is that knowledge of the molecular structure of certain compounds can be used by those with a mind to work out why they might react different in different environments. If certain compounds reacted differently with water than with dry earths then agriculturalists might research different mixes of compounds used as fertilisers to be used by farmers in different environments that are wet or dry. So they might predict and be right that one is more useful in the pacific northwest than in California and arizona and save money and produce more crops in the two regions. Basic research does often enhance knowledge that can be used to solve problems in an unexpected way too though, and this is a major reason why it is very important to improve science as a whole. For example, scientists performed basic research into the way that sharks skin cells aligned with each other after they noticed how rough they felt to the touch. Further down the line, unrelated research teams used the data to perform applied research and design clothing materials for people working in harsh enivieonrments like extremely cold places or where there is a need to not tear clothing like in a building where corrosive or poisonous solutions will be regularly used.

To summarize, I think that basic and applied research are both important and scientists should continue to work at both types so that more general and specific discoveries can be made to significantly improve the quality of life that we as people will enjoy because if only one type of research had been performed in the past we might not have done many important things such as reduced the spread of malaria, investigated the likelihood of life existing on Mars, or even invented the iPad.