

RESEARCH METHODOLOGY (SQG2613)

Overview of Biological Research

Dr Nik Ahmad Nizam Bin Nik Malek,

BSc (Ind. Chem.)(UTM), MSc (Chem)(UTM), PhD (Chem)(UTM), A.M.I.C

Senior Lecturer,

Department of Biotechnology and Medical Engineering

Faculty of Biosciences and Medical Engineering



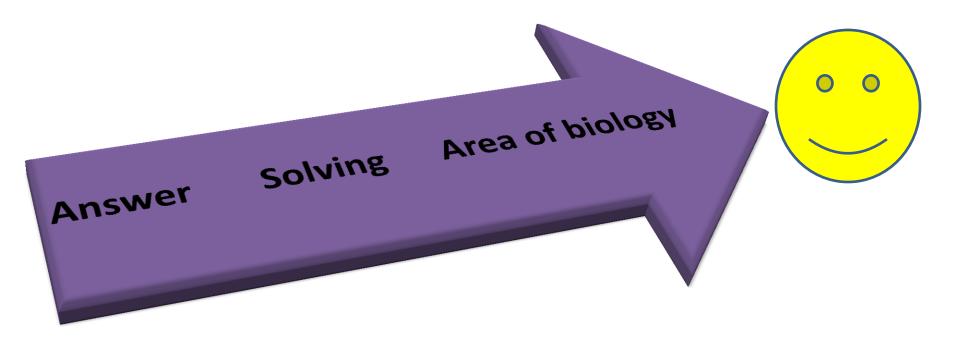
ocw.utm.my

innovative • entrepreneurial • global





What is biological research?

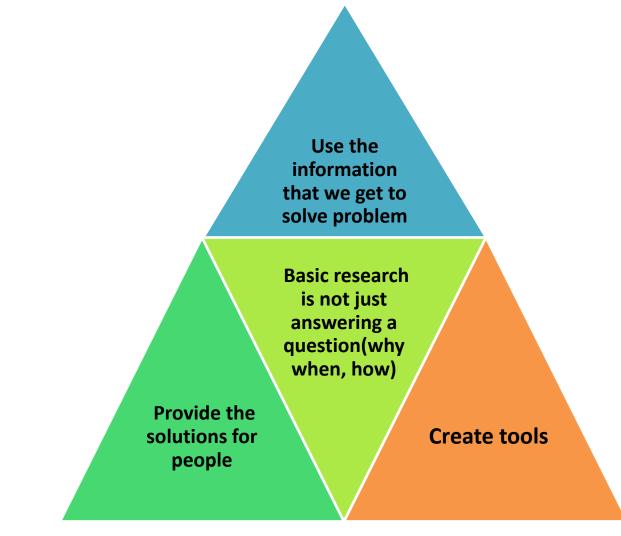








What is the purpose of research

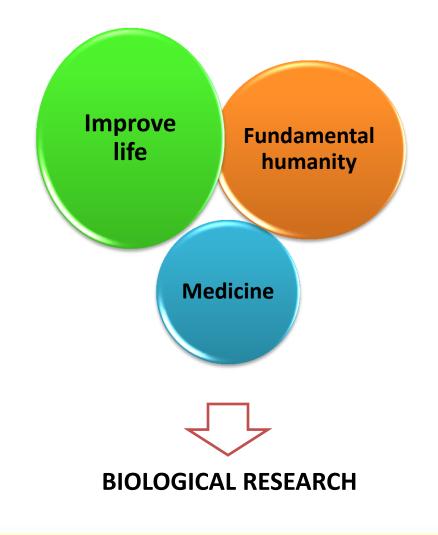








Why is it important to do a biological research?











What types of motivation crucial during the execution of research.

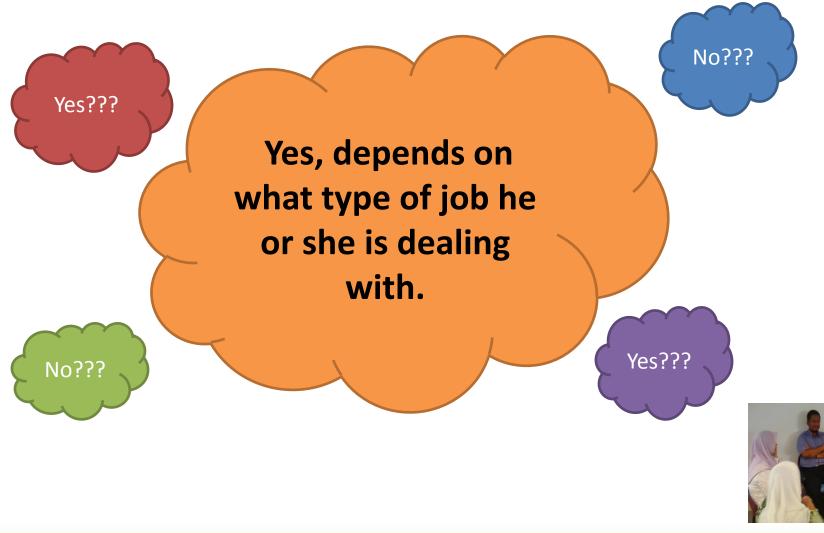








Can researcher be also a biologist?







What is Bad Research

 Looking for something when it simply is not to be found

- -Plagiarizing
- -Falsifying data

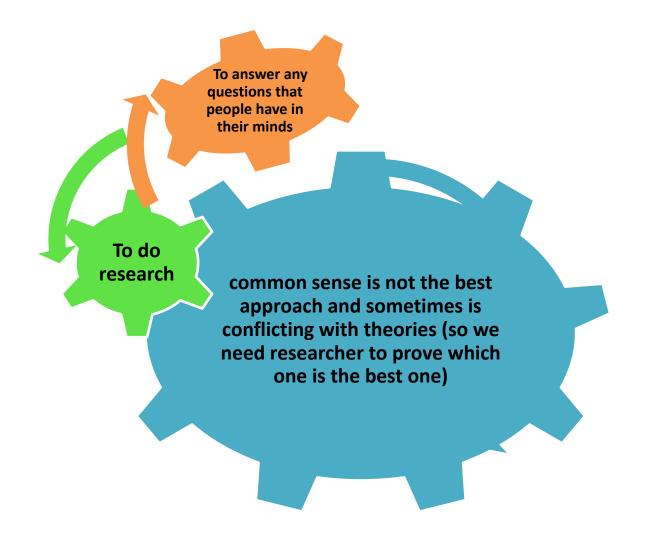
-Misrepresenting information







Why do we need researcher?









"First of all, in biological research we cannot ran away from lab experiment, trying to prove the hypothesis, because in research basically you cannot ran away from finding out the evidence. You have your scientific approaches, you cannot ran away from hypothesis, trying to prove your hypothesis, next you have theories and lastly, you come to the point of fact. You cannot ran away for those steps. So, basically in research, people try to prove their hypothesis. Whenever they start, they will start with proposal. For example here, Halim want to know whether he had glucanase enzyme or not. This is hypothesis. He just want to know the biocontrol reaction is due to the present of glucanase enzyme. Along the line, he trying to prove by conducting an experiment. In short, biological research means scientific research conducted by biologist."

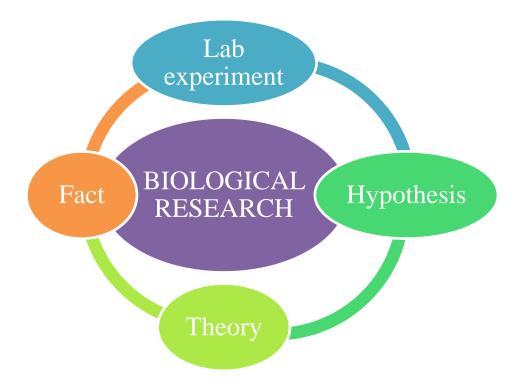
What is biological research?



Dr Chan Giek Far









Dr Chan Giek Far





What is biological research??? Differences between research and biological research...

Something to do with living things. E.g. Cloning, molecular biology, expression of enzyme.

Can be transdisciplinary (biochemistry)



Dr Shafinaz Shahir

ocw.utm.my



What are the types of motivation crucial during execution of research??

 The most important thing you need is repetition and you must have the preservance in doing your research. Some people do research because of influence in their life. Certain people they do research which is related to themselves.



Dr Shafinaz Shahir





WHAT IS BIOLOGICAL RESEARCH??

- Biological research is interesting.
- Biological research is a lot more harder because we work with living things. We need to know everything, e.g. optimum condition to live and how to maintain its optimum condition. If not, that living things will dead, we can't continue with our research. We need to revive back to get the expected result and make the research successful.







WHY IT IS IMPORTANT TO DO A BIOLOGICAL RESEARCH?

- Living organism, e.g. people die because of disease, so we need to know what caused that disease.
- Find out how to control it.
- Can make drug out of it.
- Understand a lot more about the world.
- Increase quality of food, e.g. transgenic tomato.
- Increase the quality of our life.









MY PROFILE

Dr Nik Ahmad Nizam Bin Nik Malek,

BSc (Ind. Chem.)(UTM), MSc (Chem)(UTM), PhD (Chem)(UTM), A.M.I.C

Senior Lecturer,

Department of Biotechnology and Medical Engineering Faculty of Biosciences and Medical Engineering

Email: niknizam@fbb.utm.my, niknizam@utm.my,

Website: http://www.staff.blog.utm.my/niknizam/