

6 Step Checklist for Responsible Research

These six steps can be applied to all bioscience research disciplines. The key is to identify what they mean in practice for you!



#1 What is the aim of your research?

Familiarise yourself with existing literature and decide if you will be hypothesis generating, or hypothesis testing.



#2 Identify the most appropriate research model, method, or technique?

This needs to be specific to the hypothesis you are seeking to generate or test, and may not be the same as others working around you.



#3 Familiarise yourself with your research framework

This is not just about legal requirements, but includes expectations of good practice set out by your research funder, host organisation or employer, & scientific discipline.



#4 Avoid making common experimental design errors

This means planning your research in accordance with contemporary good practice to collect statistically valid and biologically relevant reusable data.



#5 Seek to improve your research methodology

This is about critically reviewing your experimental protocols; identifying uncontrolled variables &/or confounding factors; and thinking about how you can tweak protocols to improve the repeatability and translation value of the data.



#6 Evaluate what you have learnt and next steps

This is about reflecting on the data collected, what you have learnt and how the experiment went in practice. The aim is to identify opportunities to improve reproducibility and refine your research model, method(s) or technique.