



GD Biotech
AGRI-AGRO SOLUTIONS



**Are you planning a
microbiota study?**

Let's talk about it !

Good experimental design

**= reliable and
actionable results
(publishable !)**

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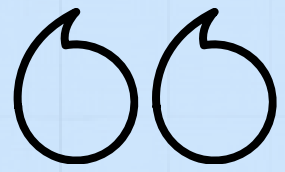


The common problem : experimental bias

Too often, biostatisticians are consulted... only after the data have been generated

- ✗ Design flaws
 - ✗ Unbalanced conditions (under-represented)
 - ✗ Insufficient statistical power
- ➡ Results : limited analyses, difficult to interpret

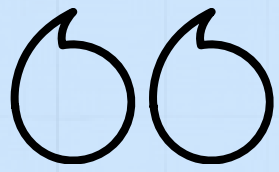




The key ? Let's plan ahead, together :

- ✓ **Determine** the right number of samples
- ✓ **Define** the precision of the biological questions
- ✓ **Assess** whether the study is appropriate
- ✓ **Identify** the covariates
- ✓ **Maximize** statistical power (even with few individuals)





Significant p-value ? Preparation is the Key

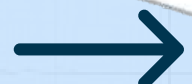


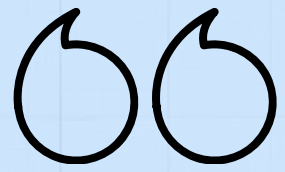
Looking for $p < 0.05$?

Even before the statistical tests, the battle is won or lost here: in the **biological QUESTION**.

- ✓ **Clear hypotheses** : precisely define the experimental design & select appropriate statistical tests
- ✓ **Statistical power** : calculate the required sample size
- ✓ **Randomisation & control** : ensure proper randomisation & suitable control groups
- ✓ **Identify and incorporate confounding variables**

 **RESULT** : robust p-values, reliable conclusions, accepted publications !





Our added-value :

We support you in:



Co-designing your study



Ensuring statistical rigour



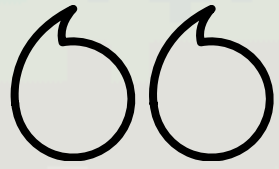
Maximising the value of every sample

**A good design = robust results
(reproducible science)**





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