



**ACB Statistics Training Day  
Thursday 14 November 2019**

University of Manchester, Oxford Road, Manchester, M13 9PL

**Provisional Programme**

- 09:30-10:00 Introduction and overview**
- 10:30-11:00 In the laboratory**  
Calibration curves  
Data transformations  
Quality (IQC/EQA)
- 11:00-12:30 Descriptive statistics and data analysis**  
Distribution of Data  
Distribution tests  
Measures of central points (Means, mode etc)  
Measure of spread (SD, SE etc)  
Data formatting  
Visualisation of data
- 12:30-13:30 Lunch (will not be provided, delegates must bring their own)**
- 13:30-14:30 Method Validations**  
Accuracy and precision measures  
Repeatability and reproducibility  
Regression  
Power and Sample Size  
Difference between results; students, t-tests etc  
Analysis of variance  
Repeated measures
- 14:30-15:45 Clinical and Diagnostic applications**  
Sensitivity and specificity  
Probability statistics and Bayes' theorem  
ROC curves  
Significant change  
Reference Limit Estimation  
Uncertainty Concept
- 15:45-16:00 Break**
- 16:00-17:00 Hypothesis Testing and Design Approaches**  
Further statistics tests and concepts (i.e. equivalence testing)  
Correlation  
Levels of confidence  
Testing for outliers  
Nonparametric statistics
- 17:00-17:30 Current and Advanced concepts**  
Big Data  
Machine Learning  
Multivariate statistics