

How to get bioinformatics help via the Sheffield Bioinformatics Core

Workshops and Training

Analytical support

Pre-grant award

Manuscript trajectory

Bioinformatics Infrastructure and software

<http://sbc.shef.ac.uk>



Sheffield Bioinformatics Core

<https://sbc.shef.ac.uk>



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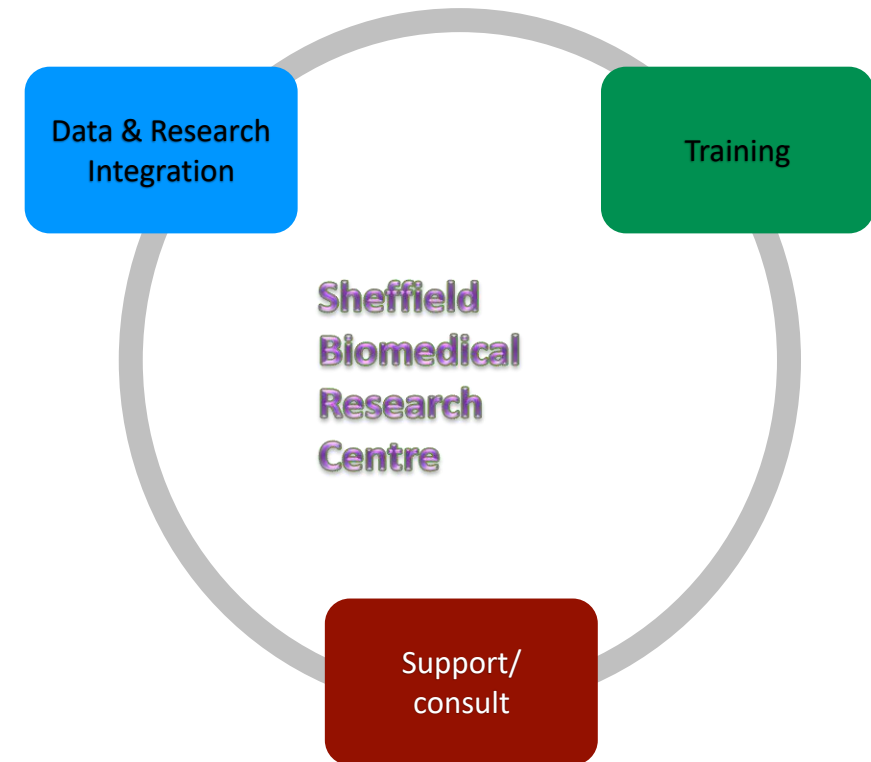
Scientific Directors - Winston Hide and Dennis Wang

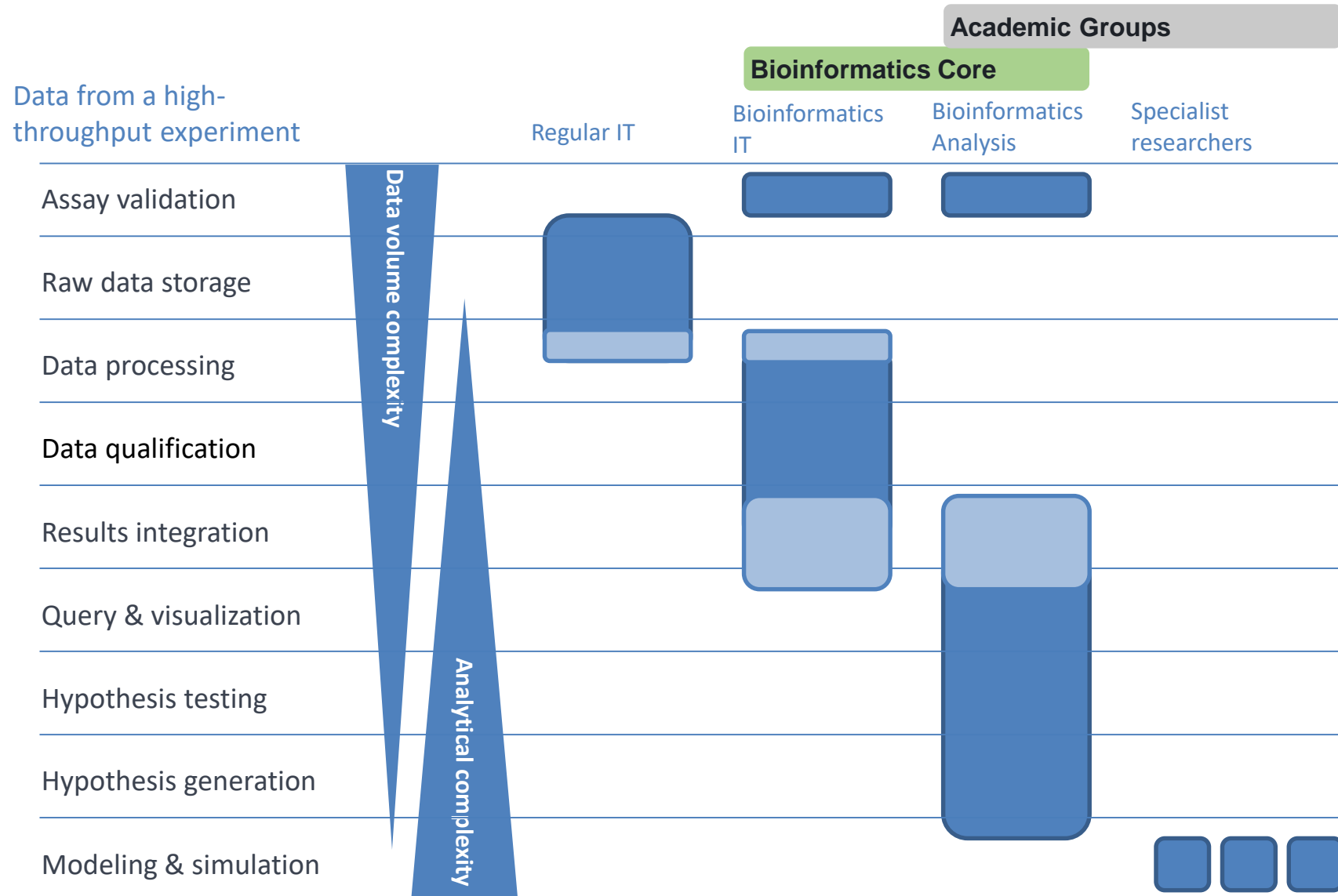
Supporting the BRC and Neuroscience research

Core



Core





Services

Research

- One-one consults
- Design experiments
- Develop grant applications
- Mine public data repositories
- Analyse –omic data (eg. genome, RNAseq)
- Identify relevant pathways
- Build NGS infrastructure
- Centralise computing and data management



Education

- Run training workshops
- Bioinformatics curriculum development
- Online tools and services training



<https://tinyurl.com/bioinformatics-training-needs>

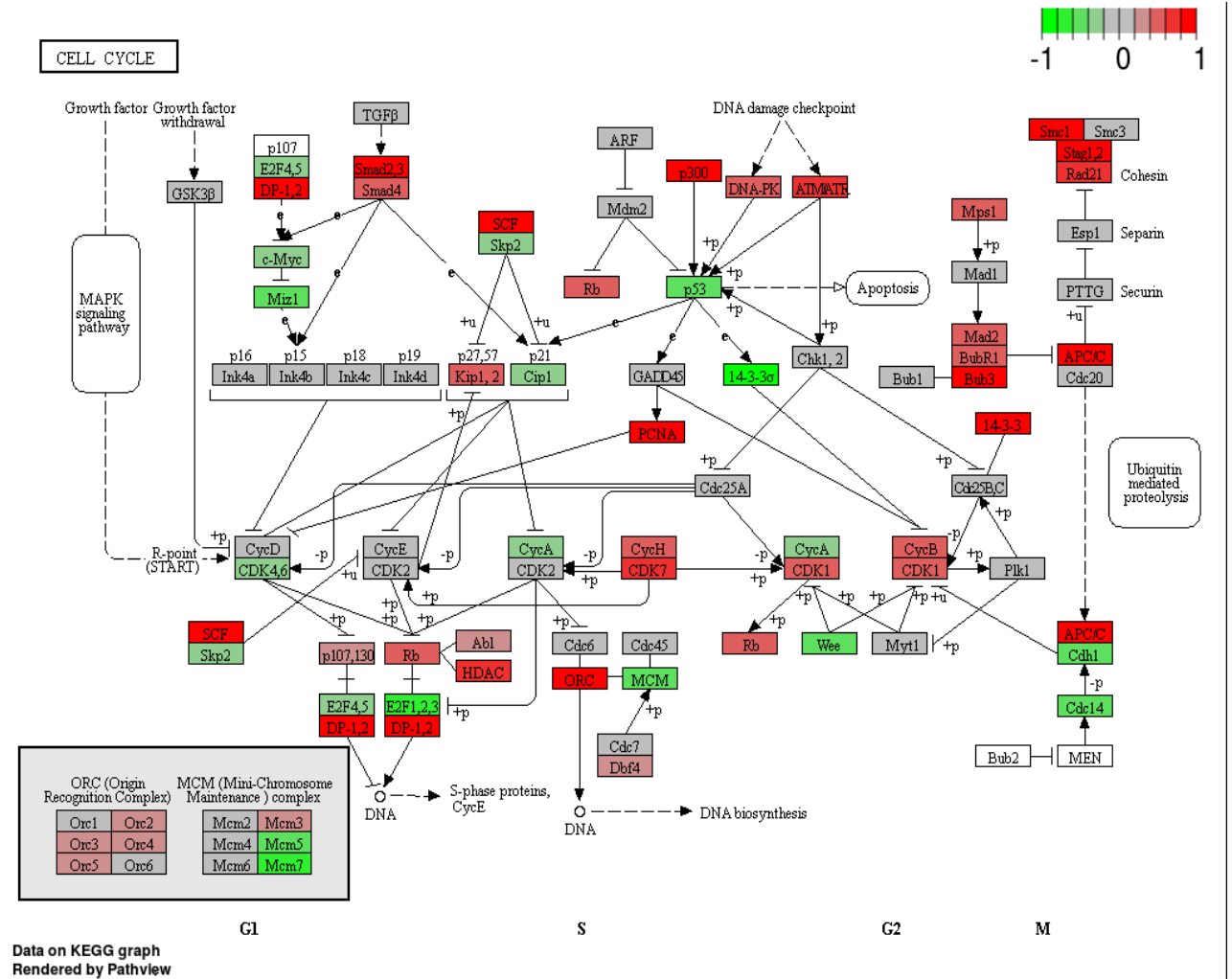
Experimental Design Consultation



"To consult the statistician after an experiment is finished is often merely to ask him to conduct a post mortem examination. He can perhaps say what the experiment died of." - R.A. Fisher

Example problem – functional gene enrichment

- Problem: **Are functional genes or genes of a particular biotype enriched in a test vs control experiment?**
- RNA-seq experiment
- Use standardised bioinformatic pipelines to:
 - Check the raw read data for quality
 - Calculate expression counts
 - Get appropriate gene annotation
 - Differential gene expression analysis
- Further downstream analysis:
 - Perform gene set enrichment analysis
 - Pathway analysis



Short Workshops

1-2 day long workshops in specialised areas

Introduction to R
1 day

Intro to Stats
1 day

Intro to RNA-seq
1/2 day

RNA-seq analysis
2 day

Intro to Command-line
1 day

Data management
1/2 day

Variant characterisation
2 day

Training Delivery

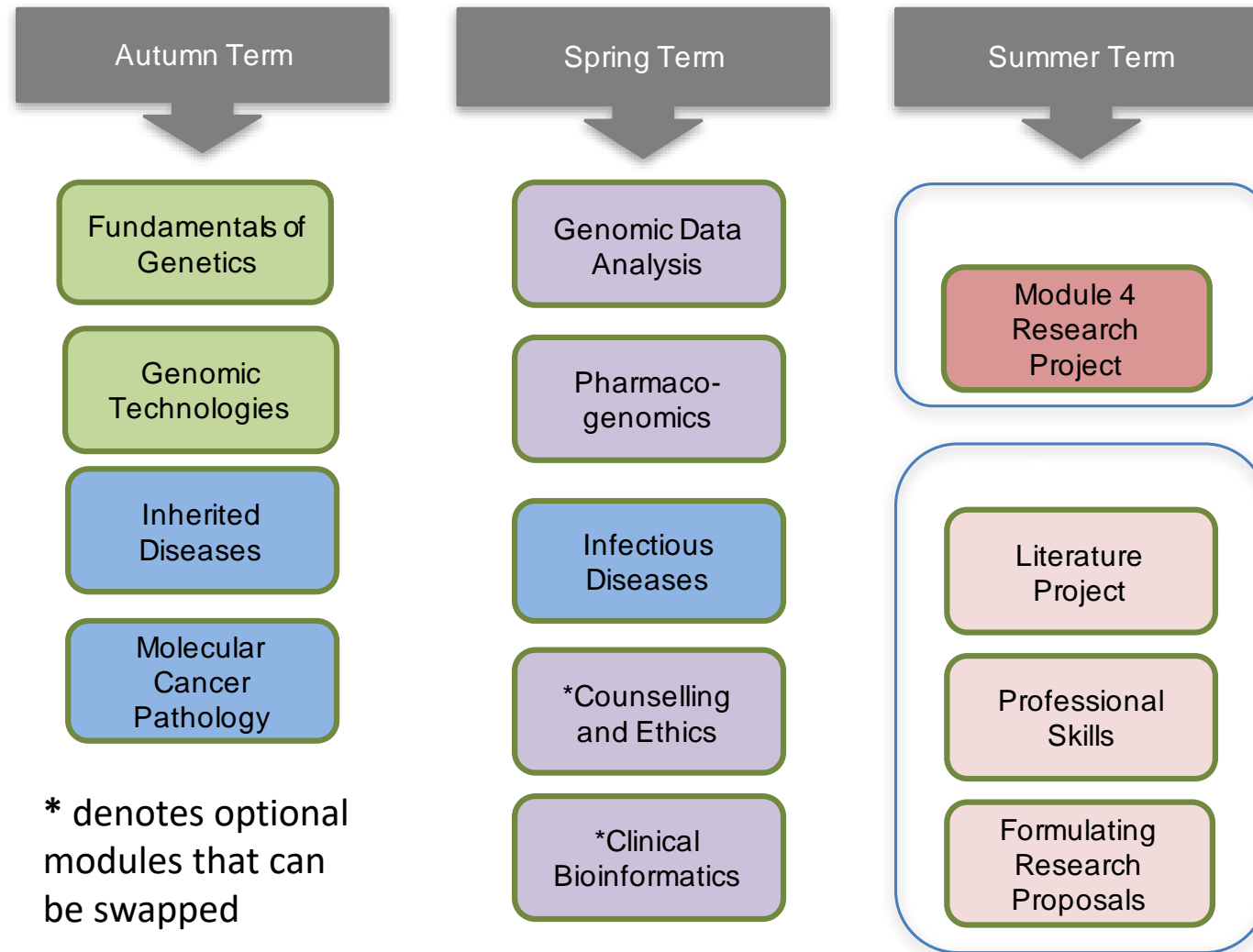
- Each workshop will comprise a mixture of lectures and practical exercises.
- At least half of the allotted time will be devoted to practical work and lectures will be a maximum of 30 – 45 min
- Around 20 - 30 to encourage an interactive learning environment
- 3 - 4 experienced instructors will be there to help

Schedule: <http://sbc.shef.ac.uk/training/>

Cost: £60 / day

CPD modules for Genomics

<https://www.sheffield.ac.uk/neuroscience/genomicmedicine/>



Questions ?

<https://tinyurl.com/bioinformatics-training-needs>