



## The NMD4C Summer School May 2025, York University

### Fibre Isolation and Analysis Workshop (Draft Agenda)

Led by Dr Anthony Scimè

8:00 - 8:45am	i) Introductions, organize participants into groups of 2 ii) presentation on the fiber culture protocol (room to be determined)
8:45 - 9:00am	i) Prep fresh collagenase (lab room/procedure room?)
9:00 - 10:00am	i) Demonstrate EDL isolation ii) Practice iii) Place muscles in collagenase (aim for 9:30 am) iv) Agitate muscles (30 mins) and incubate (procedure room)
10:00 - 10:30am	i) Break ii) Make Isobuffer and FCM (fresh)
10:30 - 11:00am	i) Reconvene. Place muscles in isobuffer ii) Demonstrate and practice making bore and hooked pipettes (procedure room)
11:00 - 11:15am	i) preview of next steps and demonstrate fibre isolation
11:15am - 12:30pm	i) Practice fiber isolation into 24-well plates with FCM (procedure room)
12:30 - 1:30pm	Lunch
1:30 - 2:30pm	i) Demonstrate and practice fixing fibers ii) Demonstrate and practice mounting fibers on slides (procedure room)
2:30 - 2:45pm	Break
2:45 - 3:45pm	i) Show short video on staining ii) overview protocol iii) kahoot (quiz their knowledge) (room to be determined)



## Rodent Muscle Function Assessment Workshop agenda (Draft Agenda)

Led by Dr Arthur Cheng

- 9:00 - 10:00am
- i) Introductions
  - ii) Fundamentals of muscle function assessments
  - iii) Organize students into groups of 4 per station for three stations (classroom close to procedure room)
- 10:00 - 10:15am
- Break
- 10:15am - 12:15pm
- IN-VIVO MUSCLE FUNCTION**
- i) Demonstrate mouse anaesthesia and mouse placement
  - ii) Demonstrate length-tension relationship and force-frequency assessment
  - iii) **Student practice with length-tension relationship and force-frequency assessment**
  - iv) Demonstrate fatigue assessment
  - v) **Student practice with fatigue assessment** (procedure room)
- 12:15 - 13:15pm
- Lunch
- 13:15 - 14:15pm
- IN-VITRO MUSCLE FUNCTION**
- i) Demonstrate in-vitro setup, dissection of soleus muscle, and mounting
  - ii) **Student practice with dissecting and mounting muscle** (procedure room)
- 14:15 - 15:15pm
- i) Demonstrate force-frequency and fatigue assessment
  - ii) **Student practice with force-frequency and fatigue assessment** (procedure room)
- 15:15 - 15:30pm
- Break
- 15:30 - 16:00pm
- i) Debrief Q&A session
  - ii) Quiz (Kahoot) (classroom close to procedure room)