

# 7.18 Day 16 Agenda

- materials and methods

# Materials & Methods

- Enough detail for interpretation or replication
  - Cite and provide context for previously published methods.
  - Detail new methods and modifications of previous methods: final volume, components in standard units, temperature, time.
  - Do not provide a protocol.
- Structure
  - In general, only one level of exposition, e.g. no sub-subheadings.
  - Describe methods in logical order, not the order in which you performed experiments.
- Reagents/equipment
  - Explain concepts of kits and other reagents, unfamiliar equipment.
  - Cite source, but cite unnecessary.
- Language
  - Write in the past tense and passive voice.
  - Watch your grammar, e.g. “After scraping the desired plate in four swipes, the bacteria were placed in 8 ml of media with no antibodies.”

- Details: final volume, components in standard units, temperature, time.
- Kits: Avoid referencing, but if you must, then explain the concept of the kit.

# Oocyte Transfers and Embryo Injections

Example Materials and Methods section from following article removed due to copyright reasons. Please see Amaya et al. *Cell*, 66 (July 26, 1991): 257-270.

- Sub-subheadings unnecessary.

## 2.1. Materials

## 2.2. Preparation of nanoparticles

Example Materials and Methods section from following article removed due to copyright reasons. Please see Win, & Feng. *Biomaterials* 26 (2005): 2713–2722.

- Materials should be incorporated.
- No need to mention city of company: there are catalogs.
- No need to mention water.
- Modified protocol mentioned, but not cited.

# Southern blot analysis

Example Materials and Methods section from following article removed due to copyright reasons. Please see

Ellis, et al. *Human Molecular Genetics* 14, no. 18 (2005): 2705–2715.

- No need to mention experimental variables in first sentence.
- Reference for genomic DNA prep, Church buffer?
- Washes in incomplete sentence; number not specified.

# Electrophysiology

Example Materials and Methods section from following article removed due to copyright reasons. Please see

Chatelain, et al. *Neuron* 47, no. 6 (2005): 833-843.

- Explain concept of kit.
- Note use of citation
- Can give range of variables.

# Proteins and In Vitro Substrates

Example Materials and Methods section from following article removed due to copyright reasons. Please see Val, et al. *Molecular Cell* 19, no. 4 (2005):559-566.

- Unclear sentence in middle.
- pET vector not specified. Unclear antecedent in next sentence.

# Next week's assignments

*Due Tuesday, 8 November:*

- Submit 2-page Methods & Materials
- Group meetings

*Due Thursday, 10 November:*

- Submit critique of selected student's journal club article
- Journal club