Lab 8 – PartIIA The Roles of RNA and Protein Synthesis in Pollen Germination And Pollen Tube Growth
Plant Biology (SC/BIOL 2010.04)
Winter 2014

One-Page Written Assignment, single spaced (plus calculations, tables, figures, references, etc):
- There is a lot of information for students to condense here. Page limits are in place as a guideline and TAs are to use their discretion in enforcing the limit. Please mark students based on the succinctness of their writing.

Introduction (2 marks)
- Objective(s) of the lab
- Background information with reference
- Hypothesis, types of controls used, variables, etc.
  - Explain the treatments- what do ActinoD, CycloH. DMSO, and PGM do and why used?

Results (8 marks total):

a) Data Table
   Sample table of data – students can simply submit the raw data they took down in class

b) T-test (3 marks) – similar to fermentation lab write-up
   - t-test which appropriately tests their stated hypothesis
   - state the p-value (0.5 mark) in their written results
   - include a print screen (0.5 marks) of their SPSS output.

c) Written Interpretation of results (2 mark)
   - What does the data indicate?
   - Does this conform to or refute hypothesis and why?
   - Are suspect values in the data set / potential sources of error?

d) Tables and Graphs: 3 marks
   Bar graph of results see
   - Appropriately formatted with axis label, proper units, and captions, error bars

Conclusion (3 Marks)
   Discuss the role of RNA synthesis and protein synthesis, respectively, in germination and pollen tube growth –should reference peer reviewed literature

Pollen grain drawing
- identified correctly to genus/sp.
- properly labelled

References: 1 mark
Total: 15 marks

Time Period (min)