BIO 445/645 PLANT TISSUE CULTURE TECHNIQUES

Fall 2022

* Week 1. Laboratory Design and Aseptic Techniques
* Week 2. Tissue Culture History
* Week 3. Botanical Basis for Plant Tissue Culture
* Week 4. Nutrition of Plant Tissue Cultures
* Week 5. Direct and Indirect Organogenesis
* Week 6. Cell Suspension Cultures and Dealing with Biological Contaminants
* Week 7. Somatic Embryogenesis and Synthetic Seeds
* Week 8. Meristem Culture and Clonal Propagation
* Week 9. Mid-term examination
* Week 10. Anther Culture, Haploidy and Embryo Rescue
* Week 11. Protoplast Culture and Somatic Hybridization
* Week 12. Acclimatization and Establishment of *In Vitro* Grown Plants
* Week 13. Commercial Considerations in Plant Tissue Culture
* Week 14. Project Presentations

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**Textbooks: Plants from Test Tubes by L. Kyte and J. Kleyn, 1996.**

**Micropropagation by P. Debergh and R. H. Zimmerman, 1994**

**Grading: 25 % mid-term (5/11/2018), 25 % project report, 36 % final exam;**

**14 % attendance.**