



Studying hypoxia as a tool to introduce students to molecular and cellular biology techniques

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Abstract

Hypoxia is a term used to describe conditions with reduced oxygen. Hypoxia is associated with many diseases and disorders including cancer and cardiovascular disease. Investigating hypoxia in a lab setting allows lab students a unique environmental variable to examine changes in cell proliferation, protein expression, and protein localization. In this workshop, I will detail how I used hypoxia in an upper-level cancer biology course to introduce undergraduate students to several cellular and molecular techniques including cell counting, immunofluorescence and nuclear and cytoplasmic fractionation. Technique selection criteria will be reviewed and cost-saving technique suggestions will be provided. Limitations and troubleshooting will also be discussed.

Keywords: hypoxia, cell biology, proliferation

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