

**Lecture Outline for “Experimental Approaches in Molecular and Cell Biology”**

Topic	<b>Protein localization</b>
Lecturer	<b>Dr. Hsou-min Li</b>
Course Outline	<p>Targeting and retention signals for sub-cellular compartments</p> <p>The endomembrane system</p> <ul style="list-style-type: none"><li>In vitro transcription</li><li>Use of endoglycosidase to determine localization</li><li>Fluorescence vs. chemiluminescence</li><li>Immunogold microscopy (peroxisome)</li></ul> <p>Nucleus</p> <p>Chloroplasts and mitochondria</p> <ul style="list-style-type: none"><li>In vitro translation</li><li>Cell lysis</li><li>Centrifugation: differential, rate zonal, isopycnic<ul style="list-style-type: none"><li>Run time conversion using k factor</li></ul></li><li>Protease treatment</li><li>Alkaline and high salt extractions</li></ul> <p>Nuclear and cytoplasmic bodies</p>