Molecular Biosciences Orals Exam Proficiency Checklist

Rate the overall performance of the student in the final "Rating" column of the table below. Use the terms Basic, Intermediate or Advanced level. Or Unsatisfactory if the student falls below the Basic level. Return the completed form to John Connolly.

Skill Component	Basic Level	Intermediate Level	Advanced Level	Rating
Description of research area	Describes basic outlines of the area	Some aspects explained well, but important parts omitted	Organized and thorough description of area	
Formulation of hypotheses	Uses basic concepts to make simple hypotheses	Creates coherent and internally consistent hypotheses	Generates new hypotheses for alternative outcomes proposed by committee	
Design of experiments	Most methods are appropriate; some will lead to unforeseen problems	Methods are appropriate; proper controls included	Proposed experiments use innovative strategies and methods	
Interpretation of methods and results	Makes limited interpretations; omits outcomes not in agreement with preconceptions	Considers alternative outcomes that may question reliability of anticipated results	Predicts consequences of alternative outcomes proposed by committee; anticipates and defends against criticisms	
Understanding of methods	Knows names of methods and simple descriptions of their operation	Methods are understood but does not know several aspects	Explains theoretical and practical aspects of methods in detail	
General knowledge of the molecular biosciences	Knows basic outlines of concepts in own area; little/no knowledge of some basic concepts	Knows concepts in detail in several areas; recalls other material when coached	Knows concepts in detail in all areas examined; integrates concepts from multiple areas	
Communication skills	Simple descriptions of concepts	Descriptions are adequate but not extensive	Explains complex material with ease	
Awareness of larger significance	Explanations limited to basic details of proposed experiments	Relevance within a particular research area presented clearly	Relevance of results to important scientific or societal needs presented	