

Description of proficiency levels on the oral exam

Skill component	Level		
	Basic	Intermediate	Advanced
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 molecular bioscience	Knows basic outlines of concepts in own area; little or 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

Please return to John Connolly.

Orals Proficiency Checklist

Skill component

Level

	Unsatisfactory	Basic	Intermediate	Advanced
1. Description of research area				
2. Formulation of hypotheses				
3. Design of experiments				
4. Interpretation of results				
5. Methods				
6. General knowledge				
7. Communication skills				
8. Awareness of larger significance				

Rate overall performance in each skill area by placing a check in the appropriate box.