

Criteria for Scoring Future Research Plans from Faculty Candidates

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Significance of the scientific problem: Which specific questions does the candidate seek to answer? If the hypothesis is tested, do we care about the answer? Are the questions fundamental to the field or incremental? Are the questions relevant to the larger scientific community?

	3 (Exceptional)	2 (Solid)	1 (Weak)	0
Importance of Problem	Clearly articulates the importance of the larger problem. Seeks a biological insight and/or technological advance that has broad significance to the scientific community.	Describes an important problem and offers convincing justification.	Either describes an insignificant problem or only vaguely justifies the problem's significance.	Not addressed
Potential to advance field	Clearly articulates research questions and why they are fundamental to the field. Questions are deep and challenging to answer.	Good likelihood that research will be fundamental to the field	Incremental to the field	Not addressed

Focus and approach: What will the candidate do to answer their questions? Is the plan logical? Will the results address the hypothesis? If the approach succeeds, will it result in understanding of a biological problem at the molecular level?

	3 (Exceptional)	2 (Solid)	1 (Weak)	0
Clear and appropriate	All experiments are logical and clearly described. Completion will provide an insightful perspective on the problem. Candidate makes clear case that they are exceptionally positioned for the work	Most experiments are logically related to the scientific question and are clearly described at an appropriate level of detail.	Some experiments are logical while others are tangential or irrelevant. Some important details are missing or unclear.	Unclear and/or illogical
Mechanistic	Seeks a complete and quantitative understanding at the cellular and/or molecular level	Central focus is on molecular and/or cellular mechanisms	Somewhat mechanistic. May identify key players but only superficially interrogate their roles.	Not mechanistic

Innovation and scope: Is the perspective pioneering? Are new methods used or proposed? Are the aims well balanced between short-term/feasible and longer term/ambitious?

	3 (Exceptional)	2 (Solid)	1 (Weak)	0
Innovation	Highly novel concepts and/or methodologies developed by the applicant are central to success of the work.	Significant conceptual and/or methodological novelty	Conceptually incremental. Uses standard methods to answer obvious questions, which may nevertheless be important.	Not addressed
Scope	Ambitious and unified long-term project with clear and feasible increments described.	Reasonable scope	Multiple objectives are either overly ambitious or excessively narrow	Trivial or absurdly excessive

This document was adapted from search criteria used by Yale MB&B Fall 2020.