RICE

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To the members of the Search Committee:

Allison Mallory as asked me to write a letter of support for your open Assistant Professor position and I am happy to do so. I know Allison because she is a post doc in the lab of my collaborator (and brother) David Bartel at the Whitehead Institute. I have been working closely with Allison since the beginning of 2003, when she began her post doc in David's lab. Via frequent phone conversations and email correspondence and occasional meetings in person, we have planned experiments, interpreted results, and co-authored manuscripts. I feel that I know her and her abilities quite well. In short – she is fantastic.

Allison is addressing the biological functions of the recently discovered plant microRNAs. She approached this question by making microRNA-resistant versions of various microRNA target genes, introducing these modified genes back into plants, and analyzing the morphological and molecular phenotypes that result. Importantly, she chose to do these analyses in the genomic context so that the reintroduced genes are driven by their own regulatory regions. Thus her results reflect the consequences of loss of microRNA regulation, in contrast to if she had chosen the more experimentally facile approach to expressing altered cDNAs from a ubiquitously expressed promoter. We combined her work showing increased floral organ boundaries in plants in expressing the CUC1 transcription factor freed from miR164 regulation with that of a graduate student in my lab showing that miR164 overexpression impairs boundary formation and leads to organ fusions; this work was published in *Current Biology*. A second paper we co-authored details Allison's work on *ARF17*, one of the genes targeted by miR160; this paper was published in *Plant Cell*. Both of these articles were featured on the cover of the respective journals.

Allison is a truly impressive scientist. She follows the experiments wherever they lead, with seemingly no activation energy barrier to learning new techniques or methodologies, from scanning electron microscopy to small RNA northerns; she dives in and gets great results on the first pass. She does big experiments with many replicates and yet is appropriately cautious about interpreting her results. This is an important trait in any scientist, but perhaps especially in one working in such a fast-moving field where a certain pressure to premature publication can be felt. She has had to be unusually independent to succeed in David's lab; he is running a large and diverse group and is not a plant scientist by training. Allison has made the most of this opportunity, and I think knows better than many post docs what it takes to succeed in an academic environment.

In addition to her formidable bench skills, Alison is a highly intelligent, deep-thinking scientist with a flair for writing. She wrote the initial drafts of both of our manuscripts, and was instrumental in putting our work in the context of the field. She also gives very clear and engaging seminars and will make a great teacher.

In summary, Allison is an outstanding scientist with a great record as an undergraduate, graduate student, and postdoctoral fellow. I would be delighted to have her as a faculty colleague here at Rice, and I am confident that she has what it takes to excel as an independent investigator. Please let me know if I can provide any further information.

Sincerely,

Bonnie Bartel
Ralph and Dorothy Looney Professor
of Biochemistry & Cell Biology
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