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Re: Necmettin Yildirim, PhD

To the Committee:

It is my pleasure to recommend Necmettin Yildirim Ph.D. for a faculty position in your department. Necmettin is an excellent scientist and teacher, and is in my view very likely to succeed in both capacities as a potential member of your faculty.

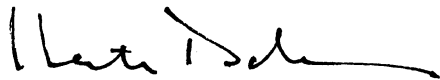
Necmettin is currently a postdoctoral fellow working under Tim Elston in our Applied Mathematics Program. My laboratory has collaborated with Tim and Necmettin for nearly two years now, and I feel I am in an excellent position to comment on Necmettin's capabilities. The nature of our collaboration has been to model feedback regulation of the mating response signaling pathway in yeast *Saccharomyces cerevisiae*. Yeast has long been the premier model organism for molecular genetic analysis of cell signaling through G proteins and G protein-coupled cell surface receptors. Past work, spearheaded by Necmettin, has pioneered the application of mathematical modeling approaches to signal desensitization. The initial phase of the project focused on pathway deactivation by a regulator of G-protein signaling (RGS) protein, and in this phase of the project Necmettin successfully developed a mathematical model that described the time-dependent behavior of the receptor, G-protein, and RGS protein. Current work, still in progress, is even more exciting and innovative, as it is uncovering new models of feedback regulation at the level of downstream effector proteins.

Necmettin's models are routinely tested experimentally in my laboratory, and then refined and retested and refined again. This has been a wonderful, dynamic collaboration. As a measure of his success he has in the last few years published highly visible papers in the *Journal of Biological Chemistry* and *Methods in Enzymology*. There is also a third manuscript in preparation. The paper in *JBC* was highlighted in a recent article published by the web-based journal *Science STKE*, published weekly by *Science* magazine. Clearly his contributions have been widely recognized and have significantly advanced the state of the art.

As a researcher Necmettin is a quick learner, skillful, rigorous, and insightful. His knowledge is unusually broad, and he is just as comfortable talking to mathematicians and biologists. Although I have not observed Necmettin in a classroom setting, his research presentations are always clear, articulate, and well prepared. I have benefited greatly from my interactions with Necmettin, as he has patiently explained each aspect of his modeling, which to a biologist like myself can be difficult to appreciate fully. I expect he will be equally effective as a teacher with undergraduates. His command of the English language is more than adequate. In short he is a superb colleague.

Necmettin has clearly demonstrated that he is an excellent scholar, author, and collaborator. I am fully confident that with his unique skills and training he will be a great asset to your program and I am very pleased to recommend him with enthusiasm.

Sincerely,

A handwritten signature in black ink, appearing to read "Henrik Dohlman". The signature is fluid and cursive, with a long horizontal stroke at the end.

Henrik G. Dohlman, PhD
Professor of Biochemistry and Biophysics