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RE: Dr. Hugh MacMillan

Dear Search Committee Members,

I was very pleased when Dr. Hugh R. MacMillan asked me to write a recommendation letter for him. Normally, one would hesitate when you have only known a colleague for just over a year and have not been collaborating; however, my discussions with Hugh during our first meeting which took place in a biomathematics workshop in 2003 convinced me that Hugh is an original, thorough and honest thinker. The present academic culture of 'publish, get grants, or perish' tends to push out intellectuals like Hugh who really deserve to be among us. Hugh is a young scientist with great promise.

Hugh is an expert in the design and numerical analysis of adaptive finite element methods for partial differential equations. After his PhD, he obtained a prestigious Sloan/DOE transitional fellowship and immersed himself in biology. He first worked on reaction-diffusion systems within the realistic geometry of a neuromuscular junction; this work got published recently. He is currently engaged in the systems biology effort to quantify uncertainty in modeling the molecular basis of cell cycle and cell fate control. I, myself, work on computational modeling of the mammalian cell cycle but from the perspective of a physical chemist. Hugh was invited to participate in the international workshop (which I co-chaired) on 'cell growth and proliferation' at the Mathematical Biosciences Institute at Ohio State University last year. This is where we first met. Since then, he has written a substantial manuscript that investigates whether DNA damage response could serve as an intrinsic developmental timer during cortical neurogenesis (submitted to *Bulletin of Mathematical Biology*). I am very impressed with the originality, boldness, and thoroughness of his ideas in this paper.

Hugh is very serious in teaching. His amiable personality is seen in his lectures (I've heard him talk in a few occasions) and he makes you feel at ease with even the most technical ideas. From our one-to-one discussions, I am convinced that Hugh has genuine concern for the welfare of his students.

If you have other questions, please do not hesitate to contact me at (617) 414 1654 or bdaguda@bu.edu

Sincerely yours,

A handwritten signature in black ink that reads "B. Aguda".

Baltazar D. Aguda, PhD
Associate Professor

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