

February 14, 2007

To whom it may concern:

Jeremy Horst has now been working in my research group for the last eighteen months. Even though he has a very high course load related to his DDS degree, he has carried out his Ph.D. research with high standards and rigour. He has developed novel methods and generated a vast amount of preliminary data for the computational modelling of bone and tooth protein structure, function, and interactions, a project he is spearheading in my group.

Jeremy has maintained a high level of responsibility regarding the completion of all tasks proposed in his F30 grant application. Despite his busy schedule, he has attended our group meetings regularly, advanced in research ability, and has made substantial progress in his project. He has orchestrated complex coordination to ensure his presence in group meeting and the laboratory. Jeremy is very capable of juggling a diverse spectrum of tasks, and continually makes marked strides in progress for all tasks before him.

Jeremy displays deep and cumulative comprehension of didactic material for the subjects he studies in the classroom. His professors respect his approach, accumulated knowledge, and initiative. Jeremy has taken an additional load of mentoring an undergraduate student for whom he designed a project tangentially related to his own, using computational approaches to create three-dimensional reconstruction of mineralized tissues in dental radiographs. The project concept is quite insightful and is showing much promise. His mentoring has resulted in the development of the undergraduate's ability to perform literature review and summary, present hypotheses and methodologies, and discuss results with the group.

In my group environment, Jeremy asks questions that demonstrate a keen insight and offers constructive suggestions when responding to the problems encountered by other members of the group, showing a sophisticated approach to research and a far reaching understanding of science. As noted in the research progress section (17.B of this application), Jeremy has spearheaded the computational sciences portion of our collaborative NIH grant application to rebuild the tooth, and has demonstrated organisational abilities that are remarkable for a graduate student.

Jeremy's writing skills are excellent and he has assisted members of my group, particularly the nonnative English speakers, in the preparation of their manuscripts and talks which have amounted to effective improvements in presentation. I assigned him the task of situating the many new students in our group (recently four per quarter), for his effective leadership and friendly communication. His success in this assignment is tribute to the rapid development of his own skills in the areas of computational biology, particularly in using the Linux operating system and developing computational algorithms. In this regard, Jeremy's progress should put any doubts about his computational expertise (raised during the initial round of review) at rest since he can now interact with members of my group formally trained as computer scientists at the same level.

In summary, Jeremy has demonstrated that he has the necessary skills and drive to be a first class scientist, and continues to be a valuable asset to my group as well as the UW DDS/Ph.D. program.

Sincerely,



Ram Samudrala