



## DUKE UNIVERSITY MEDICAL CENTER

Department of Biochemistry

November 18, 2004

Biocomplexity Faculty Search Committee  
c/o Prof. Rob de Ruyter van Steveninck  
Department of Physics  
Indiana University  
Swain Hall West 117  
Bloomington IN 47405-7105

Dear Prof. de Ruyter van Steveninck:

I am writing to support Dr. Jochen Genschel who is applying for a position in your department. Jochen is a senior postdoctoral fellow Professor Paul Modrich's lab. Since Paul's lab is physically very close to mine, and since I am always interested in the latest development in the mismatch repair biochemistry, I have had ample opportunity to talk to Jochen and have kept up with his research.

As a start, I should state that Jochen is amazingly dedicated to science. You can easily appreciate his enthusiasm by talking to him, which usually lasts to a point that you have to apologize and walk away, and by observing his work hours in the lab, which makes you wonder whether he ever goes home. I should also quickly add that Jochen's enthusiasm is a positive and generous one. He is just as interested in your problem as his own, and is very willing to offer you his thoughts and technical assistance. This is a rare and much cherished combination. He has certainly earned himself a unique position among all the postdoctoral fellows in our department. I believe he will make an excellent colleague in the institution he will join in the future.

Jochen's major research interest in the last few years is in the mismatch repair biochemistry primarily using an enzymological approach. He is one of the major "purifiers" in Paul's lab, and he has opened up several exciting new directions because of this effort. One of the exciting developments that he is responsible for is the biochemical role of exonuclease I in mismatch repair. Genetic data have long pointed to a critical function of exo I in the mismatch repair. However, its exact biochemical role was not elucidated. Using a highly fractionated system, Jochen has demonstrated a potential role for exo I in the 5' to 3' direction of repair reaction, which is expected because of the exonucleolytic activity has the same directionality. But the surprising result was that exo I apparently has a critical role in the repair of 3' to 5' as well. This is a very intriguing result suggesting as yet an unknown function for this enigmatic exonuclease. It is also important to note that these recent developments have put the human mismatch repair within the final stage of the "purified system". For an example, the 5' to 3' repair requires only mutS $\alpha$ , mutL $\alpha$ , RPA, and Exo I for the initial mismatch removal steps. These purified reagents can serve as a starting point for identifying other components necessary for the complete mismatch repair reaction (degradation and synthesis). I believe a paper is now in press in a high-profile journal describing his results on the initial 5'→3' reaction in a purified system.

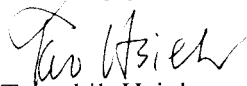
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I often feel Jochen is fearless in approaching a problem. He will not hesitate to spend two-week of time to go through five chromatographic steps to get a protein purified. His dedication to science is beyond question. He reads widely and he is a good person to sound off your ideas and problems. I believe he can be a valuable colleague in your institution. I recommend him to you with great enthusiasm.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Tao-shih Hsieh".

Tao-shih Hsieh

Professor of Biochemistry