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Rob de Ruyter van Steveninck Chair, Biocomplexity Search Committee Indiana University Bloomington, Department of Physics, Swain West 165

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Basel, January 19, 2004

Dear Rob de Ruyter van Steveninck

Please find enclosed a letter of recommendation, which Clemens Wagner asked me to send to you. He worked with me at the Biozentrum (University of Basel) almost ten years ago, but I still vividly and with great pleasure remember that time. Meanwhile I am retired, which also explains why this letter is sent from my private address. Please do not hesitate to contact me if I can be of any further help.

Sincerely yours,

Dieter Wah

Dr. Dieter Walz

Enclosure

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Basel, January 19, 2004

Letter of recommendation for Dr. Clemens Wagner

To whom it may concern

Clemens Wagner has carried out his PhD thesis under my supervision between 1992 and 1996. The subject of his thesis was an energetic and kinetic investigation of the electron and proton transfer reactions in the b_6 f complex of thylakoid membranes. Using the Marcus theory, and based on structural data of the complex available at that time, Clemens was able to build a kinetic scheme with which he could successfully simulate a number of experimental data.

Being a Theoretical Physicist by training, Clemens had first to familiarize with biological systems and the problems encountered in a field that was then new to him. He has mastered this job amazingly well and in a very short time so that he could work essentially on is own. His background in physics enabled him to develop new ideas. For example, he found a way to describe the effect of proton binding to groups not directly associated with redox centers on electron transfer reactions. He could thus show that the pH-dependence of electron flow through the $b_6 f$ complex which resembles, and usually is attributed to, the binding of a proton to a redox center may as well be interpreted in terms of proton binding to several unspecific sites.

In my view Clemens as a serious and very critical scientist who is never satisfied with easy solutions but always attempts to explore a problem in depth. He is open to new ideas and does not hesitate to enter a new field in which he may introduce innovative aspects. I know him as a very pleasant colleague, with whom to work is a real pleasure, and can highly recommend him as a candidate for an academic position.

Dieter Wah

Dr. Dieter Walz