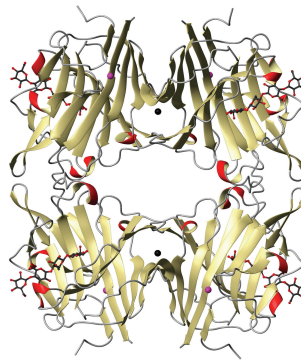


**STUDIES OF  
PROTEIN STRUCTURE AND FUNCTION  
BY X-RAY CRYSTALLOGRAPHY  
AND NMR SPECTROSCOPY**

Dissertation  
zur Erlangung des akademischen Grades  
"Doktor der Naturwissenschaften"  
(Doctor rerum naturalium, Dr. rer. nat.)  
am Fachbereich Biologie, Chemie, Pharmazie  
der Freien Universität Berlin

vorgelegt von Diplom-Biochemiker  
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Berlin, im Oktober 2006



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Disputation am: 23. März 2007

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Dedicated to

My cousin Harald Riffert (†2001)  
who once sparked my interest in natural sciences,

and

Lilly (\*2003),  
full of childlike curiosity for the mysteries of life,  
reminding us of our responsibility for continuous innovation and improvement  
of basic and higher education.

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The physicist Leo Szilard once announced to his friend Hans Bethe that he was thinking on keeping a diary. "I don't intend to publish, I am merely going to record the facts for the information of God." "Don't you think God knows the facts?" Bethe asked. "Yes", said Szilard, "He knows the facts, but He does not know *this version of the facts!*"

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At any rate, I am convinced that He [God] does not play dice.

(Albert Einstein, in a letter to Max Born, 1926)

Not only does God play dice, but (...) he sometimes throws them where they cannot be seen.

(Stephen Hawking)

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