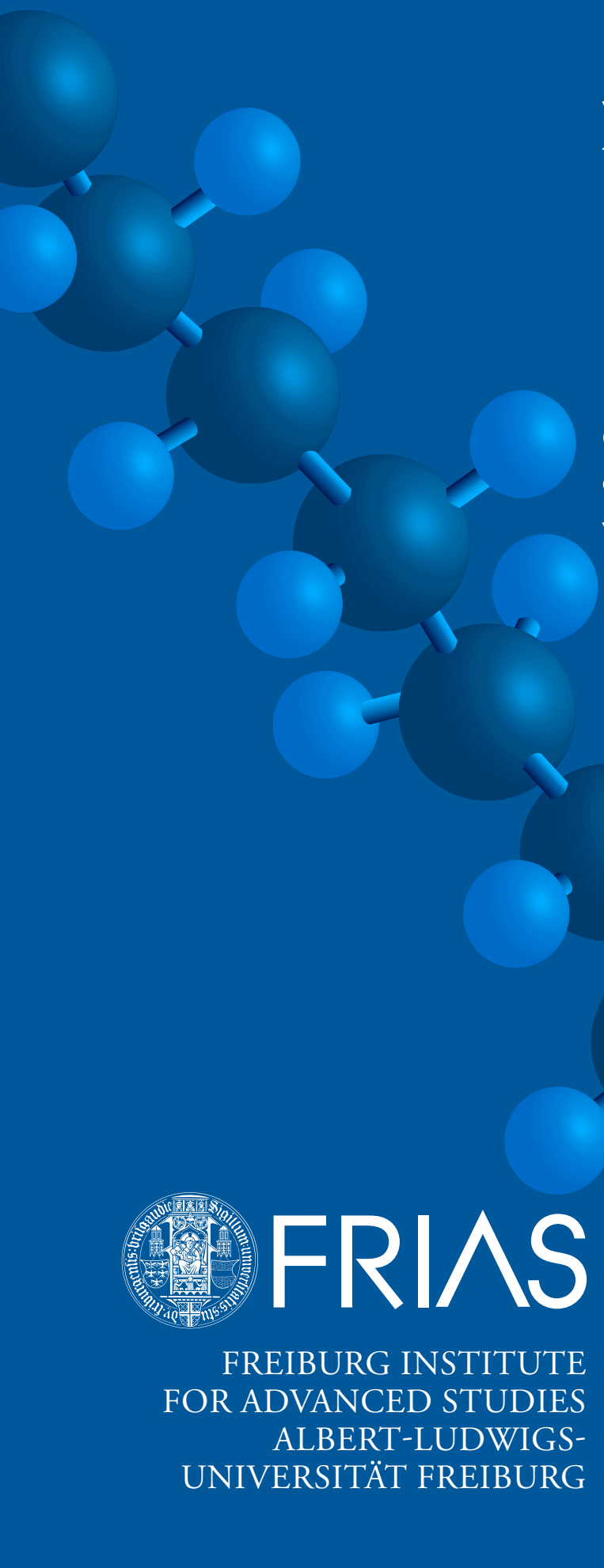
25TH HERMANN STAUDINGER LECTURE

NOBEL PRIZE LAUREATES AT FRIAS

JOACHIM FRANK

COLUMBIA UNIVERSITY, NEW YORK, USA

VISUALIZATION OF BIOMOLECULES IN THEIR NATIVE STATES



For decades, structure determination of biological molecules has been dominated by X-ray crystallography, a technique which requires highly ordered crystals and usually depicts the molecule in a single conformation that is not necessarily relevant for its function. In contrast, single-particle cryo-electron microscopy (cryo-EM) is able to depict the molecule in all naturally occurring states and requires no crystals. Since around 2013, with the arrival of direct electron detecting cameras, near-atomic resolution (2-4 Å) is routinely achieved. A few examples illustrate that the impact of these new developments on biological knowledge and the future of Molecular Medicine will be substantial.

Monday, July 2, 2018
5:15 p.m.
Anatomy Lecture Hall
Albertstraße 17, Freiburg

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