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【Speciality】 NMR spectroscopy, Biophysics

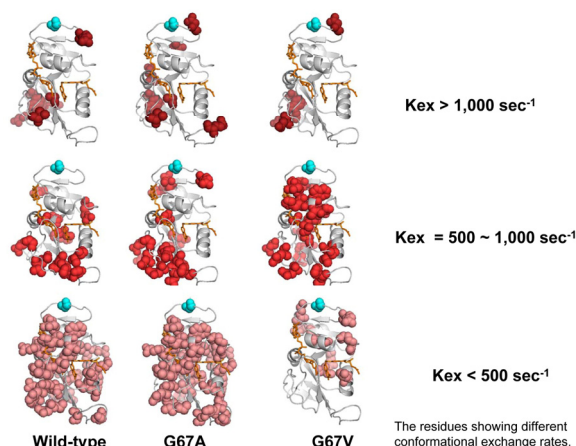
【 Keywords 】 anisotropic spin interaction, nuclear spin relaxation, protein dynamics

【Research Subject】

Exploring functionally related morphological changes of KcsA by NMR spectroscopy

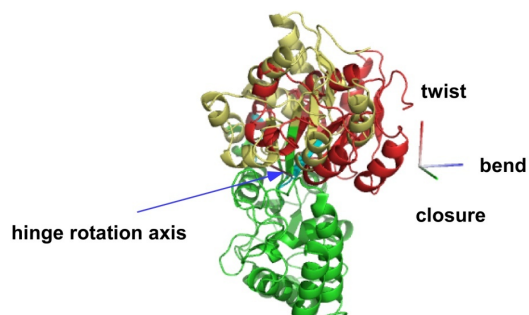
Research Group Activity

- Protein dynamics and function relationships revealed through nuclear spin relaxation analyses



Protein dynamics, in the time regime in μsec - msec , can be revealed by nuclear spin relaxations. Systematic analyses on the dynamical modulations caused by single site-directed mutation will give us experimental insights into the ‘protein dynamics and function relationships’.

- Protein morphological change analysis using a novel NMR technique using anisotropic spin interactions



We have devised a new NMR approach to elucidate protein morphological changes by using orientation dependent Trosy shift changes, which are induced by a weak protein alignment against the NMR magnetic field. This allows us to observe the functionally related protein morphological changes.