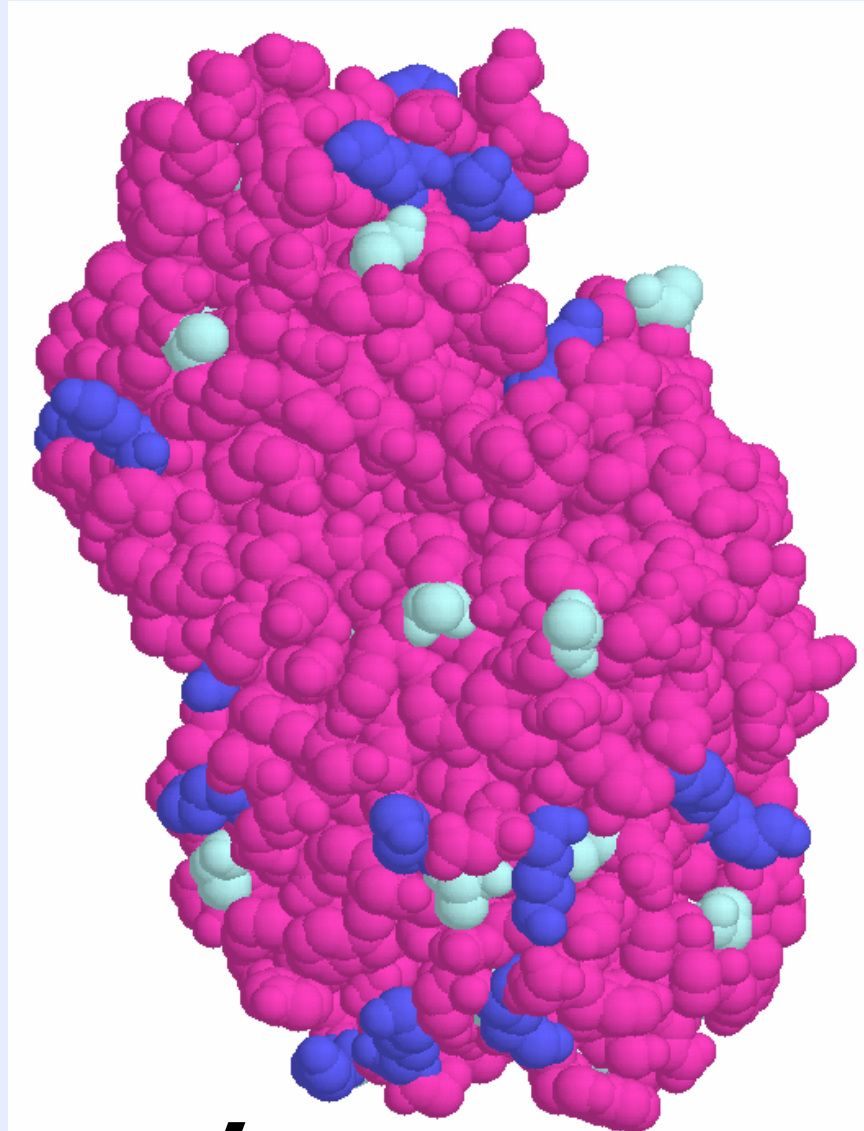


Dynamics of the Purple Membrane:
Specific amino acids
&
Hydration Water

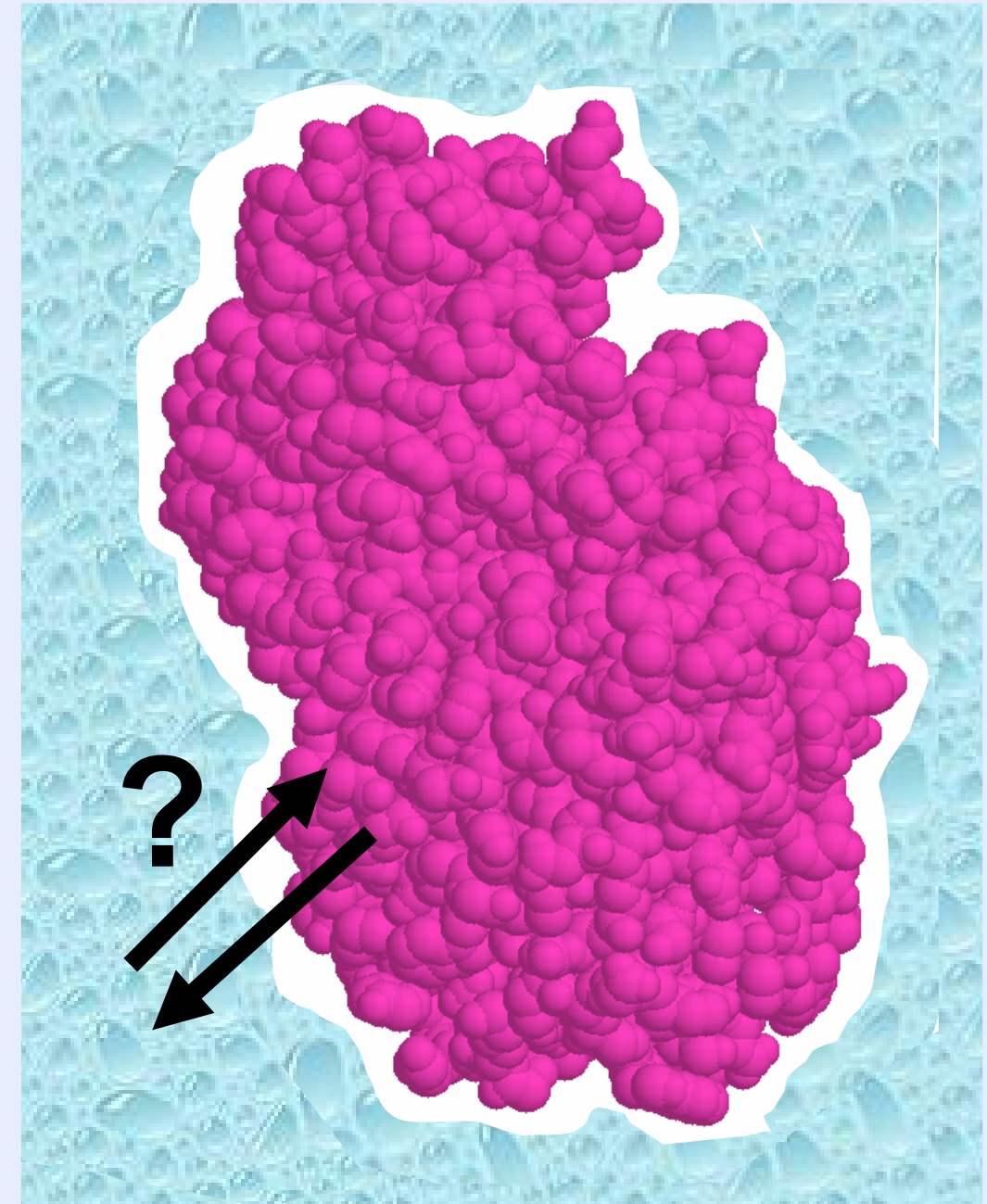
Dynamics of:

1. Different amino acids



≠ dynamics?

2. Hydration Water

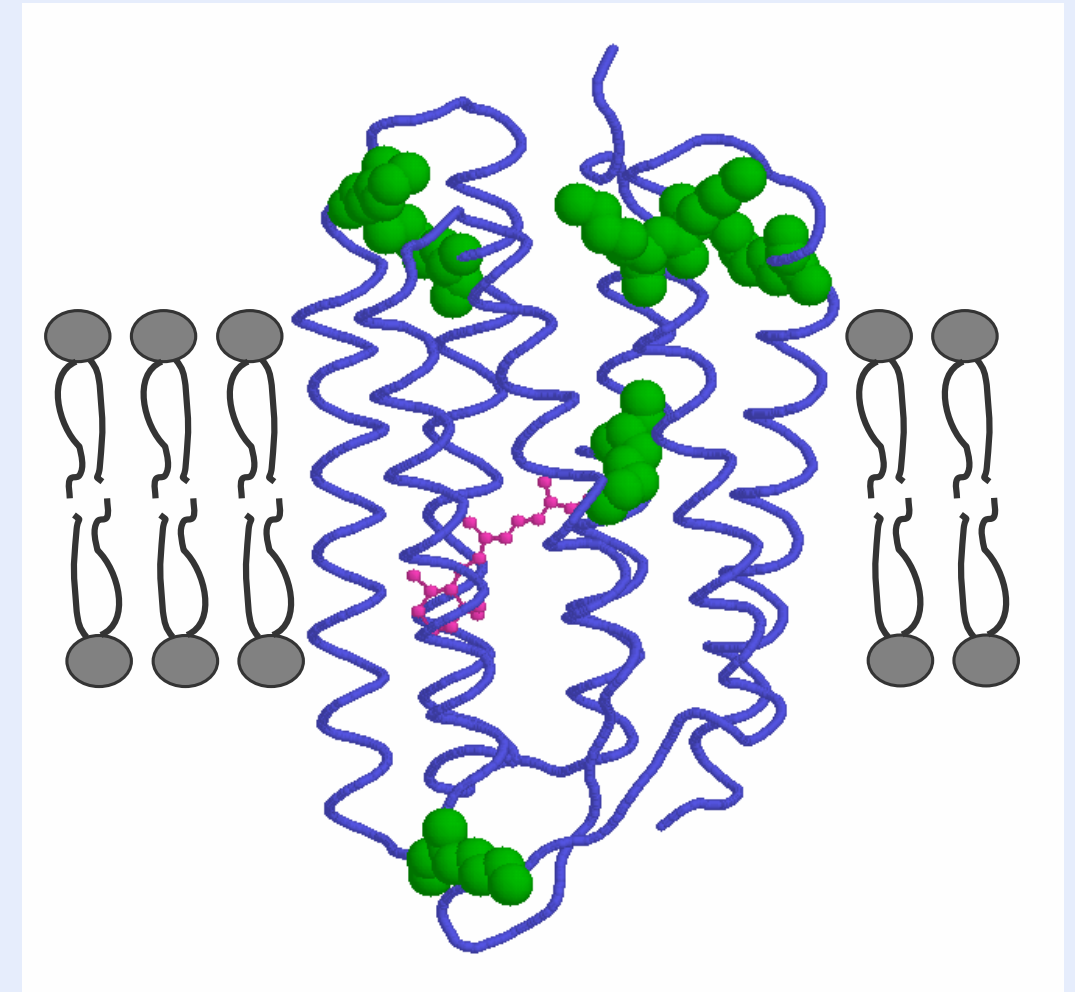
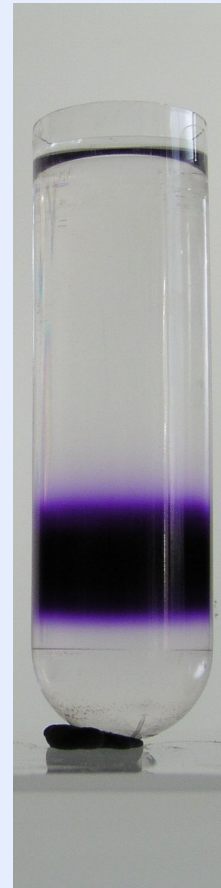
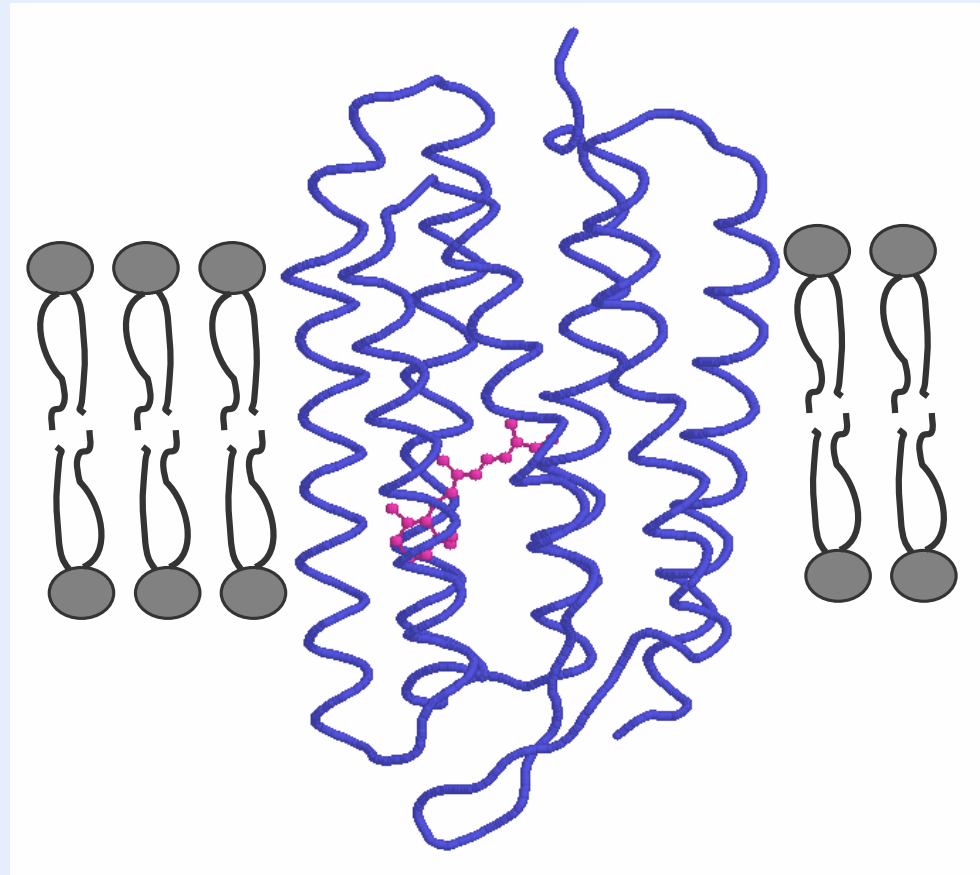


Using:

→ Elastic Incoherent Neutron Scattering

→ H/D labelling

The sample: the Purple Membrane



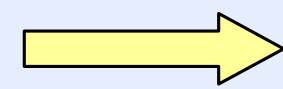
1. Specific amino acids

→ deuterated membrane with 1 amino acid hydrogenated
(here lysine)

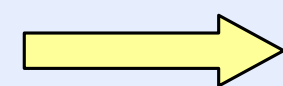
2. Hydration water:

Deuterated membrane in H_2O

Wild type membrane in D_2O

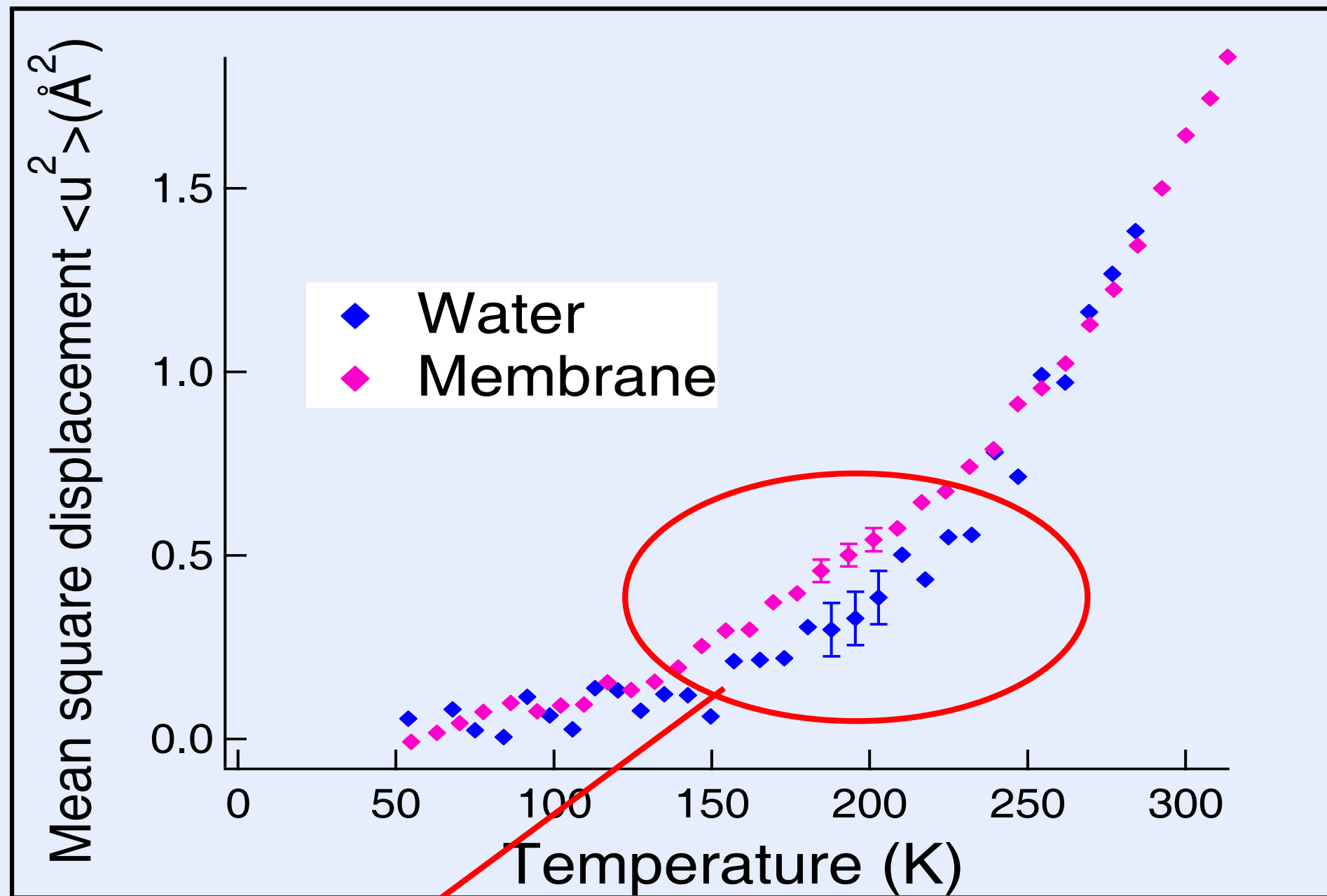


water dynamics



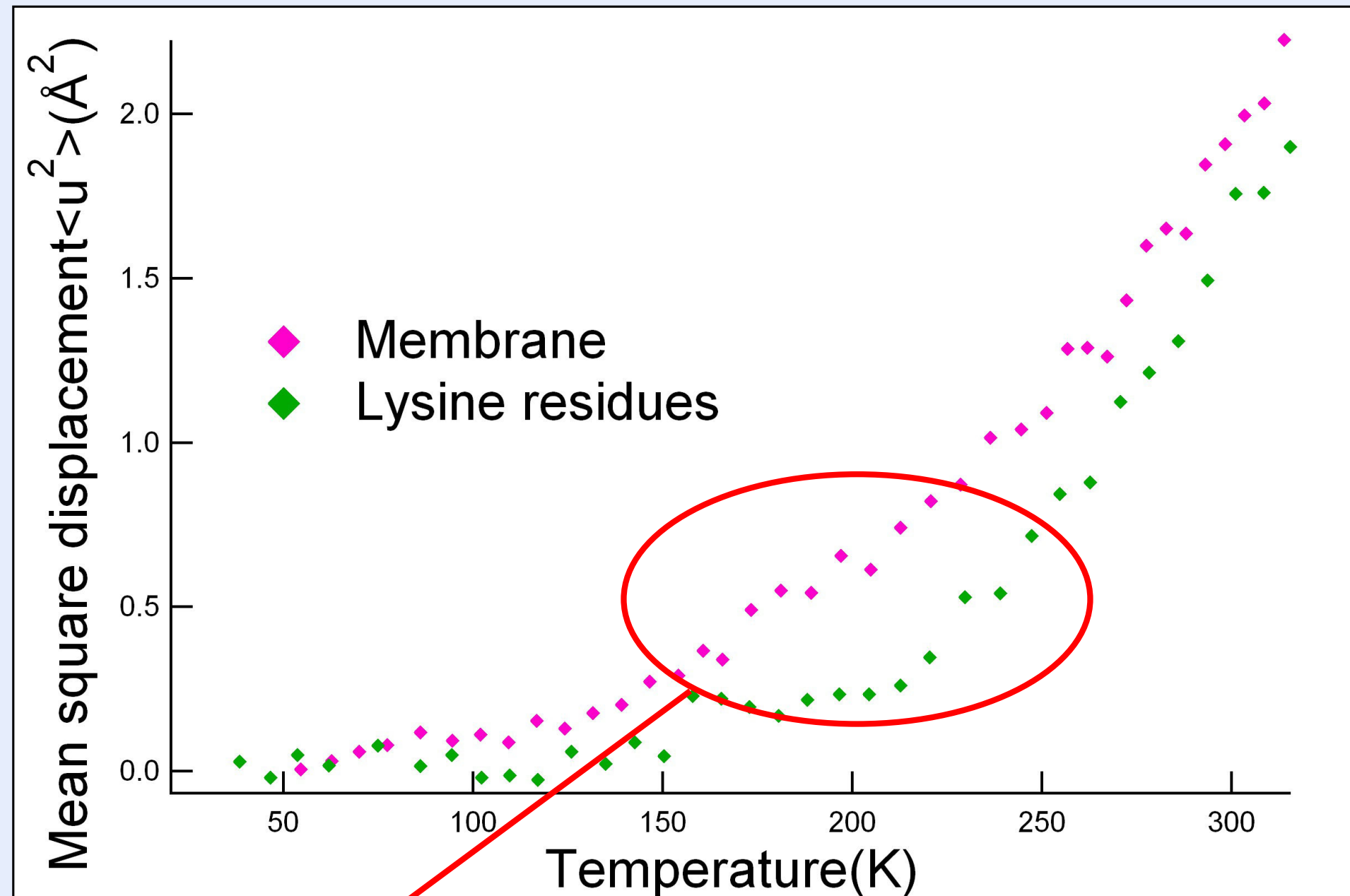
membrane dynamics

Some results... hydration water



Water and Membrane display different dynamics

Some results... specific amino acids



Lysine very different from 'average' membrane dynamics

Close to hydration water...

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