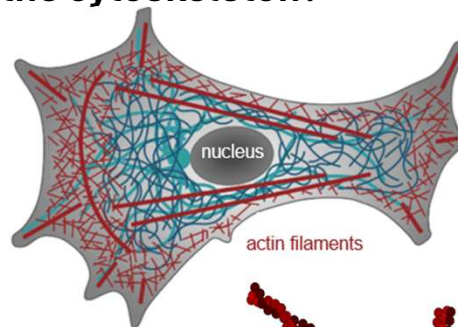




## Central Research Question: How does the cytoskeleton-membrane linker protein ezrin attach to the actin cortex of the cytoskeleton?

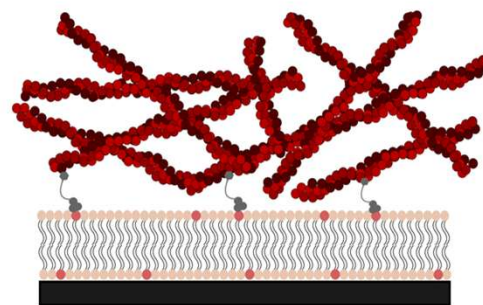
### The cytoskeleton

A dynamic network of proteins facilitating structural support, intercellular transport and cellular motility



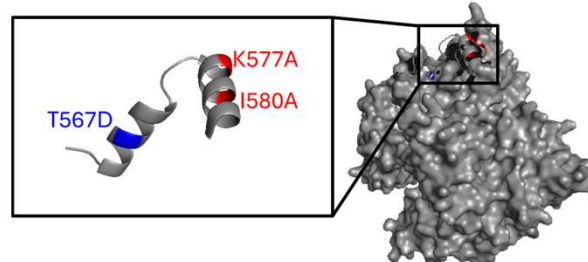
### Model system

Solid-supported lipid bilayers (SLBs) are employed as membrane model and the linker protein ezrin (grey) binds to the lipid bilayer and the actin cortex (red).



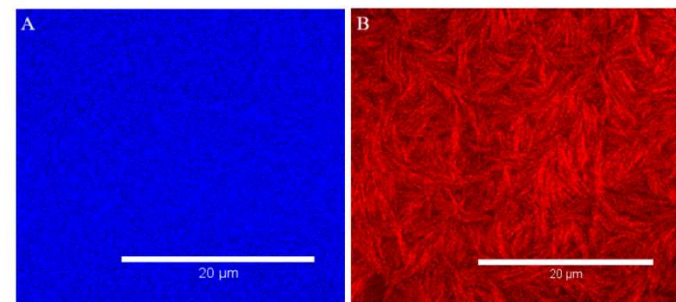
### Ezrin mutations

Varying the amino acid sequence of ezrin allows for deductions about the binding characteristics of the ezrin-actin interaction



### Methods

- Protein biochemistry (expression, isolation, purification and labeling)
- Reflectometric interference spectroscopy (RIfS)
- Atomic force microscopy (AFM)
- Fluorescence microscopy (CLSM, TIRF...)



CLSM fluorescence micrograph of SLBs and a minimal actin cortex