

## Oxygen sensing by brain capillaries in health and disease

**Upper Panel:** Low oxygen conditions called hypoxia promote increases in extracellular adenosine concentration in the brain. An ion channel called the ATP-sensitive potassium channel found in brain capillaries responds to adenosine to increase blood flow to areas of need, thus restoring oxygen levels.

**Lower Panel:** During progression of ischemic small vessel disease, the activity of the ATP-sensitive potassium channel is diminished causing sustained hypoxia conditions in deep brain regions.