A comparison and contrast of: **ACTIVE TRANSPORT vs FACILITATED TRANSPORT**

ACTIVE TRANSPORT

- **Energy required**
- **ATP used**
- **Lover conc. To area of higher conc.**
- **Movement of Na+/K+**
- **Opposite of diffusion**
- **Against conc. Gradient**
- **Transports ions**
- **Mitochondria near the transport proteins**
- **Glucose used to make the ATP**
- **BIG molecules moved this way**
- **Shape of carrier changes to accommodate molecule carried.**

FACILITATED TRANSPORT

- **No requirement for water**
- **Part of a *selectively* permeable membrane**
- **Proteins are used**
- **Proteins go THROUGH the membrane**
- **Move molecules, not large amounts of substrates (i.e. not endocytosis/exocytosis)**
- **No vesicle required**
- **Both can put molecules either in/out of cell.**
- **BINDING of protein to molecule being moved occurs**
- **Proteins are specific to which molecule they carry.**

- **Other names = facilitated transport, facilitated diffusion, passive transport, passive diffusion.**
- **No energy required and no ATP used**
- **Molecules go from high conc. To low conc.**
- **Used to move glucose and amino acids**
- **"helped" diffusion**
- **Often works by a "flip" of a membrane protein holding the molecule to be transported.**
- **Some lipid insoluble small molecules need to be facilitated in/out.**

<u>Comment[s]:</u>The protein carriers seem similar to enzymes, but enzymes CHANGE the molecule they work with; whereas carriers just move it.