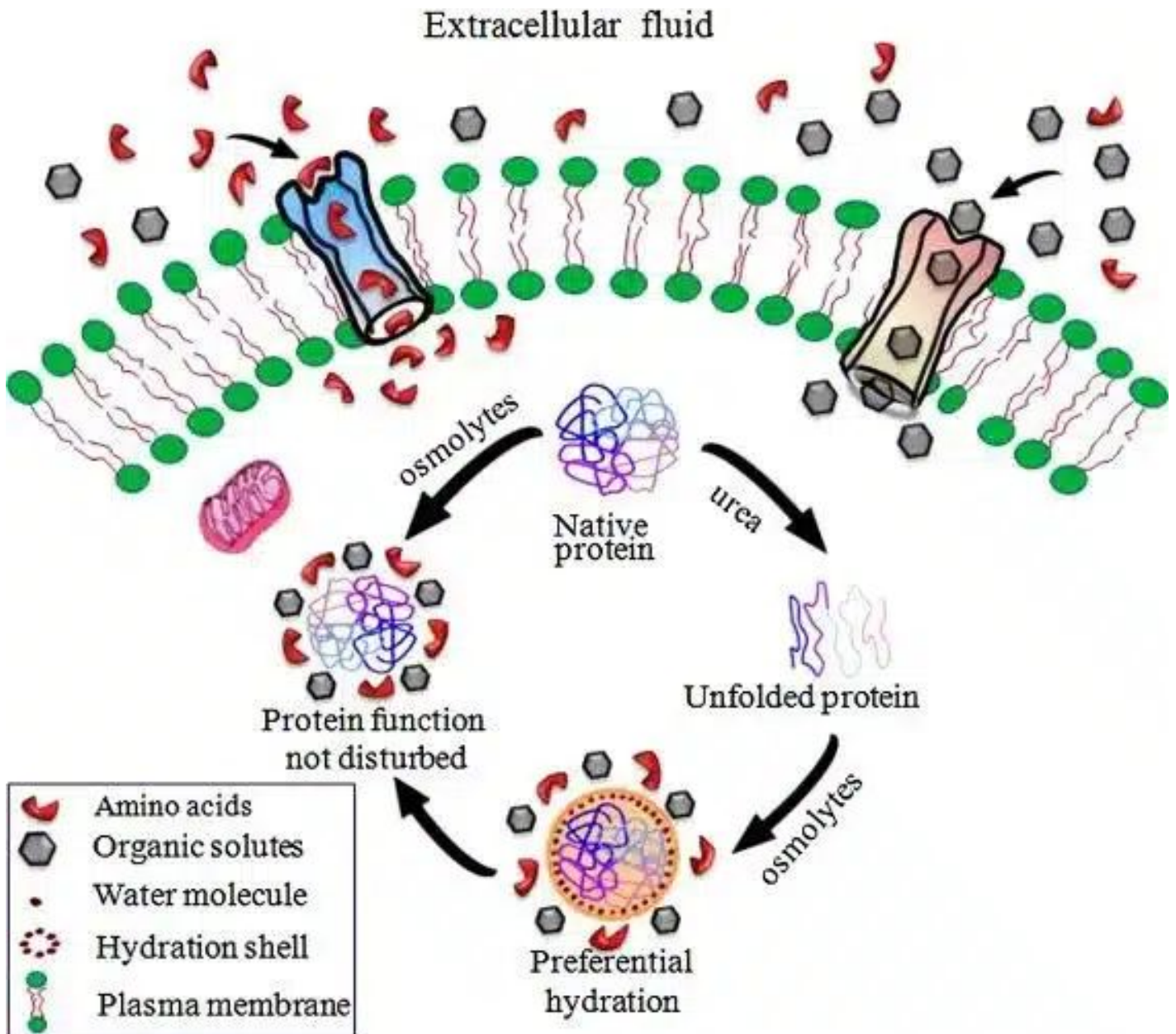


What are Osmolytes?

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About Osmolytes:

- These are **low molecular weight organic molecules** usually built up in tissues at a quite high amount during stress or any pathological condition.
- These are **small molecules** that help cells survive stress by **stabilizing proteins** and preventing them from misfolding.
- They help **proteins maintain their structure** and function under stressful conditions
- Misfolded proteins can't perform their functions properly, leading to diseases.

- Osmolytes are crucial in maintaining the stability of protein structures, making them potential targets for new drugs.

Key facts about Parkinson's disease

- It is a progressive **neurological disorder** that affects the nervous system and the parts of the body controlled by the nerves.
 - The risk of developing Parkinson's disease naturally increases with age, and the average age at which it **starts is 60 years old.**
 - Many studies have suggested that **men are more likely** to be **affected** by Parkinson's than women.
 - **Cause:**
 - It is caused by the **degeneration of nerve cells** in the part of the brain called the substantia nigra, which controls movement.
 - These nerve cells die or become impaired, **losing the ability to produce** an important chemical called **dopamine.**
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Q1: What are Proteins?

These are large, complex molecules that are fundamental to the structure and functioning of all living organisms. They are composed of chains of smaller units called amino acids, which are linked together in specific sequences. Proteins serve a wide variety of critical roles in biological systems.

Source: [Osmolyte – protein interaction study can help treatments for Alzheimer's & Parkinson's](#)

Source: <https://vajiramandravi.com/current-affairs/osmolytes/>

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