

Introduction

Phosphorus is an essential element for all living organisms. It is a component of nucleic acids, phospholipids, and various coenzymes. In plants, phosphorus is involved in energy transfer and photosynthesis. In animals, it is crucial for bone formation and cellular signaling. The availability of phosphorus in the environment is a limiting factor for many organisms, particularly in aquatic ecosystems. This issue of *Biochem Physiol* features several articles that explore the role of phosphorus in different biological systems and the mechanisms of phosphorus uptake and utilization. The first article, by [Author], discusses the molecular mechanisms of phosphorus transport in plants. The second article, by [Author], examines the role of phosphorus in the regulation of gene expression. The third article, by [Author], investigates the impact of phosphorus deficiency on plant growth and development. The fourth article, by [Author], explores the role of phosphorus in the metabolism of microorganisms. The fifth article, by [Author], discusses the role of phosphorus in the regulation of cellular signaling pathways. The sixth article, by [Author], examines the role of phosphorus in the development of the nervous system. The seventh article, by [Author], investigates the impact of phosphorus deficiency on the immune system. The eighth article, by [Author], explores the role of phosphorus in the regulation of the cell cycle. The ninth article, by [Author], discusses the role of phosphorus in the metabolism of the brain. The tenth article, by [Author], examines the role of phosphorus in the regulation of the endocrine system. The eleventh article, by [Author], investigates the impact of phosphorus deficiency on the reproductive system. The twelfth article, by [Author], explores the role of phosphorus in the regulation of the circadian rhythm. The thirteenth article, by [Author], discusses the role of phosphorus in the metabolism of the liver. The fourteenth article, by [Author], examines the role of phosphorus in the regulation of the immune response. The fifteenth article, by [Author], investigates the impact of phosphorus deficiency on the development of the heart. The sixteenth article, by [Author], explores the role of phosphorus in the regulation of the respiratory system. The seventeenth article, by [Author], discusses the role of phosphorus in the metabolism of the kidney. The eighteenth article, by [Author], examines the role of phosphorus in the regulation of the digestive system. The nineteenth article, by [Author], investigates the impact of phosphorus deficiency on the development of the lungs. The twentieth article, by [Author], explores the role of phosphorus in the regulation of the reproductive system.

Phosphorus Storage Compounds in Microorganisms

Microorganisms have evolved various strategies to store phosphorus in the form of polyphosphates, phosphonates, and other phosphorus-containing compounds. These storage compounds play a crucial role in the survival of microorganisms in phosphorus-limited environments. This issue of *Biochem Physiol* features several articles that explore the role of phosphorus storage compounds in different microorganisms. The first article, by [Author], discusses the role of polyphosphates in the storage of phosphorus in bacteria. The second article, by [Author], examines the role of phosphonates in the storage of phosphorus in fungi. The third article, by [Author], investigates the impact of phosphorus deficiency on the growth and development of microorganisms. The fourth article, by [Author], explores the role of phosphorus storage compounds in the regulation of gene expression. The fifth article, by [Author], discusses the role of phosphorus storage compounds in the metabolism of microorganisms. The sixth article, by [Author], examines the role of phosphorus storage compounds in the regulation of cellular signaling pathways. The seventh article, by [Author], investigates the impact of phosphorus deficiency on the immune system. The eighth article, by [Author], explores the role of phosphorus storage compounds in the regulation of the cell cycle. The ninth article, by [Author], discusses the role of phosphorus storage compounds in the metabolism of the brain. The tenth article, by [Author], examines the role of phosphorus storage compounds in the regulation of the endocrine system. The eleventh article, by [Author], investigates the impact of phosphorus deficiency on the reproductive system. The twelfth article, by [Author], explores the role of phosphorus storage compounds in the regulation of the circadian rhythm. The thirteenth article, by [Author], discusses the role of phosphorus storage compounds in the metabolism of the liver. The fourteenth article, by [Author], examines the role of phosphorus storage compounds in the regulation of the immune response. The fifteenth article, by [Author], investigates the impact of phosphorus deficiency on the development of the heart. The sixteenth article, by [Author], explores the role of phosphorus storage compounds in the regulation of the respiratory system. The seventeenth article, by [Author], discusses the role of phosphorus storage compounds in the metabolism of the kidney. The eighteenth article, by [Author], examines the role of phosphorus storage compounds in the regulation of the digestive system. The nineteenth article, by [Author], investigates the impact of phosphorus deficiency on the development of the lungs. The twentieth article, by [Author], explores the role of phosphorus storage compounds in the regulation of the reproductive system.

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Polyphosphate and Apatite: An Evolutionary Insight

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