

SAS Studies Towards Exploring the Potential Use of Protein Ferritin as a Dietary Supplement

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Ferritin is a globular protein complex essential for iron assimilation and storage within the protein shell of apoferritin. Given its unique biochemical properties and globule topology, ferritin has diverse applications, some of which are already realized, while others remain prospective. This work focuses on a potential application of ferritin as a dietary supplement for iron deficiency and anemia prevention. We highlight the potential of ferritin as an iron source and supplement. We show that small-angle scattering studies of ferritin might enhance *in vitro* experiments towards understanding molecular mechanism of iron release and uptake. However, a deeper understanding of the molecular mechanisms regulating ferritin levels and iron metabolism is essential to determine the most effective ways to harness ferritin for human health.

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