

MBG FOCUS TALK

Hosted by Bjørn Panyella Pedersen



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Nucleus (1871-120)



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Ex vivo structures proteomics: new strategy for combining structure and plant research

Ex vivo structure determination of macromolecules from native source is gaining increasing attention from the scientific community, as the method can be employed to dissect the function of important, multi-component molecular machines. However, the existing *ex vivo* procedures often require genome manipulation or availability high-affinity binders, limiting the general applicability. Here, we report simple yet robust principles for isolation of protein complexes from enriched native biological material, enabling cryoEM-facilitated high-resolution structure determination. We report the structures of ten separate membrane and soluble protein complexes determined from spinach leaves. Moreover, the developed pipeline is likely adaptable to essentially any biological system. As such, the approach may represent an attractive avenue for future structural proteomics efforts.