BIOLOGICAL CHEMISTRY

Founded in 1877 by Felix Hoppe-Seyler as
Zeitschrift für Physiologische Chemie

Felix Hoppe-Seyler (1825–1895) was a pioneer of biochemistry, remembered not only for his discovery of hemoglobin and his contributions to the chemical characterization of many other biological compounds and processes but also for having been the mentor of Friedrich Miescher and Albrecht Kossel. In his preface to the first issue of ***Zeitschrift für Physiologische Chemie,*** Felix Hoppe-Seyler coined the term ***Biochemistry*** ('Biochemie') for the then newly emerging discipline.

Biological Chemistry is associated with the Gesellschaft für Biochemie und Molekularbiologie e.V. (GBM)

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COVER ILLUSTRATION
Dynamic organization of biomolecules into cellular microcompartments is increasingly investigated by novel fluorescence superresolution imaging techniques. Among these, single molecule localization-based techniques play a prominent role, as they allow multiplexed imaging and readily provide information on the mobility of biomolecules in the context of microcompartments. The cover image shows submicroscopic co-organization of the type I interferon receptor subunits IFNAR1 (green) and IFNAR2 (red) at the cortical actin skeleton (blue) resolved by live-cell triple colour superresolution. This was achieved by combining dual-color fluorescence photoactivation localization microscopy (FPALM) with direct stochastic optical reconstruction microscopy (dSTORM). With a resolution of approx. 25 nm for all three colors, dynamic association of the receptor subunit to cytoskeletal structures could be revealed. These studies highlight the key role of the cortical actin skeleton for submicroscopic organization of the plasma membrane. As dynamic micropartmentation is involved in most complex functions throughout the cell, fluorescence superresolution imaging techniques will be a prominent tool in future cell biology research (see the article by Hensel et al., this issue pp. 1097–1113).
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