

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.



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COVER ILLUSTRATION

Thioredoxin-interacting protein (TXNIP) is an important physiological inhibitor of the cellular thioredoxin redox system. Regulation of TXNIP expression and/or activity also has redox-independent physiological effects that exhibit direct pathophysiological consequences including elevated inflammatory response, aberrant glucose metabolism, cellular senescence and apoptosis, cellular immunity, and tumorigenesis. In their review article on pp. 1215-1231 in this issue, Cao et al. discuss the current knowledge about redox-dependent and independent roles of TXNIP and its relevance to various disease states, including possible implications for the therapeutic targeting of TXNIP. The front cover shows the physical interactive network of TXNIP: TXNIP complexed with its interacting proteins ITCH (pink), SHP2 (green) and VAV2 (gray) via its PPxY motifs (shown as stick-ball model in each complex).

Images courtesy of X. Cao, W. He, Y. Pang, Y. Cao and A. Qin. Structural models were generated from the coordinates with the PDB IDs 4ROJ (VAV2), 5CQ2 (ITCH) and 5DF6 (SHP2).



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