

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 PP_XY 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).



Contents

Reviews

Chiara Galber, Manuel Jesus Acosta, Giovanni Minervini and Valentina Giorgio

The role of mitochondrial ATP synthase in cancer — 1199

Xiankun Cao, Wenzin He, Yichuan Pang, Yu Cao and An Qin
Redox-dependent and independent effects of thioredoxin interacting protein — 1215

Verena Kohler and Claes Andréasson

Hsp70-mediated quality control: should I stay or should I go? — 1233

Research articles/Short communications

Protein structure and function

Ketaki D. Belsare, Anna Joëlle Ruff, Ronny Martinez and Ulrich Schwaneberg

Insights on intermolecular FMN-heme domain interaction and the role of linker length in cytochrome P450cin fusion proteins — 1249

Cell biology and signaling

Vijaya Lakshmi Bodiga, Praveen Kumar Vemuri, Greeshma Nimmagadda and Sreedhar Bodiga

Zinc-dependent changes in oxidative and endoplasmic reticulum stress during cardiomyocyte hypoxia/reoxygenation — 1257

Yuanjing Lv, Jinle Lu, Xin Liu, Susheng Miao, Xionghui Mao, Baojun Li, Rong Pei and Cheng Xiang

Histone deacetylase 1 regulates the malignancy of oral cancer cells via miR-154-5p/PCNA axis — 1273

Hilal Korkmaz, Deniz Önal, Murat Alışık, Özcan Erel and Bilge Pehlivanoğlu

The impact of oxytocin on thiol/disulphide and malonyldialdehyde/glutathione homeostasis in stressed rats — 1283

Andrew English, Sarah L. Craig, Peter R. Flatt and Nigel Irwin

Individual and combined effects of GIP and xenin on differentiation, glucose uptake and lipolysis in 3T3-L1 adipocytes — 1293