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Please use this identifier to cite or link to this item: http://hdl.handle.net/123456789/1983 Title: The glutathione cycle: Glutathione metabolism beyond the  $\gamma$ -glutamyl cycle Authors: Bachhawat, A.K. (/jspui/browse?type=author&value=Bachhawat%2C+A.K.) Yadav, Shambhu (/jspui/browse?type=author&value=Yadav%2C+Shambhu) Kevwords: ChaC1 GGT Glutathione Redox γ-glutamyl cycle Issue Date: Blackwell Publishing Ltd Publisher: Citation: IUBMB Life, 70(7), pp. 585-592 Abstract: Glutathione was discovered in 1888, over 125 years ago. Since then, our understanding of various functions and metabolism of this important molecule has grown over these years. But it is only now, in the last decade, that a somewhat complete picture of its metabolism has emerged. Glutathione metabolism has till now been largely depicted and understood by the γ-glutamyl cycle that was proposed in 1970. However, new findings and knowledge particularly on the transport and degradation of glutathione have revealed that many aspects of the  $\gamma$ -glutamyl cycle are incorrect. Despite this, an integrated critical analysis of the cycle has never been undertaken and this has led to the cycle and its errors perpetuating in the literature. This review takes a careful look at the  $\gamma$ glutamyl cycle and its shortcomings and presents a "glutathione cycle" that captures the current understanding of glutathione metabolism. © 2018 IUBMB Life, 70(7):585–592, 2018. © 2018 International Union of Biochemistry and Molecular Biology URI: https://iubmb.onlinelibrary.wiley.com/doi/full/10.1002/iub.1756 (https://iubmb.onlinelibrary.wiley.com/doi/full/10.1002/iub.1756) http://hdl.handle.net/123456789/1983 (http://hdl.handle.net/123456789/1983) Appears in Research Articles (/jspui/handle/123456789/9)

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