

Cover Picture

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The cover picture addresses a very general and basic question: is the active form of a protein only ever the native one? The single-molecule experiments reported in the article by Samorì et al. on p. 1774 ff indicate that angiostatin is present in vivo not only in its native, fully oxidized and folded structure, but in a series of partially reduced and partially unfolded structures. Access to these structures is controlled by the coupling of redox and mechanical switches, depicted on the cover figure for the K2–K3 fragment of this multimodular protein. If we assume that these structures, rather than the native one, can act as the active forms of this protein, a set of puzzling and so far unexplained data on the antiangiogenic activity of angiostatin can be accounted for. AFM-based single-molecule force spectroscopy was used in this study, and one of the recorded force curves is shown in the background of the picture.

