CBCHFX 9 (14) 2169 – 2336 (2008) · ISSN 1439-4227 · Vol. 9 · No. 14 · September 22, 2008

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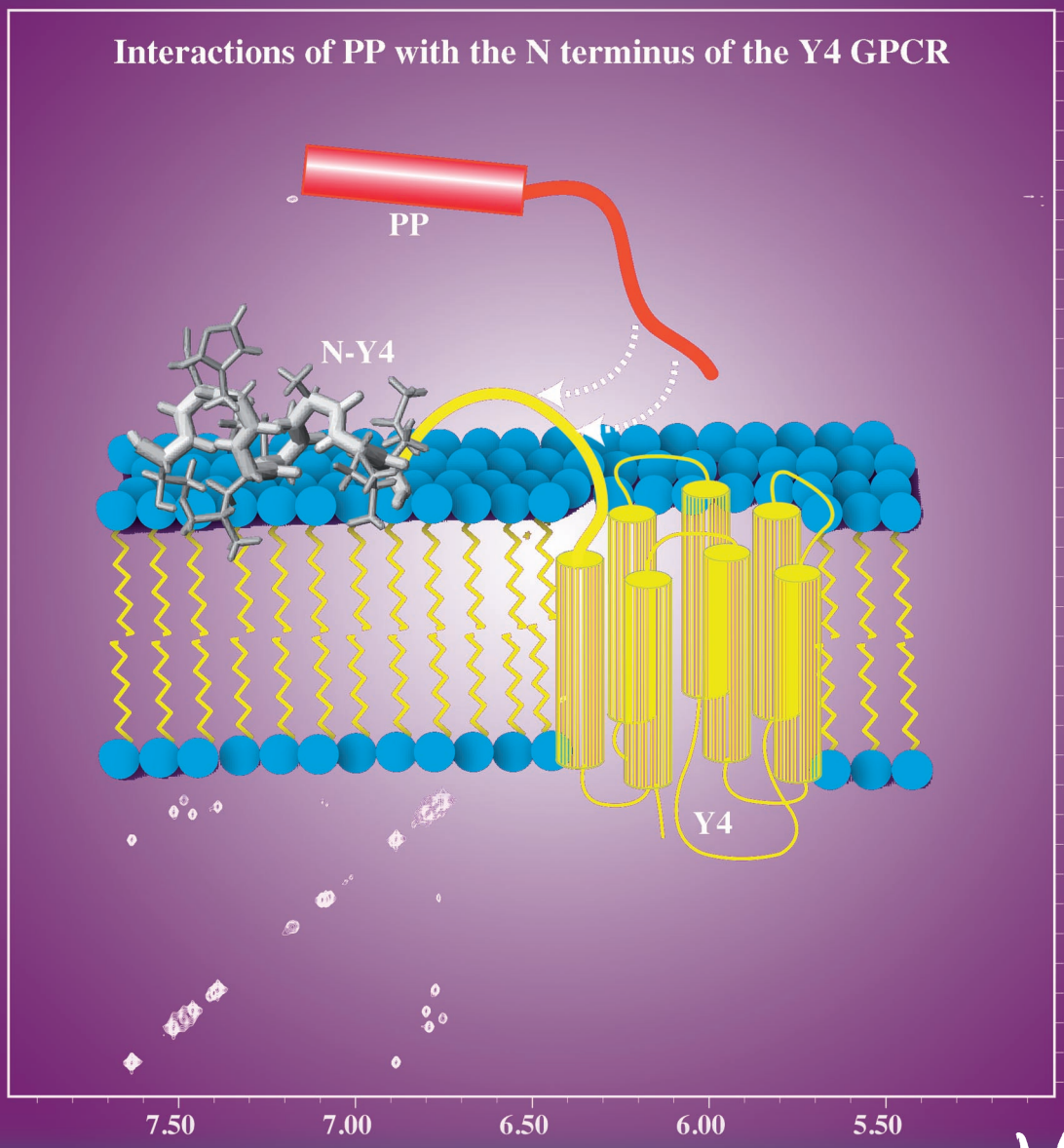
A EUROPEAN JOURNAL

CHEMBIOCHEM

OF CHEMICAL BIOLOGY



Chemistry & Life Sciences

14/2008

Minireview: Achieving Turnover in DNA-Templated Reactions
(O. Seitz)

Highlight: Histone H2B Ubiquitylation Directly Stimulates Histone H3K79 Methylation
(A. Jeltsch)

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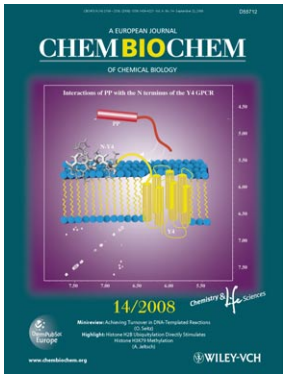
Cover Picture

Chao Zou, Sowmini Kumaran, Stefan Markovic, Reto Walser, and Oliver Zerbe*



The cover picture shows the conformation of a structured region of the N-terminal domain of the Y4 receptor, a mammalian GPCR, as determined in this issue. The remainder of the receptor and its ligand, the pancreatic polypeptide, is drawn schematically. Signaling through the Y4 receptor influences important physiological functions such as gastrointestinal regulation. The extracellular domain of the Y4 receptor was expressed, and NMR techniques revealed it to be mostly flexible with the exception of a membrane-associated helix. The pancreatic polypeptide (PP) binds to the N-terminal domain with a dissociation constant of ~ 50 mM as measured by surface-plasmon resonance; while site-directed mutagenesis revealed that electrostatic interactions dominate. In contrast, neuropeptide Y (NPY) and the peptide YY (PPY), which target this receptor subtype with lower affinity, also bind significantly less strongly to the N-terminal domain of Y4. For further details see the article by O. Zerbe et al. on p. 2276 ff.