

Oral presentation

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## Structural insights into sGC

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from 4th International Conference of cGMP Generators, Effectors and Therapeutic Implications  
Regensburg, Germany. 19–21 June 2009

Published: 11 August 2009

*BMC Pharmacology* 2009, **9**(Suppl 1):S42 doi:10.1186/1471-2210-9-S1-S42

This abstract is available from: <http://www.biomedcentral.com/1471-2210/9/S1/S42>

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The membrane and soluble guanylyl cyclases (sGCs) are key families of enzymes that produce the second messenger cGMP. Although both families recognize different ligands and have therefore different N-terminal input domains, they do have similar C-terminal output domains containing a coiled-coil domain and a guanylyl cyclase catalytic domain. We present here our latest structure-function studies on both the sGC and membrane guanylyl cyclases in an effort to enhance our molecular understanding of these receptors to delineate their similarities and differences. Our studies include a new 2.15 Å crystal structure of part of sGC and mutagenesis studies of these families of guanylyl cyclases thereby providing new insights into the structure, activation, and regulation of these receptors.