

# Intracellular messengers

Pergamon Press - Molecular action of hormones and intracellular messengers

**4. Intracellular Second Messengers**

<p>• <b>Definition:</b> Second messengers are small molecules produced in the cytoplasm in response to the activation of a cell surface receptor</p>	<p>• <b>Examples :</b></p> <ul style="list-style-type: none"> <li>• cAMP</li> <li>• <math>IP_3</math>, DAG, <math>Ca^{2+}</math></li> <li>• cGMP</li> <li>• Nitric Oxide (NO)</li> </ul>
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Second messengers start a cascade of intracellular events (enzyme activation, inhibition) resulting in a specific cellular response

Description: -

- Signal Transduction.  
G proteins.  
Second messengers (Biochemistry)  
Cellular signal transduction. Intracellular messengers

- section 139

International encyclopedia of pharmacology and therapeutics  
; Intracellular messengers

Notes: Includes bibliographical references and index.

This edition was published in 1993



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Tags: #Intracellular #messengers #in #the #generation #and #degeneration #of #hippocampal #neuroarchitecture

## Intracellular Signal Transduction by G protein coupled receptor 'GPCR Signalling'

When signaling occurs, ligand-gated calcium ion channels allow the higher levels of  $Ca^{2+}$  that are present outside the cell or in intracellular storage compartments to flow into the cytoplasm, which raises the concentration of cytoplasmic  $Ca^{2+}$ . Digital Library Federation, December 2002.

## Understanding Second Messenger Systems

These physiological effects are exerted through binding to a number of proteins which includes cyclic nucleotide dependant protein kinases, cyclic nucleotide gated channels and cyclic nucleotide-regulated phosphodiesterases. Zhang J, Campbell RE, Ting AY, Tsien RY.

## Intracellular Signaling Cascades

Third, to elaborate the detailed molecular mechanisms by which the drugs produce the altered biochemical and electrophysiological phenotypes.

## Reactome

These are made available by the action of the other second messenger —  $IP_3$ . J Cell Biol 171: 303—312, 2005.

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## Related Books

- [Excess and restraint - Propertius, Horace and Ovids Ars Amatoria](#)
- [Computing anticipatory systems - CASYS 2000, fourth international conference, Liège, Belgium, 7-12](#)
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