

NOBEL PRIZE IN CHEMISTRY IN 2004 FOR UBIQUITIN-DEPENDENT PROTEIN DEGRADATION

Summary

In the article Nobel laureates in chemistry for 2004 — Irvine Rose, Avram Hershko and Aron Ciechanover — and their achievements in elucidating the ubiquitin-mediated protein degradation are presented and the function of ubiquitin in this process is shortly reviewed. Moreover, ubiquitin ligases involved in

the ubiquitylation of the main cell cycle regulators as well as the mechanisms regulated by their activities are described. Examples of the abnormalities of functioning of the ubiquitin/proteasome system in various diseases and possibilities of pharmacological intervention in its action are also presented.