

## Original peer-reviewed articles (selected; since 1995):

1. Stancovski, I., Gonen, H., Orian, A., Schwartz, A.L., and **Ciechanover, A.** (1995). Degradation of the Proto-oncogene Product c-Fos by the Ubiquitin Proteolytic System *In Vivo* and *In Vitro*: Identification and Characterization of the Conjugating Enzymes *Mol. Cell Biol.* **15**, 7106-7116.
2. Gonen, H., Stancovski, I., Shkedy, D., Hadari, T., Bercovich, B., Bengal, E., Mesilati, S., Abu-Chatoum, O., Schwartz, A. L., and **Ciechanover, A.** (1996). Isolation, Characterization, and Partial Purification of a Novel Ubiquitin-Protein Ligase, E3: Targeting of Protein Substrates Via Multiple and Distinct Recognition Signals and Conjugating Enzymes. *J. Biol. Chem.* **271**, 302-310.
3. Bercovich, B., Stancovski, I., Mayer, A., Blumenfeld, N., Laszlo, A., Schwartz, A.L., and **Ciechanover, A.** (1997). Ubiquitin-Dependent Degradation of Certain Protein Substrates *In Vitro* requires the Molecular Chaperone Hsc70. *J. Biol. Chem.* **272**, 9002-9010.
4. Gross-Mesilaty, S., Reinstein, E., Bercovich, B., Tobias, K.E., Kahana, C., and **Ciechanover, A.** (1998). Basal and Human Papillomavirus E6 Oncoprotein-Dependent Accelerated Degradation of Myc Proteins by the Ubiquitin Proteolytic Pathway. *Proc. Natl. Acad. Sci. USA* **95**, 8058-8063.
5. Abu Hatoum, O., Gross-Mesilaty, S., Breitschopf, K., Hoffman, A., Gonen, H., **Ciechanover, A.\***, and Bengal, E. (1998). Degradation of the Myogenic Transcription Factor MyoD by the Ubiquitin Pathway *In Vivo* and *In Vitro*: Regulation by Specific DNA-Binding. *Mol. Cell. Biol.* **18**, 5670-5677.  
\*Senior corresponding author.
6. Breitschopf, K., Bengal, E., Ziv, T., Admon, A., and **Ciechanover, A.** (1998). A Novel Site for Ubiquitination: The N-Terminal Residue and Not Internal Lysines of MyoD is Essential for Conjugation and Degradation of the Protein. *EMBO J.* **17**, 5964-5973.
7. Orian, A., Schwartz, A.L., Israël, A., Whiteside, S., Kahana, C., and **Ciechanover, A.** (1998). Structural Motifs Involved in Ubiquitin-Mediated Processing of the NF- $\kappa$ B Precursor p105: Roles of the Glycine-Rich Region and a Downstream Ubiquitination Domain. *Mol. Cell. Biol.* **19**, 3664-3673.

8. Gonen, H., Bercovich, B., Orian, A., Carrano, A., Takizawa, C., Yamanaka, K., Pagano, M., Iwai, K., and **Ciechanover, A.** (1999). Identification of the Ubiquitin Carrier Proteins, E2s, Involved in Signal-Induced Conjugation and Subsequent Degradation of I $\kappa$ B $\alpha$ . *J. Biol. Chem.* **274**, 14823-14830.
9. Orian, A., Gonen, H., Bercovich, B., Fajerman, I., Eytan, E., Israël, A., Mercurio, F., Iwai, K., Schwartz, A.L., and **Ciechanover, A.** (2000). SCF- $\beta$ -TrCP Ubiquitin Ligase-Mediated Processing of NF- $\kappa$ B p105 Requires Phosphorylation of its C-Terminus by I $\kappa$ B Kinase. *EMBO J.* **19**, 2580-2591.
10. Aviel, S., Winberg, G., Massucci, M., and **Ciechanover, A.** (2000). Degradation of Epstein-Barr Virus Latent Membrane Protein 1 (LMP1) by the Ubiquitin-Proteasome Pathway: Targeting via Ubiquitination of the N-Terminal Residue *J. Biol. Chem.* **275**, 23491-23499.
11. Reinstein, E., Scheffner, M., Oren, M., Schwartz, A.L., and **Ciechanover, A.** (2000) Degradation of the E7 Human Papillomavirus Oncoprotein by the Ubiquitin-Proteasome System: Targeting via Ubiquitination of the N-Terminal Residue. *Oncogene* **19**, 5944-5950.
12. Cohen, S., Orian, A., and **Ciechanover, A.** (2001). Processing of p105 is Inhibited by Docking of p50 Active Subunits to the Ankyrin Repeat Domain, and Inhibition is Alleviated by Signaling via the C-Terminal Phosphorylation/Ubiquitin-Ligase Binding Domain. *J. Biol. Chem.* **276**, 26769-26776.
13. Amir, R.E., Iwai, K., and **Ciechanover, A.** (2002). The NEDD8 pathway is required for SCF-mediated processing of the NF- $\kappa$ B precursor p105. *J. Biol. Chem.* **277**, 23253-23259.
14. Ben-Izhak, O., Lahav-Baratz, S., Meretyk, S., Ben-Eliezer, S., Sabo, E., Dirnfeld, M., Cohen, S., and **Ciechanover, A.** (2003). Inverse Relationship Between Skp2 Ubiquitin Ligase and the Cyclin Dependent Kinase Inhibitor p27<sup>Kip1</sup> in Prostate Cancer. *J. Urol.* **170**, 241-245.
15. Amir, R.E., Haecker, H., Karin, M., and **Ciechanover, A.** (2004) Mechanism of Processing of the NF- $\kappa$ B2 p100 Precursor: Identification of the Specific Polyubiquitin Chain-Anchoring Lysine Residue and Analysis of the Role of NEDD8-Modification on the SCF <sup>$\beta$ -TrCP</sup> Ubiquitin Ligase. *Oncogene* **23**, 2540-2547.

16. Cohen, S., Achbert-Weiner, H., and Ciechanover, A. (2004). Dual Effect of IKK $\beta$ -Mediated Phosphorylation on p105 Fate: SCF $^{\beta$ -TrCP-Dependent Degradation and SCF $^{\beta$ -TrCP-Independent Processing. *Mol. Cell. Biol.* **24**, 475-486.

#### **Review Articles:**

1. Hershko, A. and Ciechanover, A. (1998). The Ubiquitin System. *Annu. Rev. Biochem.* **67**, 425-479.
2. Ciechanover, A. 1998. The Ubiquitin-Proteasome Pathway: On Proteins Death and Cell Life. *EMBO J.* **17**, 7151-7160.
3. Schwartz, A., and Ciechanover, A. (1998). The Ubiquitin-Proteasome Pathway: Involvement in the pathogenesis of Human Diseases. *Annu. Rev. Med.* **50**, 57-74.
4. Kornitzer, D., and Ciechanover, A. (2000). Modes of Regulation of Ubiquitin-Mediated Protein Degradation. *J. Cell. Physiol.* **182**, 1-11.
5. Ciechanover, A., Orian, A., and Schwartz, A.L. (2000). Ubiquitin-Mediated Proteolysis: Biological Regulation via Destruction. *BioEssays* **22**, 442-451.
6. Ciechanover, A. (2000). The Ubiquitin System: From Obscurity to the Patient Bed. *Nature Medicine* **6**, 1075-1077. (Part of a commentary published on the occasion of winning the 2000 Lasker Award for Basic Medical Research: Hershko, A., Ciechanover, A., and Varshavsky, A. (2000) The Ubiquitin System. *Nature Medicine* **6**, 1073-1081.
7. Ciechanover, A. (2001). Parkinson's Disease: Linking Ubiquitination, Parkin and Synphilin-1. *Nature Medicine* **7**, 1108-1109.
8. Ciechanover, A., and Schwartz, A.L. (2001). Ubiquitin-Mediated Degradation of Cellular Proteins in Health and Disease. *Hepatology* **35**, 3-6.
9. Ciechanover, A., and Brundin, P. (2003). The Ubiquitin-Proteasome System in Neurodegenerative Diseases: Sometimes the Chicken, Sometimes the Egg. *Neuron* **40**, 427-446.
10. Ciechanover, A., and Ben-Saadon R. (2004). N-Terminal Ubiquitination: More Protein Substrates Join In. *Trends Cell Biol.* **14**, 103-106.

Dr. Ciechanover published close to 100 original, peer-reviewed, and 25 review articles, 20 book chapters, and edited two books on the ubiquitin system. He was also the guest editor of a special issue of a periodical dedicated to the involvement of the ubiquitin system in the pathogenesis of malignancies. The first articles, at the late 70s and early 80s, describing the basic components and mode of action of the system *in vitro*, were published when Ciechanover was a graduate student of Prof. Avram Hershko in the Technion. Later, as a post-doctoral fellow in the laboratory of Dr. Harvey Lodish at M.I.T, and in collaboration with Prof. Alexander Varshavsky and his then graduate student, Prof. Daniel Finley, he described the system in cells. Since 1984, he has been studying the system in his own laboratory in the Faculty of Medicine of the Technion.