

Aaron Ciechanover:

Aaron Ciechanover was born in Haifa, Israel in 1947. He is currently a Distinguished Research Professor in the Faculty of medicine at the Technion - Israel Institute of Technology in Haifa, Israel. He received his M.Sc. (1971) and M.D. (1973) from the Hebrew University in Jerusalem. He then completed his national service (1973-1976) as military physician, and continued his studies to obtain a doctorate in biological sciences in the Faculty of Medicine in the Technion (D.Sc.; 1982). There, as a graduate student with Dr. Avram Hershko and in collaboration with Dr. Irwin A. Rose from the Fox Chase Cancer Center in Philadelphia, USA, they discovered that covalent attachment of ubiquitin to a target protein signals it for degradation. They deciphered the mechanism of conjugation, described the general proteolytic functions of the system, and proposed a model according to which this modification serves as a recognition signal for a specific downstream protease. As a post-doctoral fellow with Dr. Harvey Lodish at the M.I.T., he continued his studies on the ubiquitin system and made additional important discoveries. Along the years it has become clear that ubiquitin-mediated proteolysis plays major roles in numerous cellular processes, and aberrations in the system underlie the pathogenetic mechanisms of many diseases, among them certain malignancies and neurodegenerative disorders. Consequently, the system has become an important platform for drug development. Among the numerous prizes Ciechanover received are the 2000 Albert Lasker Award, the 2002 EMET Prize, the 2003 Israel Prize, and the 2004 Nobel Prize (Chemistry; shared with Drs. Hershko and Rose). Among many academies, Ciechanover is member of the Israeli National Academy of Sciences and Humanities, The European Molecular Biology Organization (EMBO), the American Academy of Arts and Sciences (Foreign Fellow), the American Philosophical Society, the National Academies of Sciences (NAS) and Medicine (NAM) of the USA (Foreign Associate), the Pontifical Academy of Sciences at the Vatican, the Chinese Academy of Sciences (CAS; Foreign Member), the Russian Academy of Sciences (Foreign Member), and the German Academy of Sciences (Leopoldina).

February 2026

CURRICULUM VITAE

NAME:

Aaron J. Ciechanover

DATE OF BIRTH:

October 1, 1947

PLACE OF BIRTH:

Haifa, Israel

ADDRESS:

Rappaport-Technion-I.I.T. Integrated Cancer Center
(R-TICC), The Rappaport Faculty of Medicine and
Research Institute,
Technion-Israel Institute of Technology,
P.O. Box 9649,
Haifa 31096, ISRAEL

coordinator: Telephone: Mrs. Meirav Franks, research
+972-4-829-5427; +972-4-829-5356
Laboratory:
+972-4-829-5379; +972-4-829-5399

Fax: Laboratory: +972-4-851-3922
Mrs. Meirav Franks, research
coordinator:
+972-4-852-1193
e-Fax: +972-3-725-5981

e-mail: **Aaron Ciechanover:**
aaroncie@technion.ac.il
Mrs. Meirav Franks,
Research Coordinator:
meiravf@technion.ac.il

MILITARY SERVICE:

1974-1977 National Compulsory Service, Israel Defense Forces (IDF).
Military Combat Physician, Israeli Navy and the Unit for
Research and Development, Surgeon General Headquarters.

EDUCATION:

DEGREES:

1970 M.Sc.: Medical Sciences. Summa Cum Laude.
Faculty of Life Sciences and the Department of
Biochemistry, "Hadassah" and the Hebrew
University Faculty of Medicine, Jerusalem,
Israel.

1974	M.D.:	"Hadassah" and the Hebrew University Faculty of Medicine, Jerusalem, Israel.
1981	D.Sc.:	Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel.

CLINICAL TRAINING:

1973-1974	Internship.	"Rambam" University Medical Center, and the Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel.
1974-1979	Partial training.	Department of Surgery "B", "Rambam" University Medical Center and the Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel.

ACADEMIC APPOINTMENTS (Technion):

1977-1979	Research Fellow.	Department of Biochemistry, Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel.
1979-1981	Lecturer.	Department of Biochemistry, Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel.
1984-1987	Senior Lecturer (with tenure).	Department of Biochemistry, Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel.
1987-1992	Associate Professor.	Department of Biochemistry, Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel.
1992-	Full Professor.	Department of Biochemistry, Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel.
2002-	Distinguished University Professor.	Technion-Israel Institute of Technology, Haifa, Israel.

ACADEMIC APPOINTMENTS (Foreign Universities):

2011-2014	Adjunct Professor and Co-Director (along with Professor Guigen Li). The Institute for Chemistry and Biomedical Studies (ICBS), Nanjing University, Nanjing, China.
-----------	---

ADMINISTRATIVE APPOINTMENTS:

1993-2000	Director. The Rappaport Family Institute for Research in the Medical Sciences. Technion-Israel Institute of technology, Haifa, Israel.
2004-2009	Founder and Director. The Lorry Lokey Interdisciplinary Center for Life Sciences and Engineering. Technion-Israel Institute of Technology, Haifa, Israel
2015-2018	Vice Chancellor. Guandong-Technion-Israel Institute of Technology (GTIIT), Shantou, Guandong Province, China

- 2018- **Special envoy of the President of the Technion.** Guandong-Technion-Israel Institute of Technology (GTIIT), Shantou, Guandong Province, China
- 2015- **Chairman of the Board.** The Rappaport Family Institute for Medical Sciences, Faculty of Medicine, Technion-Israel Institute of Technology.
- 2014-2018 **Founder and Co-Director** (along with Professor Ze'ev Ronai). Technion Integrated Cancer Center (TICC). Technion-Israel Institute of technology, Haifa, Israel.
- 2018 **Chairman of the Board.** Rappaport-Technion Integrated Cancer Center (R-TICC).

VISITING APPOINTMENTS:

- 1978, 1979 **Visiting Scientist.** The Institute for Cancer Research, The Fox Chase Cancer Center, Philadelphia, Pennsylvania, USA (Dr. Irwin A. Rose's laboratory).
- 1980, 1981
- 1981-1984 **Postdoctoral Fellow.** Department of Biology, Massachusetts Institute of Technology (M.I.T.) and The Whitehead Institute for Biomedical Research, Cambridge, Massachusetts, USA (Dr. Harvey F. Lodish's laboratory).
- 1985, 1986 **Visiting Professor.** The Dana Farber Cancer Institute and Harvard Medical School, Boston, Massachusetts, USA (Dr. Alan L. Schwartz's laboratory).
- 1987, 1988-1989 **Visiting Professor.** Division of Hematology-Oncology, Department of Pediatrics, Children's Hospital, Washington University School of Medicine, St. Louis, Missouri, USA. (Dr. Alan L. Schwartz's laboratory).
- 1990, 1991, 1992
- 1993, 1994, 1995
- 1996, 1997, 1998
- 1999, 2001
- 1988-1989 **American Cancer Society Eleanor Roosevelt Memorial Visiting Professor.** Division of Hematology-Oncology, Department of Pediatrics, Children's Hospital, Washington University School of Medicine, St. Louis, Missouri, USA. (Dr. Alan L. Schwartz's laboratory).
- 2000 **Visiting Professor.** University of Kyoto School of Medicine (within the frame of the JSPS – Japan Society for Promotion of Science – Young Scientist Award (Dr. Kazuhiro Iwai's Laboratory).
- 2002, 2003 **Visiting Adjunct Professor.** Northwestern University School of Medicine, Chicago, Illinois, USA. (Department of Medicine and Division of Pulmonary Critical care: Dr. Jacob J. Sznajder's Laboratory).
- 2003, 2005, 2007, 2009 **Visiting Professor.** STINT Fellow. Microbiology and Tumor Biology Center (MTC), and the Department of Cell and Molecular Biology (CMB). The Karolinska Institute, Stockholm, Sweden (Laboratory of Dr. Maria Masucci).

- 2002, 2003-2004, 2005, 2016 **Visiting Professor** (within the frame of the JSPS – Japan Society for Promotion of Science – Eminent Scientist Award). City University of Osaka and Kyoto University Schools of Medicine (Dr. Kazuhiro Iwai’s Laboratory).
- 2004 **Visiting Professor.** Rockefeller University, New York, NY, USA (Dr. Hermann Steller’s laboratory).
- 2007- **Distinguished Visiting Research Professor.** National Cheng Kung University (NCKU), Tainan, Taiwan.
- 2007- **Member.** The Institute for Advanced Studies, Honk Kong University of Science and Technology (HKUST)
- 2013-2014 **Extraordinary Professor.** The “TEFAF Oncology Chair”. School of Oncology and Developmental Biology, Faculty of Health, Medicine, and Life Sciences, Maastricht University, Maastricht, The Netherlands.
- 2011-2014 **Co-director.** The Institute for Chemical and BioMedical Sciences (ICBMS), Nanjing University, Nanjing, P.R. China
- 2014-2019 **Co-Director** (along with Professor Yong-Tae Kwon). The Center for Protein Dynamics, Seoul National University (SNU) School of Medicine, Seoul, South Korea.

BOARDS (academic):

- 2005 -2010 Chairman, Scientific Advisory Board, Rambam Medical Center, Haifa, Israel
- 2005- Scientific Advisory Board, National Institute of Biotechnology - NIBN, Ben Gurion University in the Negev, Beer Sheba, Israel
- 2005 - Board of Governors, Ben Gurion University in the Negev, Beer Sheba, Israel
- 2005 - Board of Governors, Haifa University, Haifa, Israel
- 2005- Member, Scientific Advisory Board, Migal Research Institute, Kiryat Shmona, Israel
- 2006- Board of Governors, Israeli Academy for the Hebrew Language, Jerusalem, Israel
- 2006 - Institute of Advanced Studies, Hong Kong University of Science and Technology
- 2006 - Scientific Advisory Board. Britton Chance Center for BioMedicalPhotonics. Huazhong University of Science and Technology, Wuhan, China
- 2006- International Union for Biochemistry and Molecular Biology (IUBMB)
- 2007 - Board of Directors, German-Israeli Foundation (GIF) for Scientific Research and Development
- 2007- Angelman Syndrome Foundation, USA
- 2008- Israel National Council for Research and Development (Molmop)
- 2008 - President’s council, NY Academy of Sciences

2009-	International Institute for Biomedical Science and Technology (IIBMST), Upstate Medical University, Syracuse, NY, USA.
2009-	National Advisory Board, Government of Singapore
2009-	Scientific Advisory Board, San Raffaele Scientific Institute, Milan, Italy
2009 - 2020	Scientific Advisory Board, Venetian Institute of Molecular Medicine - VIMM, Padua, Italy
2009-	Scientific Advisory Board, CEINGE-Biotecnologie Avanzate, Napoli, Italy
2010-	Scientific Advisory Board, Rabin-Schneider Pediatric Medical Center, Petach Tikva, Israel.
2011-	Scientific Advisory Board, Friedrich Miescher Institute (Novartis), Basel, Switzerland
2015-	Scientific Advisory Board, Faculty of Life Sciences, University of Macau, Macau
2015-	Consultant to the President on Academic Affairs and Academic Development, University of Macau, Macau
2015-	President (Honorary), Global Foundation for Man's Health
2017-	Scientific Advisory Board, Migal Research Institute, Kiryat Shmona, Israel.

BOARDS (non-academic):

- (1) Achva - Organization of the handicapped people in North Israel
- (2) President (Honorary) IsrALS (Amyotrophic Lateral Sclerosis Association), Israel
- (3) Children at Risk Organization, Israel
- (4) Genealogical Institute, Jerusalem, Israel
- (5) MadaTech - Youth Science Center and Museum, Hadera, Israel
- (6) Rashi -Saksta Charity Foundation, Israel (past)
- (7) STEP-GTP - Science Training Encouraging Peace - Graduate Training Programs for Israeli and Palestinians, Tufts University, Boston, MA, USA
- (8) Wolfson Family Charitable Foundation, Tel Aviv, Israel (past)
- (9) It is all about Education Foundation (HaKol Hinuch), Israel (past)
- (10) President (Honorary), Israel Cancer Society (ICS)
- (11) Technoda – Science Museum, Haifa, Israel

SCIENTIFIC ADVISORY BOARDS (companies):

Current:

- (1) StemRad, Rehovot, Israel;
- (2) BioTheryX, Inc., New York, NY, USA;
- (3) BetaVie-BGGuard, Haifa, Israel;
- (4) Bio-Devash, Rehovot, Israel (pending);
- (5) Oncohost, Binyamina, Israel;
- (6) RemedyCell, Haifa, Israel;
- (7) Tripod BioTherapeutics, Haifa, Israel.

Past:

- (1) ARTemis Simetra, Haifa, Israel;
- (2) Chiasma, Jerusalem, Israel;
- (3) Keryx, Jerusalem, Israel;
- (4) Lumitest, Haifa, Israel;
- (5) Theravita, Rehovot, Israel;
- (6) BioMimic Pharma (Yoram Reiter). Haifa, Israel;
- (7) Allosterix, Rehovot, Israel;
- (8) Oncobate (Amir Goren), Rehovot, Israel;
- (9) Vaxil (Lior Carmon), Rehovot, Israel;
- (10) Aurora MRI, Andover, MA, USA;
- (11) CanFite, Petach Tiqva, Israel;
- (12) Celgene, Warren, NJ, USA;
- (13) MGVS, Haifa, Israel;
- (14) Rosetta Genomics, Rehovot, Israel;
- (15) Oran, Delaware, USA;
- (16) Proteologics, Rehovot, Israel.
- (17) Quintiles (Sara Bacus), Westmont, Illinois, USA;
- (18) BioLine Rx, Jerusalem, Israel
- (19) BioCancell, Jerusalem, Israel;
- (20) BioLine Rx, Jerusalem, Israel;
- (21) Natural Cure (Technion, SunPharma), Haifa, Israel;
- (21) NovoCure, Haifa, Israel;
- (22) Protalix, Karmiel, Israel;
- (23) BioTree, Boston, Massachusetts, USA;
- (24) CureLab Oncology, Inc. (CL Oncology), California, USA;
- (25) HealthWatch Technologies, Inc., Herzliya, Israel;
- (26) NovellusDX, Inc., Jerusalem, Israel;
- (27) Haplogen, Vienna, Austria
- (28) NovItero, Rehovot, Israel;
- (29) PTM, Caesarea, Israel

SOCIETIES and NGOs (active role):

2010-	President (Honorary), Israel Cancer Society
2014-	President (Honorary) – IsrALS (The Israel Amyotrophic Lateral Sclerosis Society)
2015-	President (Honorary), Global Foundation for Man’s Health
2018-	President (Honorary), Israeli Society for Skin Cancer

FELLOWSHIPS:

1981-1984	Fulbright Fellow. Massachusetts Institute of Technology (M.I.T.) Cambridge, Massachusetts, USA (Dr. Harvey Lodish’s Laboratory).
1981-1983	Leukemia Society of America Fellow. M.I.T.
1981-1984	Israel Cancer Research Fund (ICRF), USA Fellow. M.I.T.

- 1983-1984 Medical Foundation and Charles A. King Trust Fellow.
M.I.T.
Research Career Development Award, Israel Cancer Research Fund (ICRF), USA.
- 1988-1989 American Cancer Society Eleanor Roosevelt Memorial Fellow.
- 2003- Professor, Israel Cancer Research Fund (ICRF), USA
2011- Alexander von Humboldt Fellow, Alexander von Humboldt Stiftung, Bonn, Germany.

EDITORIAL BOARDS:

- 1999- Israel Medical Association Journal (IMAJ)
2006- Experimental Biology and Medicine
2007- Cell Death and Differentiation (CDD; Nature Group)
2008- Science China - Life Sciences
2005- Structural Chemistry (Springer)
2015- European Journal of Neurodegenerative Diseases

AWARDS (academic):

- 1999 The Austria Ilse and Helmut Wachter Prize, University of Innsbruck (along with Dr. Avram Hershko).
- 2000 The Jewish National Fund Alkales Award for Distinguished Scientific Achievements.
- 2000 The Albert and Mary Lasker Award for Basic Medical Research (along with Drs. Avram Hershko and Alexander Varshavsky)
- 2001 The Michael Landau (Mifa'al Ha'Peis) Award in Medical Sciences (along with Dr. Avram Hershko).
- 2002 EMET (Truth) Prize (Israeli Prime Minister Prize), for Arts, Sciences and Culture (in Life Sciences and Medicine along with Drs. Avram Hershko and Leo Sachs). Awarded by the AMAN Foundation.
- 2003 The Israel Prize for Biology
- 2003-2006, 2017 Japan Society for Promotion of Science (JSPS) Eminent Scientist Fellowship
- 2004 Nobel Prize in Chemistry (shared with Drs. Avram Hershko and Irwin A. Rose)
- 2025 The Weinman Prize for Cancer Research, the Weinman Foundation and the Cancer Center, University of Hawaii at Honolulu, USA

HONORS (academic):

- 1996- Janet and David Polak Professor of Life Sciences.
Technion-Israel Institute of Technology, Haifa, Israel
- 2002- University Distinguished Research Professor.
Technion-Israel Institute of Technology, Haifa, Israel.

2003- Professor. Israel Cancer Research Fund (ICRF), USA.
 2006 Sir Hans Krebs Medal. Federation of the European Biochemical Societies (FEBS).
 2007 Medical Magnus Medal. Polish Academy of Medicine.
 2010 Lee Kuan Yew Visiting Professorship and Award, Singapore.
 2011 IUBMB (International Union of Biochemistry and Molecular Biology) Medal for Distinct Contribution to Science, Society and the IUBMB Mission
 2024 Vladimir Ivanovich (V.I.) Vernadsky Medal and Diploma, Ukrainian Academy of Sciences, Kyiv, Ukraine,

MEMBERSHIPS (academies, etc.):

1996- Member, Council of the European Molecular Biology Organization (EMBO).
 1999- Member. Asia-Pacific IMBN (International Molecular Biology Network)
 2004- Member. European Academy of Arts and Sciences.
 2004- Member. European Academy of Sciences.
 2004- Fellow. European Academy of Sciences.
 2004- Member. Israeli National Academy of Sciences and Humanities.
 2004- Member (Hon.). American Chemical Society (ACS)
 2005- Fellow (Hon.). Royal Society of Chemistry RCS, (UK). HonFRSC.
 2005- Member. American Philosophical Society
 2005- Cell Stress Society international (CSSi) Medal and Distinguished Life Member.
 2006- Honorary Member. Society for Experimental Biology and Medicine.
 2006- Fellow. Federation of Asian Chemical Societies (FACS).
 2007- Member. Pontifical Academy of Sciences, The Vatican.
 2007- Member. Polish Academy of Medicine.
 2007- Member. Albert Schweitzer World Academy of Medicine.
 2007- Member. National Academy of Science and Technology of South Korea
 2007- Associate (Foreign). National Academy of Sciences of the USA (NAS USA).
 2008- Fellow (Honorary; Foreign). American Academy of Arts and Sciences (AAAS).
 2008- Associate (Foreign). National Academy of Medicine (previously Institute of Medicine; IOM) of the National Academies of the USA (NAM).
 2009- Member (Foreign), Ukrainian Academy of Sciences
 2009- Member (Founding), European Academy of Cancer Sciences
 2009- Member, Academia Europaea

- 2011- Member (Honorary). Hellenic Society for Biochemistry and Molecular Biology
- 2011- Member (Honorary). World Immunopathology Organization (WIPO)
- 2011- Member (Foreign). Russian Academy of Sciences
- 2011- Alexander von Humboldt Fellow, Alexander von Humboldt Stiftung, Bonn, Germany.
- 2012- Member (Foreign). Georgian Academy of Sciences, Tbilisi, Georgia
- 2012- Member (Honorary), Georgian Association of Allergology and Clinical Immunology
- 2012- Member, American Association for Cancer Research (AACR) Academy.
- 2013- Fellow, American Academy for Cancer Research (AACR).
- 2013- Member (Foreign), Chinese Academy of Sciences (CAS).
- 2016- Member, Royal European Academy of Doctors (Barcelona, Spain)
- 2016- Member, German National Academy of Sciences (Leopoldina)

MEMBERSHIPS (professional organizations):

- 1984 - American Association for Advancement of Science (AAAS)

HONORARY DEGREES (academic institutions):

- 2001 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). Tel Aviv University, Tel Aviv, Israel.
- 2004 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Ben-Gurion University, Beer Sheba, Israel.
- 2005 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), City University of Osaka, Osaka, Japan.
- 2005 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), University of Athens, Greece.
- 2005 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), National University of Uruguay, Montevideo, Uruguay.
- 2006 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Washington University, St. Louis, Missouri, USA
- 2006 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Cayetano Heredia University, Lima, Peru.
- 2006 Honorary Professor. Capital University of Medical Sciences (CPUMS), Beijing, China.
- 2006 Honorary Professor. Peking Union Medical College (PUMC). Beijing, China.
- 2006 Honorary Professor. Chinese Academy of Medical Sciences (CAMS), China.
- 2007 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Hebrew University, Jerusalem, Israel.

- 2007 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Bar-Ilan University, Ramat Gan, Israel.
- 2007 Honorary Professor. Henan University, Keifang, China.
- 2007 Honorary Professor. Nankai University, Tianjin, China.
- 2007 Honorary Professor. 1st. Teaching Hospital Medical School, XinJiang University, Urumqi, China.
- 2007 Honorary Professor. 4th Military Medical University, Xi'an, China.
- 2007 Honorary Professor. Shihezi University, Shihezi, China.
- 2007 Honorary Doctor (Doctor Honoris Causa of Science; D.Sc. Hon.), Albert Schweitzer World Academy of Science.
- 2007 Honorary Professor. Jiaotong University, Xi'an, China.
- 2007 Honorary Professor. Northwest University, Xi'an, China.
- 2008 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Weizmann Institute of Science, Rehovot, Israel.
- 2008 Honorary Doctor (Doctor Honoris Causa), Universidad San Francisco, Quito, Ecuador.
- 2008 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Universidad del Norte, Asuncion, Paraguay.
- 2008 onorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Angeles University, Angeles City, The Philippines.
- 2008 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), University of New South Wales (NSW), Sydney, Australia
- 2008 Honorary Professor. Nanjing University, Nanjing, China.
- 2009 Honoraris Causa. The Academic College, Netanya, Israel.
- 2009 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), The National University of Cambodia, Phnom Pen, Cambodia
- 2010 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). The Government of the People's Republic of China via Huazhong University of Science and Technology (HUST), Wuhan, China.
- 2010 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). Haifa University, Haifa, Israel.
- 2010 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). Medical University of Armenia, Yerevan, Armenia.
- 2010 Honoraris Causa. The Tel Hai College, Qiryat Shmona, Israel.
- 2010 Honorary Professor. Nanjing University of Technology, Nanjing, China.
- 2011 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Warsaw University of Technology, Warsaw, Poland.
- 2011 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). Warsaw University, Warsaw, Poland.
- 2011 Honorary Professor. Chongqing Medical University, Chongqing, China.

- 2011 Scientific Consultant, The City of Chongqing, China.
- 2012 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). University of Łódź, Łódź, Poland.
- 2012 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). Medical University of Łódź, Łódź, Poland.
- 2012 Honorary Professor. Guandong University Medical College, Zhanjiang, Guandong, China.
- 2012 Honorary Professor. Wuhan University, Wuhan, China.
- 2012 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). Shota Rustaveli State University, Batumi, Georgia.
- 2012 Distinguished Honorary Professor. South China Normal University, Guangzhou, China.
- 2012 Distinguished University Professor (Honorary), Kyushu University, Fukoka, Japan.
- 2013 Extraordinary Professor. TEFAF Oncology Chair, Maastricht University, The Netherlands.
- 2013 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). Mount Sinai School of Medicine, New York, NY, USA.
- 2013 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). State University of New York (SUNY), Upstate Medical College, Syracuse, NY, USA.
- 2013 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). University of Croatia, Split, Croatia.
- 2013 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). SPIT-Saint Petersburg Institute of Technology, St. Petersburg, Russia.
- 2013 Honoris Causa. Law and Science Gates College (מכללת שערי (משפט ומדע), Hod Hasharon, Israel.
- 2013 Honorary Professor. Haikou People's Hospital, Central South University Medical School, Changsha, China.
- 2013 Consultant, The Chongqing Academy of Science and technology, Chongqing, China.
- 2014 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.). Kazan University, Kazan, Russia.
- 2014 Fellow (Honorary), the Interdisciplinary Center, Hezeliya, Israel.
- 2015 Honorary Professorship. Tor-Vergata University, Rome, Italy.
- 2015 Doctor Honoris Causa, University of Panama, Panama City, Panama.
- 2015 Distinguished Honorary Professor, Shantou University Medical College, Shantou, China.
- 2016 Doctor Honoris Causa, University of Kyushu, Fukoka, Japan.
- 2016 Doctor Honoris Causa, School of Business and Social Sciences, Central University of Catalunya, Spain.

- 2017 Doctor Honoris Causa. Academic University of the Russian Academy of Sciences, St. Petersburg, Russia
- 2017 Doctor Honoris Causa. Tbilii State Medical University (TSMU), Tbilisi, Georgia
- 2017 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), University of Brasilia, Brasilia, Brasil
- 2018 Honorary Professor. Beijing Normal University, Beijing, China.
- 2018 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), European University, Nicosia, Cyprus
- 2019 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), University of Macau, Macau.
- 2019 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), Ionian University, Corfu, Greece.
- 2019 Honorary Doctor (Doctor Philosophiae Honoris Causa; Ph.D. Hon.), University of Ioannina, Ioannina, Greece.

HONORS (non-academic):

- 2005 Honorary Citizenship, City of Haifa, Israel
- 2005 Sakura Award, the City of Osaka, Japan.
- 2005 Special Award, the Mayor of Osaka, Japan.
- 2006 Honorary Citizenship, City of Montevideo, Uruguay.
- 2006 Honorary Citizenship, City of Lima, Peru
- 2008 Honorary Citizenship, City of Quito, Ecuador
- 2008 Special Distinction for Contribution to Education, Minister of Education, Government of Ecuador
- 2008 Honorary Citizenship, City of Manila, The Philippines
- 2010 The Highest Award of Recognition, Minister of Science and Technology, Armenia.
- 2011 Honorary Citizenship, City of Cajamarca, Peru.
- 2012 Honorary Citizen, Nanjing, Jiangsu Province, China
- 2014 Jingling Friendship Award of the City of Nanjing, Jiangsu Province, China
- 2014 Honorary Citizen, Jiangsu Province, P.R. China
- 2015 Honorary Citizen, Panama City, Panama

HONORARY MEMBERSHIPS (non-academic):

- 2004- The Roule Wallenberg Foundation
- 2005- The World Innovation Foundation, WIF
- 2005- Academy of Achievement, USA.

PUBLICATIONS:

Scopus: h factor – 102, citations – 53,917

Google scholar: h factor – 116, i10 index 269, citations – 82,215

Original Papers:

1. **Ciechanover, A.** and Hershko, A. (1976). Early Effects of Serum on Phospholipid Metabolism in Untransformed and Oncogenic Virus Transformed Cultured Fibroblasts. *Biochem. Biophys. Res. Commun.* **73**, 85-91.
2. **Ciechanover, A.,** Hod, Y. and Hershko, A. (1978). A Heat-stable Polypeptide Component of an ATP-dependent Proteolytic System from Reticulocytes. *Biochem. Biophys. Res. Commun.* **81**, 1100-1105.
3. Hershko, A., **Ciechanover, A.** and Rose, I.A. (1979). Resolution of the ATP-dependent Proteolytic System from Reticulocytes: A Component that Interacts with ATP. *Proc. Natl. Acad. Sci. USA* **76**, 3107-3110.
4. **Ciechanover, A.,** Heller, H., Elias, S., Haas, A.L. and Hershko, A. (1980). ATP-dependent Conjugation of Reticulocyte Proteins with the Polypeptide Required for Protein Degradation. *Proc. Natl. Acad. Sci. USA* **77**, 1365-1368.
5. Hershko, A., **Ciechanover, A.,** Heller, H., Haas, A.L. and Rose, I.A. (1980). Proposed Role of ATP in Protein Breakdown: Conjugation of Proteins with Multiple Chains of the Polypeptide of ATP-dependent Proteolysis. *Proc. Natl. Acad. Sci. USA* **77**, 1783-1786.
6. **Ciechanover, A.,** Elias, S., Heller, H., Ferber, S. and Hershko, A. (1980). Characterization of the Heat-stable Polypeptide of the ATP-dependent Proteolytic System from Reticulocytes. *J. Biol. Chem.* **255**, 7525-7528.
7. **Ciechanover, A.,** Heller, H., Etzion-Katz, R. and Hershko, A. (1981). Activation of the Heat-stable Polypeptide of the ATP- dependent Proteolytic System. *Proc. Natl. Acad. Sci. USA* **78**, 761-765.
8. Hershko, A., **Ciechanover, A.** and Rose, I.A. (1981). Identification of the Active Amino Acid Residue of the Polypeptide of ATP-dependent Protein Breakdown. *J. Biol. Chem.* **256**, 1525-1528.
9. **Ciechanover, A.,** Elias, S., Heller, H. and Hershko, A. (1982). "Covalent Affinity" Purification of Ubiquitin Activating Enzyme. *J. Biol. Chem.* **257**, 2537-2542.
10. Hershko, A., Eytan, E., **Ciechanover, A.** and Haas, A.L. (1982). Immunochemical Analysis of the Turnover of Ubiquitin-protein Conjugates in Intact Cells: Relationship to the Breakdown of Abnormal Proteins. *J. Biol. Chem.* **257**, 13964-13970.
11. **Ciechanover, A.,** Schwartz, A.L. and Lodish, H.F. (1982). The Asialoglycoprotein Receptor Internalizes and Recycles Independently of the Transferrin and Insulin Receptors. *Cell* **32**, 267-275.

12. Dautry-Varsat, A., **Ciechanover, A.** and Lodish, H.F. (1983). pH and the Recycling of Transferrin During Receptor Mediated Endocytosis. *Proc. Natl. Acad. Sci. USA* **80**, 2258-2262.
13. Hershko, A., Heller, H., Elias, S. and **Ciechanover, A.** (1983). Components of Ubiquitin-protein Ligase System: Resolution, Affinity Purification and Role in Protein Breakdown. *J. Biol. Chem.* **258**, 8206-8214.
14. **Ciechanover, A.**, Schwartz, A.L., Dautry-Varsat, A. and Lodish, H.F. (1983). Kinetics of Internalization and Recycling of Transferrin and the Transferrin Receptor in a Human Hepatoma Line: Effect of Lysosomotropic Agents. *J. Biol. Chem.* **258**, 9681-9689.
15. **Ciechanover, A.**, Schwartz, A.L. and Lodish, H.F. (1983). Sorting and Recycling of Cell Surface Receptors and Endocytosed Ligands: The Asialoglycoprotein and the Transferrin Receptors. *J. Cell. Biochem.* **23**, 107-130.
16. **Ciechanover, A.**, Finley, D. and Varshavsky, A. (1984). The Ubiquitin Mediated Proteolytic Pathway and Mechanisms of Energy Dependent Intracellular Protein Degradation. *J. Cell. Biochem.* **24**, 27-53.
17. Finley, D., **Ciechanover, A.** and Varshavsky, A. (1984). Thermolability of Ubiquitin Activating Enzyme from the Mammalian Cell Cycle Mutant ts85. *Cell* **37**, 43-55.
18. **Ciechanover, A.**, Finley D. and Varshavsky, A. (1984). Ubiquitin Dependence of Selective Protein Degradation Demonstrated in the Mammalian Cell Cycle Mutant ts85. *Cell* **37**, 57-66.
19. Patel, V.P., **Ciechanover, A.**, Platt, O. and Lodish, H.F. (1985). Mammalian Reticulocytes Lose Adhesion to Fibronectin During Differentiation to Erythrocytes. *Proc. Natl. Acad. Sci. USA* **82**, 440-444.
20. **Ciechanover, A.**, Wolin, S.L., Steitz, J.A. and Lodish, H.F. (1985). Transfer RNA is an Essential Component of the Ubiquitin and ATP-dependent Proteolytic System. *Proc. Natl. Acad. Sci. USA* **82**, 1341-1345.
21. **Ciechanover, A.**, Finley, D. and Varshavsky, A. (1985). Mammalian Cell Cycle Mutant Defective in Intracellular Protein Degradation and Ubiquitin Protein Conjugation. *Prog. Clin. Biol. Res.* **180**, 17-31.
22. Neutra, M.R., **Ciechanover, A.**, Owen, S.L. and Lodish, H.F. (1986). Intracellular Transport of Transferrin- and Asialoorosomucoïd-colloidal Gold Conjugates to Lysosomes after Receptor Mediated Endocytosis. *J. Histochem. Cytochem.* **33**, 1134-1144.
23. Ferber, S. and **Ciechanover, A.** (1986). Transfer RNA is Required for Conjugation of Ubiquitin to Selective Substrates of the Ubiquitin- and ATP-dependent Proteolytic System. *J. Biol. Chem.* **261**, 3128-3134.
24. Jahngen, J.H., Haas, A.L., **Ciechanover, A.**, Blondin, J., Eisenhauer, D. and Taylor, A. (1986). The Eye Lens has an Active Ubiquitin-lens Protein Conjugation System. *J. Biol. Chem.* **261**, 13760-13767.
25. Teeters, C.L., Lodish, H.F., **Ciechanover, A.** and Wallace, B.A. (1986). Transferrin and Apotransferrin: pH-dependent Conformational Changes Associated with Receptor-mediated Uptake. *Ann. N.Y. Acad. Sci.* **463**, 403-407.

26. Schwartz, A.L., **Ciechanover, A.**, Merritt, S. and Turkewitz, A. (1987). Antibody-induced Receptor Loss: Different Fates for Asialoglycoproteins and the Asialoglycoprotein Receptor in HepG2 Cells. *J. Biol. Chem.* **261**, 15225-15232.
27. **Ciechanover, A.** (1987). Regulation of the Ubiquitin Mediated Proteolytic Pathway: Role of the Substrate α -NH₂ Group and of Transfer RNA. *J. Cell. Biochem.* **34**, 81-100.
28. Ferber, S. and **Ciechanover, A.** (1987). Role of Arginine-tRNA in Protein Degradation by the Ubiquitin Pathway. *Nature* **326**, 808-811.
29. **Ciechanover, A.**, Ferber, S., Ganoth, D., Elias, S., Hershko, A. and Arfin, S. (1988). Purification and Characterization of Arginyl-tRNA-Protein Transferase from Rabbit Reticulocytes: Its Involvement in Posttranslational Modification and Degradation of Acidic N-Termini Substrates of the Ubiquitin Pathway. *J. Biol. Chem.* **263**, 11155-11167.
30. Kulka, R.G., Raboy, B., Schuster, R., Parag, H.A., Diamond, G., **Ciechanover, A.**, and Marcus, M. (1988). A Chinese Hamster cell Cycle Mutant Arrested at G2 Phase Has a Temperature-Sensitive Ubiquitin-Activating Enzyme, E1. *J. Biol. Chem.* **263**, 15726-15731.
31. Schwartz, A.L., **Ciechanover, A.**, Brandt, R.A. and Geuze, H.J. (1988). Immunoelectron Microscopic Localization of Ubiquitin in Hepatoma Cells. *EMBO J.* **10**, 2961-2966.
32. Mayer, A., Gropper, R., Schwartz, A.L. and **Ciechanover, A.** (1989). Purification, Characterization and Rapid Inactivation of Ubiquitin Activating Enzyme from the Mammalian Cell Cycle Mutant ts85. *J. Biol. Chem.* **264**, 2060-2068.
33. Mayer, A., Siegel, N.R., Schwartz, A.L. and **Ciechanover, A.** (1989). Degradation of Proteins with Acetylated Amino Termini by the Ubiquitin System. *Science* **244**, 1480-1483.
34. Bercovich, Z., Rosenberg-Hasson, Y., **Ciechanover, A.** and Kahana, C. (1989). Degradation of Ornithine Decarboxylase in Reticulocyte Lysate is ATP-Dependent but Ubiquitin-Independent. *J. Biol. Chem.* **264**, 15949-15952.
35. **Ciechanover, A.**, Gonen, H., Elias, S. and Mayer, A. (1990). Degradation of Proteins by the Ubiquitin-Mediated Proteolytic Pathway. *The New Biologist* **2**, 227-234.
36. Rosenberg-Hasson, Y., Bercovich, Z., **Ciechanover, A.** and Kahana, C. (1990). Degradation of Ornithine Decarboxylase in Mammalian Cells is ATP-Dependent but Ubiquitin-Independent. *Eur. J. Biochem.* **185**, 469-474.
37. Elias, S. and **Ciechanover, A.** (1990). Post-Translational Addition of an Arginine Moiety to Acidic NH₂-Termini of Proteins is Required for their Recognition by Ubiquitin-Protein Ligase. *J. Biol. Chem.* **265**, 15511-15517.

38. **Ciechanover, A.**, DiGiuseppe, J.A., Bercovich, B., Orian, A., Richter, J.D., Schwartz, A.L. and Brodeur, G.M. (1991). Degradation of Nuclear Oncoproteins by the Ubiquitin System *In Vitro*. ***Proc. Natl. Acad. Sci. USA* 88**, 139-143.
39. **Ciechanover, A.**, and Gonen, H. (1990). The Ubiquitin-Mediated Proteolytic Pathway: Enzymology and Mechanisms of Recognition of the Proteolytic Substrates. ***Seminars in Cell Biology* 1**, 415-422.
40. Gropper, R., Brandt, R.A., Elias, S., Bearer, C.F., Mayer, A., Schwartz, A.L. and **Ciechanover, A.** (1991). The Ubiquitin-Activating Enzyme, E1, is Required for Stress-Induced Lysosomal Degradation of Cellular Proteins. ***J. Biol. Chem.* 266**, 3602-3610.
41. Handley, P.M., Mueckler, M., Siegel, N.R., **Ciechanover, A.** and Schwartz, A.L. (1991). Molecular Cloning, Sequence, and Tissue Distribution of the Human Ubiquitin Activating Enzyme, E1. ***Proc. Natl. Acad. Sci. USA* 88**, 258-262.
42. **Ciechanover, A.**, DiGiuseppe, J.A., Schwartz, A.L. and Brodeur, G.M. (1991). Regulation of N-myc Protein Degradation by the Ubiquitin System. ***Prog. Clin. Biol. Res.* 366**, 37-43.
43. **Ciechanover, A.** (1991). The Ubiquitin Mediated System for Intracellular Protein Degradation. ***J. Basic Clin. Physiol. Pharmacol.* 2**, 141-159.
44. **Ciechanover, A.**, Gropper, R., Schwartz, A.L. (1991). The Ubiquitin-Activating Enzyme is Required for Lysosomal Degradation of Cellular Proteins Under Stress. ***Biomedica Biochimica Acta* 50 (4-6)**, 321-332.
45. Gonen, H., Schwartz, A.L., and **Ciechanover, A.** (1991). Purification and Characterization of a Novel Protein that is Required for the Degradation of N- α -Acetylated Proteins by the Ubiquitin System. ***J. Biol. Chem.* 266**, 19221-19231.
46. DeMartino, G.N., McCullough, M.L., Reckelhoff, J.F., Croall, D.E., **Ciechanover, A.**, and McGuire, M.J. (1991). ATP-stimulated Degradation of Endogenous Proteins in Cell-Free Extracts of BHK 21/C13 Fibroblasts: A Key Role for the Proteinase, Macropain, in the Ubiquitin-Dependent Degradation of Short-Lived Proteins. ***Biochim. Biophys. Acta* 1073**, 299-308.
47. Schwartz, A.L., Brandt, R.A., Geuze, H., and **Ciechanover, A.** (1992). Stress-Induced Alterations in the Autophagic Pathway: Relationship to the Ubiquitin System. ***Am. J. Physiol.* 262, (Cell Physiol. 31): C1031-C1038**.
48. Schwartz, A.L., Trausch, J.S., **Ciechanover, A.**, Slot, J.W., and Geuze, H. (1992). Immunoelectron Microscopic Localization of the Ubiquitin-Activating Enzyme E1 in HepG2 Cells. ***Proc. Natl. Acad. Sci. USA* 89**, 5542-5546.
49. Lenk, S.E., Dunn, W.A., Jr., Trausch, J.S., **Ciechanover, A.**, and Schwartz, A.L. (1992). Ubiquitin-Activating Enzyme, E1, is Associated with Maturation of Autophagic Vacuoles. ***J. Cell Biol.* 118**, 301-308.

50. Trausch, J.S., Grenfell, S.J., Handley-Gearhart, P.M., **Ciechanover, A.**, and Schwartz, A.L. (1993). Immunofluorescent Localization of the Ubiquitin-Activating Enzyme, E1, to the Nucleus and Cytoskeleton. *Am. J. Physiol.* **264**, (Cell Physiol. **33**): C93-C102.
51. Blumenfeld, N., Gonen, H., Mayer, A., Smith, C. E., Siegel, N.R., Schwartz, A. L., and **Ciechanover, A.** (1994). Purification and Characterization of a Novel Species of Ubiquitin-Carrier Protein, E2, that is Involved in Degradation of Non-"N-End Rule" Protein Substrates. *J. Biol. Chem.* **269**, 9574-9581.
52. **Ciechanover, A.**, Shkedy, D., Oren, M., and Bercovich, B. (1994). Degradation of the Tumor Suppressor Protein p53 by the Ubiquitin-Mediated Proteolytic System Requires a Novel Species of Ubiquitin-Carrier Protein, E2. *J. Biol. Chem.* **269**, 9582-9589.
53. Gonen, H., Smith, C. E., Siegel, N. R., Merrick, W. C., Kahana, C., Chakraborty, K., Schwartz, A. L., and **Ciechanover, A.** (1994). Protein Synthesis Elongation Factor EF-1 α is Essential for Ubiquitin-Dependent Degradation of N- α -Acetylated Proteins and May be Substituted for by the Bacterial Elongation Factor EF-Tu. *Proc. Natl. Acad. Sci. USA* **91**, 7648-7652.
54. Shkedy, D., Gonen, H., and **Ciechanover, A.** (1994). Complete Reconstitution of Conjugation and Subsequent Degradation of the Tumor Suppressor Protein p53 by Purified Components of the Ubiquitin Proteolytic System. *FEBS Lett.* **348**, 125-130.
55. Grenfell, S.J., Trausch-Azar, J.S., Handley-Gearhart, P.M., **Ciechanover, A.**, and Schwartz, A.L. (1994). Nuclear Localization of the Ubiquitin-Activating Enzyme, E1, is Cell Cycle-Dependent. *Biochem. J.* **300**, 701-708.
56. Handley-Gearhart, P.M., Trausch-Azar, J.S., **Ciechanover, A.**, and Schwartz, A.L. (1994). Rescue of the Complex Temperature-Sensitive Phenotype of Chinese Hamster Ovary E36ts20 Cells by Expression of the Human Ubiquitin-Activating Enzyme cDNA. *Biochem. J.* **304**, 1015-1020.
57. Handley-Gearhart, P.M., Stephen, A.G., Trausch-Azar, J.S., **Ciechanover, A.**, and Schwartz, A.L. (1994). Human Ubiquitin-Activating Enzyme, E1: Indication of Potential Nuclear and Cytoplasmic Subpopulations Using Epitope-Tagged cDNA Constructs. *J. Biol. Chem.* **269**, 33171-33178.
58. Fischer, M., Hilt, W., Richter-Ruoff, B., Gonen, H., **Ciechanover, A.** and Wolf, D.H. (1994). The 26S Proteasome of the Yeast *Saccharomyces cerevisiae*. *FEBS Lett.* **355**, 69-75.
59. Elias, S., Bercovich, B., Kahana, C., Coffino, P., Fischer, M., Hilt, W., Wolf, D.H., and **Ciechanover, A.** (1995). Degradation of Ornithine Decarboxylase by the Mammalian and Yeast 26S Proteasome Complex Requires all the Components of the Protease. *Eur. J. Biochem.* **229**, 276-283.

60. Orian, A., Whiteside, S., Israël, A., Stancovski, I., Schwartz, A. L. and **Ciechanover, A.** (1995). Ubiquitin-Mediated Processing of NF- κ B Transcriptional Activator Precursor: Reconstitution of a Cell Free System and Identification of the Ubiquitin-Carrier Protein, E2, and a Novel Ubiquitin-Protein Ligase, E3, Involved in Conjugation. *J. Biol. Chem.* **270**, 21707-21714.
61. Alkalay, I., Yaron, A., Hatzubai, A., Orian, A., **Ciechanover, A.**, and Ben Neria, Y. (1995). Stimulation-Dependent I κ B α Phosphorylation Marks the NF- κ B Inhibitor for Degradation Via the Ubiquitin-Proteasome Pathway. *Proc. Natl. Acad. Sci. USA* **92**, 10599-10603.
62. 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**, 7106-716.
63. 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.
64. **Ciechanover, A.**, Bercovich, B., Laszlo, A., Stancovski, I., Ben-Neria, Y., and Orian, A. (1995). The Ubiquitin-Mediated Proteolytic System: Involvement of Molecular Chaperones, Degradation of Oncoproteins, and Activation of Transcriptional Regulators. *Cold Spring Harbor Symp. Quant. Biol.* **60**, 491-501.
65. Strous, G.J., van Kerkhof, P., Govers, R., **Ciechanover, A.**, and Schwartz, A.L. (1996). The Ubiquitin Conjugation System is Required for Ligand-Induced Endocytosis and Degradation of the Growth Hormone Receptor. *EMBO J.* **15**, 3806-3812.
66. Gonen, H., Dickman, D., Schwartz, A. L., and **Ciechanover, A.** (1996). Protein Synthesis Elongation Factor EF-1 α is an Isopeptidase Essential For Ubiquitin-Dependent Degradation of Certain Proteolytic Substrates. *Adv. Exptl. Med. Biol.* **389** (Intracellular Protein Catabolism; K. Suzuki and J. S. Bond, eds.). Plenum Press, New York and London. pp. 209-219.
67. Stephen, A.G., Trausch-Azar, J.S., **Ciechanover, A.**, and Schwartz, A.L. (1996). The Ubiquitin-Activating Enzyme E1 is Phosphorylated and Localized to the Nucleus in a Cell Cycle-Dependent Manner. *J. Biol. Chem.* **271**, 15608-15614.
68. Wöstman, C., Liakopoulos, D., **Ciechanover, A.**, and Bakker-Grunwald, T. (1996). Characterization of Ubiquitin Genes and -Transcripts and Demonstration of a Ubiquitin- Conjugating System in *Entamoeba Histolytica*. *Mol. Biochem. Parasitol.* **82**, 81-90.

69. **Ciechanover, A.**, Hargrove, J.L., and Mesilaty-Gross, S. (1997). Degradation of Tyrosine Aminotransferase (TAT) via the Ubiquitin-Proteasome Pathway. *Mol. Biol. Rep.* **24**, 27-33.
70. 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.
71. Mesilaty-Gross, S., Hargrove, J.L., and **Ciechanover, A.** (1997). Degradation of Tyrosine Aminotransferase (TAT) via the Ubiquitin-Proteasome Pathway. *FEBS Lett.* **405**, 175-180.
72. Stephen, A.G., Trausch-Azar, J.S., Handley-Gearhart, P.M., **Ciechanover, A.**, and Schwartz, A.L. (1997). Identification of a Region within the Ubiquitin-Activating Enzyme E1 Required for Nuclear Targeting and Phosphorylation. *J. Biol. Chem.* **272**, 10895-10903.
73. Gonen, H., Shkedy, D., Barnoy, S., Kosower, N.S., and **Ciechanover, A.** (1997). On the Involvement of Calpains in the Degradation of the Tumor Suppressor Protein p53 *FEBS Lett.* **406**, 17-22.
74. Yaron, A., Gonen, H., Alkalay, I., Hatzubai, A., Jung, S., Beyth, S., Mercurio, F., Manning A.M., **Ciechanover, A.***, Ben-Neriah, Y. (1997). Inhibition of NF- κ B Cellular Function via Specific Targeting of the I κ B α -Ubiquitin Ligase. *EMBO J.* **16**, 6486-6494.
*senior corresponding co-author along with YBN
75. Staub, O., Gautschi, I., Ishikawa, T., Breitschopf, K., **Ciechanover, A.**, Schild, L., and Rotin, D. (1997). Regulation of Stability and Function of the Epithelial Na⁺ Channel (ENaC) by Ubiquitination. *EMBO J.* **16**, 6325-6336.
76. Levitskaya, J., Sharipo, A., Leonchiks, A., **Ciechanover, A.**, and Masucci, M. (1997). Inhibition of Ubiquitin-Proteasome-Dependent Protein Degradation by the Gly-Ala Repeat Domain of the Epstein-Barr Virus Nuclear Antigen (EBNA)-1. *Proc. Natl. Acad. Sci. USA* **94**, 12616-12621.
77. Sancho, E., Vila, M.R., Sanchez-Pulido, L., Lozano, J.J., Paciucci, R., Nadal, M., Fox, M., Harvey, C., Bercovich, B., Loukili, N., **Ciechanover, A.**, Lin, S.L., Sanz, F., Estivill, X., Valencia, A., and Thomson, T. (1998). Role of UEV-1, an Inactive Variant of the E2-Ubiquitin-Conjugating Enzymes, in In Vitro Differentiation and Cell Cycle Behavior of HT-29-M6 Intestinal Mucosecretory Cells. *Mol. Cell Biol.* **18**, 576-589.
78. 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.

79. 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.
80. 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.
81. 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- κ B Precursor p105: Roles of the Glycine-Rich Region and a Downstream Ubiquitination Domain. *Mol. Cell. Biol.* **19**, 3664-3673.
82. 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 κ B α . *J. Biol. Chem.* **274**, 14823-14830.
83. **Ciechanover, A.**, Breitschopf, K., Abu Hatoum, O., and Bengal, E. (1999). Degradation of MyoD by the Ubiquitin Pathway: Regulation by Specific DNA-Binding and Identification of a Novel Site for Ubiquitination. *Mol. Biol. Rep.* **26**, 59-64.
84. Cummings, C.J., Reinstein, E., Sun, Y., Antalffy, B., Jiang, Y.-h., **Ciechanover, A.**, Orr, H.T., Beaudet, A.L., and Zoghbi, H.Y. (1999). Mutation of the E6-AP Ubiquitin Ligase Reduces Nuclear Inclusion Frequency While Accelerating Polyglutamine-Induced Pathology in *SCA1* Mice. *Neuron* **24**, 879-892.
85. Levkowitz, G., Waterman, H., Ettenberg, S.A., Katz, M., Tsygankov, A.Y., Alroy, I., Lavi, S., Iwai, K., Reiss, Y., **Ciechanover, A.**, Lipkowitz, S., and Yarden, Y. (1999). Ubiquitin Ligase Activity and Tyrosine Phosphorylation Underlie Suppression of Growth Factor Signaling by c-Cbl/Sli-1. *Mol. Cell* **4**, 1029-1040.
86. Orian, A., Gonen, H., Bercovich, B., Fajerman, I., Eytan, E., Israël, A., Mercurio, F., Iwai, K., Schwartz, A.L., and **Ciechanover, A.** (2000). SCF- β -TrCP Ubiquitin Ligase-Mediated Processing of NF- κ B p105 Requires Phosphorylation of its C-Terminus by I6B Kinase. *EMBO J.* **19**, 2580-2591.
87. Sadot, E., Simcha, I., Iwai, K., **Ciechanover, A.**, Geiger, B., and Ben-Ze'ev, A. (2000). Differential Interaction of Plakoglobin and β -Catenin with the Ubiquitin-Proteasome System. *Oncogene* **19**, 1992-2001.

88. 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.
89. 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.
90. Hengstermann, A., Linares, L.K., **Ciechanover, A.**, Whitaker, N. J., and Scheffner, M. (2001). Complete Switch from Mdm2 to Human Papillomavirus E6-Mediated Degradation of p53 in Cervical Cancer Cells. *Proc. Natl. Acad. Sci. USA* **98**, 1218-1223.
91. **Ciechanover, A.**, Gonen, H., Bercovich, B., Cohen, S., Fajerman, I., Israëli, A., Mercurio, F., Kahana, C., Schwartz, A. L., Iwai, K., Orian, A. (2001). Ubiquitin-Mediated, Limited Processing of the NF- κ B1 Precursor Protein p105. *Biochimie* **83**, 341-349.
92. Floyd, Z.E., Trausch-Azar, J.S., Reinstein, E., **Ciechanover, A.**, and Schwartz, A.L. (2001). The Nuclear Ubiquitin-Proteasome System Degrades MyoD. *J. Biol. Chem.* **276**, 22468-22475
93. 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.
94. Sionov, R.V., Coen, S., Goldberg, Z., Berger, M., Bercovich, B., Ben-Neriah, Y., **Ciechanover, A.**, and Haupt, Y. (2001). c-Abl regulates p53 levels under normal and stress conditions by preventing its nuclear export and ubiquitination. *Mol. Cell. Biol.* **21**, 5869-5878.
95. Gupta-Rossi, N., Le Bail, O., Gonen, H., Brou, C., Logeat, F., Six, E., **Ciechanover, A.**, and Israëli, A. (2001). Functional Interaction between SEL-10, an F-box Protein, and the Nuclear Form of Activated Notch1 Receptor. *J. Biol. Chem.* **276**, 34371-34378.
96. Amir, R.E., Iwai, K., and **Ciechanover, A.** (2002). The NEDD8 pathway is required for SCF-mediated processing of the NF- κ B precursor p105. *J. Biol. Chem.* **277**, 23253-23259.
97. Ryoo, H.-D., Bergmann, A., Gonen, H., **Ciechanover, A.**, and Steller, H. (2002). Regulation of *Drosophila* IAP1 Degradation and Apoptosis by *Reaper* and *UbcD1*. *Nature Cell Biology* **4**, 432-438.
98. Herrmann, J., Edwards, W.D., Holmes, D.R., Shogren, K.L., Lerman, J.O., **Ciechanover, A.**, and Lerman, A. (2002). Increased Ubiquitin Immunoreactivity in Unstable Atherosclerotic Plaques Associated with Acute Coronary Syndromes. *J. Am. Coll. Cardiol.* **40**, 1919-1927.

99. Lingbeck, J.M., Trausch-Azar, J.S., **Ciechanover, A.**, and Schwartz, A.L. (2003). Determinants of Nuclear and Cytoplasmic Ubiquitin-mediated Degradation of MyoD. *J. Biol. Chem.* **278**, 1817-1823
100. Nadav, E., Shmueli, A., Barr, H., Gonen, H., **Ciechanover, A.**, and Reiss, Y. (2003). A Novel Mammalian Endoplasmic Reticulum Ubiquitin Ligase Homologous to the Yeast Hrd1. *Biochem. Biophys. Res. Commun.* **303**, 91-97.
101. 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^{Kip1} in Prostate Cancer. *J. Urol.* **170**, 241-245.
102. Linares, L.K., Hengstermann, A., **Ciechanover, A.**, Muller, S., and Scheffner, M. (2003). HdmX stimulates Hdm2-mediated ubiquitination and degradation of p53. *Proc. Natl. Acad. Sci. USA* **100**, 12009-120014.
103. Herrmann, J., Gulati, R., Napoli, C., Woodrum, J.E., Lerman, L.O., Rodriguez-Porcel, M., Sica, V., Simari, R.D., **Ciechanover, A.**, and Lerman, A. (2003). Oxidative stress-related increase in ubiquitination in early coronary atherogenesis. *FASEB J.* **17**, 1730-1732.
104. Amir, R.E., Haecker, H., Karin, M., and **Ciechanover, A.** (2004) Mechanism of Processing of the NF- κ B2 p100 Precursor: Identification of the Specific Polyubiquitin Chain-Anchoring Lysine Residue and Analysis of the Role of NEDD8-Modification on the SCF ^{β -TrCP} Ubiquitin Ligase. *Oncogene* **23**, 2540-2547.
105. Cohen, S., Achbert-Weiner, H., and Ciechanover, A. (2004). Dual Effect of IKK β -Mediated Phosphorylation on p105 Fate: SCF ^{β -TrCP}-Dependent Degradation and SCF ^{β -TrCP}-Independent Processing. *Mol. Cell. Biol.* **24**, 475-486.
106. Fajerman, I., Schwartz, A.L., and **Ciechanover, A.** (2004). Degradation of the Id2 Developmental regulator: Targeting via N-Terminal Ubiquitination. *Biochem. Biophys. Res. Commun.* **314**, 505-512.
107. Sun, X.M., Butterworth, M., MacFarlane, M., Dubiel, W., **Ciechanover, A.**, and Cohen GM. (2004). Caspase Activation Inhibits Proteasome Function during Apoptosis. *Mol. Cell* **14**, 81-93.
108. Lahav-Baratz, S., Ben-Izhak, O., Sabo, E., Ben-Eliezer, S., Lavie, O., Ishai, D., **Ciechanover, A.**, and Dirnfeld, M. (2004). Decreased Level of the Cell Cycle Regulator p27 and Increased Level of its Ubiquitin Ligase Skp2 in Endometrial Carcinoma but not in Normal Secretory or in Hyperstimulated Endometrium. *Mol. Hum. Reprod.* **10**, 567-572.
109. Trausch-Azar, J.S., Lingbeck, J., **Ciechanover, A.**, and Schwartz, A.L. (2004). Ubiquitin-Proteasome-Mediated Degradation of Id1 is Modulated by MyoD. *J. Biol. Chem.* **279**, 32614-32619.

110. Ben-Saadon, R., Fajerman, I., Ziv, T., Hellman, U., Schwartz, A.L., and **Ciechanover, A.** (2004). The Tumor Suppressor Protein p16^{INK4a} and the Human Papillomavirus oncoprotein E7-58 are Naturally Occurring Lysine-Less Proteins that are Degraded by the Ubiquitin System: Direct Evidence for Ubiquitination at the N-Terminal Residue. *J. Biol. Chem.* **279**, 41414-41421.
111. Lingbeck, J.M., Trausch-Azar, J., **Ciechanover, A.**, and Schwartz, A.L. (2005). E12 and E47 Modulate Cellular Localization and Proteasome-Mediated degradation of MyoD and Id1. *Oncogene* **24**, 6376-6384. doi: 10.1038/sj.onc.1208789. PMID: 16007194
112. Lotan, R., Rotem, A., Gonen, H., Finberg, J.P., Kemeny, S., Steller, H., **Ciechanover, A.**, and Larisch, S. (2005). Regulation of the Pro-Apoptotic ARTS Protein by Ubiquitin-Mediated Ddegradation. *J. Biol. Chem.* **280**, 25802-25810. .
113. Sun, L., S., Trausch-Azar, J.S., **Ciechanover, A.**, Schwartz, A.L. (2005). Ubiquitin-Proteasome-Mediated Degradation, Intracellular Localization, and Protein Synthesis of MyoD and Id1 during Muscle Differentiation. *J. Biol. Chem.* **280**, 26448-26456.
114. Comellas, A.P., Dada, L.A., Lecuona, E., Pesce, L.M., Chandel, N.S., Quesada, N., Budinger, G.R., Strous, G.J., **Ciechanover, A.**, and Sznajder, J.I. (2006). Hypoxia-Mediated Degradation of Na,K-ATPase via Mitochondrial Reactive Oxygen Species and the Ubiquitin-Conjugating System. *Circ. Res.* **98**, 1314-1322.
115. Cohen, S., Lahav-Baratz, S., and **Ciechanover, A.** (2006). Two Distinct Ubiquitin-Dependent Mechanisms are involved in NF-κB p105 Proteolysis. *Biochem. Biophys. Res. Commn.* **345**, 7-13.
116. Sun, L., Trausch-Azar, J., **Ciechanover, A.**, and Schwartz, A.L. (2006). E2A protein degradation by the ubiquitin-proteasome system is stage-dependent during muscle differentiation. *Oncogene* **26**, 441-448.
117. Goodman, S.R., **Ciechanover, A.J.**, Hulse, R.A., Feng Da, H., and Fluckiger, S. (2006). Nobel Round-Table Discussion #1: The Future of Interdisciplinary Research and Training. *Exp. Biol. Med.* (Maywood). **231**, 1225-1239.
118. Ehringhaus, S.H., **Ciechanover, A.J.**, Hulse, R.A., Pascal, C.B., and Goodman, S.R. (2006). Nobel Round-Table Discussion #2: Conflicts of Interest, Scientific Misconduct, Fair Sharing, and Intellectual Property in an Interdisciplinary/Inter-Institutional Consortium. *Exp. Biol. Med.* (Maywood). **231**, 1240-1254.
119. Ben Saadon, R., Zaarur, D., Ziv, T., and **Ciechanover, A.** (2006). The Polycomb Protein Ring1B Generates Self Atypical Mixed Ubiquitin Chains Required for its *In Vitro* Histone H2A Ligase Activity. *Mol. Cell.* **24**, 701-711.

120. Herman-Bachinsky, Y., Ryoo, H.D., **Ciechanover, A.***, and Gonen, H. (2007). Regulation of the Drosophila Ubiquitin Ligase DIAP1 is Mediated via Several Distinct Ubiquitin System Pathways. *Cell Death Differ.* **14**, 861-871.
*Senior corresponding author
121. Dada, L.A., Welch, L.C., Zhou, G., Ben Saadon, R., Ciechanover, A., and Sznajder, J.I. (2007). Phosphorylation and Ubiquitination are Necessary for Na,K-ATPase endocytosis during Hypoxia. *Cell Signal.* **19**, 1893-1898.
122. Shabek, N., Iwai, K., and **Ciechanover, A.** (2007). Ubiquitin is Degraded by the Ubiquitin System as a Monomer and as Part of its Conjugated Target. *Biochem. Biophys. Res. Commun.* **363**, 425-31.
123. Lingbeck, J.M., Trausch-Azar, J.S., **Ciechanover, A.**, and Schwartz, A.L. (2008). *In vivo* Interactions of MyoD, Id1, and E2A Proteins Determined by Acceptor Photobleaching Fluorescence Resonance Energy Transfer. *FASEB J.* **22**, 1694-1701.
124. Jaitovich, A., Mehta, S., Na, N., **Ciechanover, A.**, Goldman, R.D., and Ridge K.M. (2008). Ubiquitin-Proteasome-Mediated Degradation of Keratin Intermediate Filaments in Mechanically Stimulated A549 Cells. *J. Biol. Chem.* **283**, 25348-25355
125. Sadeh, R., Breitschopf, K., Bercovich, B., Zoabi, M., Kravtsova-Ivantsiv, Y., Kornitzer, D., Schwartz, A.L., and **Ciechanover, A.** (2008). The N-Terminal Domain of MyoD is Necessary and Sufficient for its Nuclear Localization-Dependent Degradation by the Ubiquitin System. *Proc. Natl. Acad. Sci. USA* **105**, 15690-15695.
126. Zhou, G., Dada, L.A., Chandel, N.S., Iwai, K., Lecuona, E., Ciechanover, A., and Sznajder JI. Hypoxia-mediated Na-K-ATPase degradation requires von Hippel Lindau protein. *FASEB J.* **22**, 1335-1342.
127. Kravtsova-Ivantsiv, Y., Cohen, S., and **Ciechanover, A.** (2009). Modification by Single Ubiquitin Moieties Rather Than Polyubiquitination is Sufficient for Proteasomal Processing of the p105 NF- κ B Precursor. *Mol. Cell* **33**, 496-504.
128. **Ciechanover, A.**, Blachar, Y., Shoenfeld, Y., and Shemer, Y. (2008). The Wounds of Gaza or the Demise of Editorial Review? *Lancet - Global Health Network*, February 18, 2009.
<http://www.thelancetglobalhealthnetwork.com/archives/611>
129. Lecuona, E., Sun, H., Vohwinkel, C., **Ciechanover, A.**, and Sznajder, J. (2009). Ubiquitination Participates in the Lysosomal Degradation of the Na,K-ATPase in Steady-State Conditions. *Am. J. Respir. Cell. Mol. Biol.* March 13, 2009

130. Galluzzi, L., Aaronson, S.A., Abrams, J., Alnemri, E.S., Andrews, D.W., Ashkenazi, A., Baehrecke, E.H., Bazan, N.G., Blagosklonny, M.V., Blomgren, K., Borner, C., Bredesen, D.E., Brenner, C., Castedo, M., Cidlowski, J.A., **Ciechanover, A.**, Cohen, G.M., De Laurenzi, V., De Maria, R., Deshmukh, M., Dynlacht, B.D., El-Deiry, W.S., Flavell, R.A., Fulda, S., Garrido, C., Golstein, P., Gougeon, M.-L., Green, D.R., Gronemeyer, H., Hajnóczky, G., Hardwick, J.M., Hengartner, M., Ichijo, H., Jäättelä, M., Kepp, O., Kimchi, A., Klionsky, D.J., Knight, R.A., Kornbluth, S., Kumar, S., Levine, B., Lipton, S.A., Lugli, E., Madeo, M., Malorni, W., Marine, J.-C.W., Martin, S.J., Medema, J.P., Mehlen, P., Melino, G., Moll, U.M., Morselli, E., Nagata, S., Nicholson, D.W., Nicotera, P., Nuñez, G., Oren, M., Penninger, J., Pervaiz, S., Peter, M.E., Piacentini, M., Prehn, J.H.M., Puthalakath, H., Rabinovich, G.A., Rizzuto, R., Rodrigues, C.M.P., Rubinsztein, D.C., Rudel, T., Scorrano, L., Simon, H.-U.S., Steller, H., Tschopp, J., Tsujimoto, Y., Vandenabeele, P., Vitale, I., Vousden, K.H., Youle, R.J., Yuan, J., Zhivotovsky, B., and Kroemer, G. (2009). Guidelines for the Use and Interpretation of Assays for Monitoring Cell Death in Higher Eukaryotes. *Cell Death and Differentiation* **16**, 1093-1107.
131. Shabek, N., Bachinsky-Herman, Y., and **Ciechanover, A.** (2009). Ubiquitin Degradation with its Substrate and as a Monomer in a Ubiquitination-Independent Mode Provide Clues to Proteasome Regulation. *Proc. Natl. Acad. Sci. USA*. **106**, 11907-11912.
132. Cohen, S., **Ciechanover, A.***, Kravtsova-Ivantsiv, Y., Lapid, D., and Lahav-Baratz, S., (2009). ABIN-1 Negatively Regulates NF- κ B by Inhibiting Processing of the p105 Precursor. *Biochem. Biophys. Res. Commun.***389**, 205-210.
*Senior corresponding author
133. Zaaroor-Regev, D., de Bie, P., Scheffner, M., Noy, T., Shemer, R., Heled, M., Stein, I., Pikarsky, E., and **Ciechanover, A.** (2010). Regulation of the polycomb protein Ring1B by self-ubiquitination or by E6-AP may have implications to the pathogenesis of Angelman syndrome. *Proc. Natl. Acad. Sci. USA*. **107**, 6788-6793.
134. Kashuba, E., Yurchenko, M., Yenamandra, S.P., Snopok, B., Szekely, L., Bercovich, B., **Ciechanover, A.**, and Klein, G. (2011). Epstein-Barr Virus-Encoded EBNA-5 Forms Trimolecular Protein Complexes with MDM2 and p53 and inhibits the transactivating function of p53. *Int. J. Cancer* **128**, 817-825.
135. Gleick, P.H., Adams, R.M., Amasino, R.M., Anders, E., Anderson, D.J., Anderson, W.W., Anselin, L.E., Arroyo, M.K., Asfaw, B., Ayala, F.J., Bax, A., Bebbington, A.J., Bell, G., Bennett, M.V., Bennetzen, J.L., Berenbaum, M.R., Berlin, O.B., Bjorkman, P.J., Blackburn, E., Blamont, J.E., Botchan, M.R., Boyer, J.S., Boyle, E.A., Branton, D., Briggs, S.P., Briggs, W.R., Brill, W.J., Britten, R.J., Broecker, W.S., Brown, J.H., Brown, P.O., Brunger, A.T., Cairns, J. Jr., Canfield, D.E., Carpenter,

S.R., Carrington, J.C., Cashmore, A.R., Castilla, J.C., Cazenave, A., Chapin, F.S. 3rd., **Ciechanover, A.J.**, Clapham, D.E., Clark, W.C., Clayton, R.N., Coe, M.D., Conwell, E.M., Cowling, E.B., Cowling, R.M., Cox, C.S., Croteau, R.B., Crothers, D.M., Crutzen, P.J., Daily, G.C., Dalrymple, G.B., Dangl, J.L., Darst, S.A., Davies, D.R., Davis, M.B., De Camilli, P.V., Dean, C., DeFries, R.S., Deisenhofer, J., Delmer, D.P., DeLong, E.F., DeRosier, D.J., Diener, T.O., Dirzo, R., Dixon, J.E., Donoghue, M.J., Doolittle, R.F., Dunne, T., Ehrlich, P.R., Eisenstadt, S.N., Eisner, T., Emanuel, K.A., Englander, S.W., Ernst, W.G., Falkowski, P.G., Feher, G., Ferejohn, J.A., Fersht, A., Fischer, E.H., Fischer, R., Flannery, K.V., Frank, J., Frey, P.A., Fridovich, I., Frieden, C., Futuyma, D.J., Gardner, W.R., Garrett, C.J., Gilbert, W., Goldberg, R.B., Goodenough, W.H., Goodman, C.S., Goodman, M., Greengard, P., Hake, S., Hammel, G., Hanson, S., Harrison, S.C., Hart, S.R., Hartl, D.L., Haselkorn, R., Hawkes, K., Hayes, J.M., Hille, B., Hökfelt, T., House, J.S., Hout, M., Hunten, D.M., Izquierdo, I.A., Jagendorf, A.T., Janzen, D.H., Jeanloz, R., Jencks, C.S., Jury, W.A., Kaback, H.R., Kailath, T., Kay, P., Kay, S.A., Kennedy, D., Kerr, A., Kessler, R.C., Khush, G.S., Kieffer, S.W., Kirch, P.V., Kirk, K., Kivelson, M.G., Klinman, J.P., Klug, A., Knopoff, L., Kornberg, H., Kutzbach, J.E., Lagarias, J.C., Lambeck, K., Landy, A., Langmuir, C.H., Larkins, B.A., Le Pichon, X.T., Lenski, R.E., Leopold, E.B., Levin, S.A., Levitt, M., Likens, G.E., Lippincott-Schwartz, J., Lorand, L., Lovejoy, C.O., Lynch, M., Mabogunje, A.L., Malone, T.F., Manabe, S., Marcus, J., Massey, D.S., McWilliams, J.C., Medina, E., Melosh, H.J., Meltzer, D.J., Michener, C.D., Miles, E.L., Mooney, H.A., Moore, P.B., Morel, F.M., Mosley-Thompson, E.S., Moss, B., Munk, W.H., Myers, N., Nair, G.B., Nathans, J., Nester, E.W., Nicoll, R.A., Novick, R.P., O'Connell, J.F., Olsen, P.E., Opdyke, N.D., Oster, G.F., Ostrom, E., Pace, N.R., Paine, R.T., Palmiter, R.D., Pedlosky, J., Petsko, G.A., Pettengill, G.H., Philander, S.G., Piperno, D.R., Pollard, T.D., Price, P.B. Jr., Reichard, P.A., Reskin, B.F., Ricklefs, R.E., Rivest, R.L., Roberts, J.D., Romney, A.K., Rossmann, M.G., Russell, D.W., Rutter, W.J., Sabloff, J.A., Sagdeev, R.Z., Sahlins, M.D., Salmond, A., Sanes, J.R., Schekman, R., Schellnhuber, J., Schindler, D.W., Schmitt, J., Schneider, S.H., Schramm, V.L., Sederoff, R.R., Shatz, C.J., Sherman, F., Sidman, R.L., Sieh, K., Simons, E.L., Singer, B.H., Singer, M.F., Skyrms, B., Sleep, N.H., Smith, B.D., Snyder, S.H., Sokal, R.R., Spencer, C.S., Steitz, T.A., Strier, K.B., Südhof, T.C., Taylor, S.S., Terborgh, J., Thomas, D.H., Thompson, L.G., Tjian, R.T., Turner, M.G., Uyeda, S., Valentine, J.W., Valentine, J.S., Van Etten, J.L., van Holde, K.E., Vaughan, M., Verba, S., von Hippel, P.H., Wake, D.B., Walker, A., Walker, J.E., Watson, E.B., Watson, P.J., Weigel, D., Wessler, S.R., West-Eberhard, M.J., White, T.D., Wilson, W.J., Wolfenden, R.V., Wood, J.A., Woodwell, G.M., Wright, H.E., Jr., Wu, C., Wunsch, C., and Zosback, M.L. (2010). Climate Change and the Integrity of Science. *Science* **328**, 689-690.

136. de Bie P, Zaaroor-Regev D, and **Ciechanover A.** (2010). Regulation of the Polycomb protein RING1B ubiquitination by USP7. *Biochem. Biophys. Res. Commun.* **400**, 389-395.
137. Kravtsova-Ivantsiv, Y., Cohen, S., and **Ciechanover A.** (2011). Modification by Single Ubiquitin Moieties Rather Than Polyubiquitination is Sufficient for Proteasomal Processing of the p105 NF- κ B Precursor. *Adv. Exp. Med. Biol.* **691**, 95-106.
138. Moyal, L., Lerenthal, Y., Gana-Weisz, M., Mass, G., So, S., Wang, S.Y., Eppink, B., Chung, Y.M., Shalev, G., Shema, E., Shkedy, D., Smorodinsky, N.I., van Vliet, N., Kuster, B., Mann, M., **Ciechanover, A.**, Dahm-Daphi, J., Kanaar, R., Hu, M.C., Chen, D.J., Oren, M., and Shiloh, Y. (2011). Requirement of ATM-Dependent Monoubiquitylation of Histone H2B for Timely Repair of DNA Double-Strand Breaks. *Mol. Cell* **41**, 529-542.
139. Kühnle, S., Kogel, U., Glockzin, S., Marquardt, A., **Ciechanover, A.**, Matentzoglou, K., and Scheffner, M. (2011). Physical and functional interaction of the HECT ubiquitin-protein ligases E6AP and HERC2. *J. Biol. Chem.* **286**, 19410-19416.
140. Zoaby, M., Sadeh, R., and **Ciechanover, A.** (2011). PRAJA1 is a Ubiquitin Ligase for the Polycomb Repressive Complex 2 Proteins. *Biochem. Biophys. Res. Commun.* **408**, 393-398.
141. Kravtsova-Ivantsiv, Y., and **Ciechanover, A.** (2011). Ubiquitination and Degradation of Proteins. *Methods Mol. Biol.* **753**, 335-357.
142. **Ciechanover, A.**, Shoenfeld, Y., Shemer, J., Eidelman, L., and Borow, M. (2011). Response to Health in the Occupied Palestinian Territory. *The Lancet* **378**, e1.
143. Nguyen, L.K., Muñoz-García, J., Maccario, H., **Ciechanover, A.**, Kolch, W., and Kholodenko, B.N. (2011). Switches, Excitable Responses and Oscillations in the Ring1B/Bmi1 Ubiquitination System. *PLoS Comput Biol.* **7**, e1002317
144. Buchsbaum, S., Bercovich, B., and **Ciechanover, A.** (2012). FAT10 is a Proteasomal Degradation Signal which is itself Regulated by Ubiquitination. *Mol. Biol. Cell* **23**, 225-232.
145. Craxton, A., Butterworth, M., Harper, N., Fairall, L., Schwabe, J., **Ciechanover, A.**, and Cohen, G.M. (2012). NOXA, a sensor of proteasome integrity, is degraded by 26S proteasomes by an ubiquitin-independent pathway that is blocked by MCL-1. *Cell Death Differ.* **19**, 1424-1434
146. Noy, T., Suad, O., Taglicht, D., and **Ciechanover, A.** (2012). HUWE1 ubiquitinates MyoD and targets it for proteasomal degradation. *Biochem Biophys Res Commun.* **418**, 408-413.
147. Braten, O., Shabek, N., Kravtsova-Ivantsiv, Y., and **Ciechanover, A.** (2012). Generation of free ubiquitin chains is upregulated in stress, and facilitated by the HECT domain ubiquitin ligases UFD4 and HUL5. *Biochem J.* **444**, 611-617.

148. Shabek, N., Herman-Bachinsky, Y., Buchsbaum, S., Lewinson, O., Haj-Yahya, M., Hejjaoui, M., Lashuel, H.A., Sommer, T., Brik, A., and **Ciechanover, A.** (2012). The Size of the Proteasomal Substrate Determines whether its Degradation will be Mediated by Mono- or Polyubiquitylation. *Mol. Cell* **48**, 87-97.

Reviewed by F1000 - <http://f1000.com/717953569#comments>

Reviewed by *Nature Reviews in Cell and Molecular Biology* - http://www.nature.com/nrm/journal/v13/n10/full/nrm3445.html?WT.ec_id=NRM-201210

149. De Bie, Prim, and **Ciechanover, A.** (2012). RING1B ubiquitination and stability are regulated by ARF. *Biochem. Biophys. Res. Commun.* **426**, 49-53.
150. **Ciechanover, A.** (2012). Reprint of "A Heat-Sstable Polypeptide Component of an ATP-Dependent Proteolytic System from Reticulocytes". *Biochem Biophys Res Commun.* **425**, 565-570.
151. Buchsbaum, S., Bercovich, B., Ziv, T., and **Ciechanover A.** (2012). Modification of the Inflammatory Mediator LRRFIP2 by the Ubiquitin-Like Protein FAT10 Inhibits its Activity During Cellular Response to LPS. *Biochem. Biophys. Res. Commun.* **428**, 11-16.
152. Bagola, K., von Delbrück, M., Dittmar, G., Scheffner, M., Ziv, I., Glickman, M.H., **Ciechanover, A.**, and Sommer, T. (2013). Ubiquitin Binding by a CUE Domain Regulates Ubiquitin Chain Formation by ERAD E3 Ligases. *Mol. Cell* **50**, 528-539.
153. Haj-Yahya, N., Haj-Yahya, M., CastaÇeda, C. A., Spasser, L., Hemantha, H. P., Jbara, M., Penner, M., **Ciechanover, A.**, Fushman, D., and Brik, A. (2013). Modifying the Vicinity of the Isopeptide Bond to Reveal Differential Behavior of Ubiquitin Chains with Interacting Proteins. *Angew. Chem. Int. Ed. Engl.* **52**, 11149-11153.
154. Haj-Yahyaa, M., Fauvet, B., Herman-Bachinsky, Y., Hejjaoui, M., Bavikar, S. N., Karthikeyan, S. V., **Ciechanover, A.***, Lashuel, H. A.*, and Brik, A.* (2013). Synthetic polyubiquitinated α -Synuclein reveals important insights into the roles of the ubiquitin chain in regulating pathophysiology. *Proc. Natl. Acad. Sci. USA* **110**, 17726-17731.
***Corresponding authors**
155. Hemantha, H.P., Bavikar, S.N., Herman-Bachinsky, Y., Haj-Yahya, N., Bondalapati, S., **Ciechanover, A.**, and Brik, A. (2014). Nonenzymatic polyubiquitination of expressed proteins. *J. Am. Chem. Soc.* **136**, 2665-2673.
156. Belogurov, A., Kudriaeva, A. K., Kuzina, E., Smirnov, A., Boblik, T., Ponomarenko, N., Kravtsova-Ivantsiv, Y., **Ciechanover, A.***, and Gabibov, A.* (2014). Multiple Sclerosis Autoantigen Myelin Basic Protein Escapes Control by Ubiquitination During Proteasomal Degradation. *J. Biol. Chem.* **289**, 17758-17766.

157. Rossi, M., Rotblat, B., Ansell, K., Amelio, I., Caraglia, M., Misso, G., Bernassola, F., Cavasotto, C.N., Knight, R.A., **Ciechanover, A.***, and Melino, G.* (2014). High Throughput Screening for Inhibitors of the HECT Ubiquitin E3 Ligase ITCH Identifies Antidepressant Drugs as Regulators of Autophagy. *Cell Death Dis.* 1;5:e1203. doi: 10.1038/cddis.2014.113; PMID: 24787015].
*Corresponding authors
158. Queisser, M.A., Dada, L.A., Deiss-Yehiely, N., Angulo, M., Zhou, G., Kouri, F.M., Knab, L.M., Liu, J., Stegh, A.H., DeCamp, M.M., Budinger, G.R., Chandel, N.S., Ciechanover, A., Iwai, K., and Sznajder, J.I. (2014). HOIL-1L Functions as the PKC ζ Ubiquitin Ligase to Promote Lung Tumor Growth. *Am. J. Respir. Crit. Care Med.* **190**, 688-698.
159. Ahmed, Q., Avidan, A.Y., **Ciechanover, A.**, Shechtman, D., Zajfman, D., Reichman, U., Kornberg, R., Hershko, A., and Lavie, P. (2014). Israel-Gaza Conflict. *Lancet* **384**, 9945. e34-7. doi: 10.1016/S0140-6736(14)61314-3. Epub August 18, 2014. PMID: 25145777
160. Galluzzi, L., Bravo-San Pedro, J.M., Vitale, I., Aaronson, S.A., Abrams, J.M., Adam, D., Alnemri, E.S., Altucci, L., Andrews, D., Annicchiarico-Petruzzelli, M., Baehrecke, E.H., Bazan, N.G., Bertrand, M.J., Bianchi, K., Blagosklonny, M.V., Blomgren, K., Borner, C., Bredesen, D.E., Brenner, C., Campanella, M., Candi, E., Cecconi, F., Chan, F.K., Chandel, N.S., Cheng, E.H., Chipuk, J.E., Cidlowski, J.A., **Ciechanover, A.**, Dawson, T.M., Dawson, V.L., De Laurenzi, V., De Maria, R., Debatin, K.M., Di Daniele, N., Dixit V.M., Dynlacht, B.D., El-Deiry, W.S., Fimia, G.M., Flavell, R.A., Fulda, S., Garrido, C., Gougeon, M.L., Green, D.R., Gronemeyer, H., Hajnoczky, G., Hardwick, J.M., Hengartner, M.O., Ichijo, H., Joseph, B., Jost, P.J., Kaufmann, T., Kepp, O., Klionsky, D.J., Knight, R.A., Kumar, S., Lemasters, J.J., Levine, B., Linkermann, A., Lipton, S.A., Lockshin, R.A., López-Otín, C., Lugli, E., Madeo, F., Malorni, W., Marine, J.C., Martin, S.J., Martinou, J.C., Medema, J.P., Meier, P., Melino, S., Mizushima, N., Moll, U., Muñoz-Pinedo, C., Nuñez, G., Oberst, A., Panaretakis, T., Penninger, J.M., Peter, M.E., Piacentini, M., Pinton, P., Prehn, J.H., Puthalakath, H., Rabinovich, G.A., Ravichandran, K.S., Rizzuto, R., Rodrigues, C.M., Rubinsztein, D.C., Rudel, T., Shi, Y., Simon, H.U., Stockwell, B.R., Szabadkai, G., Tait, S.W., Tang H.L., Tavernarakis, N., Tsujimoto, Y., Vanden Berghe, T., Vandenabeele, P., Villunger, A., Wagner, E.F., Walczak, H., White, E., Wood, W.G., Yuan, J., Zakeri, Z., Zhivotovsky, B., Melino, G., Kroemer, G. (2014). Essential versus Accessory Aspects of Cell Death: Recommendations of the NCCD 2015 (2015). *Cell Death Differ.* **22**, 58-73.

161. Kravtsova-Ivantsiv, Y., Shomer, I., Cohen-Kaplan, V., Snijder, B., Superti-Furga, G., Gonen, H., Sommer, T., Ziv, T., Admon, A., Naroditky, I., Jbara, M., Brik, A., Pikarsky, E., Kwon, Y.T. Doweck, I., and **Ciechanover, A.** (2015). KPC1-mediated ubiquitination and Proteasomal Processing of NF- κ B p105 to p50 Restricts Tumor Growth. *Cell* **161**, 333-347.
162. Cha-Molstad, H., Sung, K.S., Hwang, J., Kim, K.A., Yu, J.E., Yoo, Y.D., Jang, J.M., Han, D.H., Molstad, M., Kim, J.G., Lee, Y.J., Zakrzewska, A., Kim, S.H., Kim, S.T., Kim, S.Y., Lee, H.G., Soung, N.K., Ahn, J.S., **Ciechanover, A.**, Kim, B.Y., and Kwon, Y.T. (2015). Amino-Terminal Arginylation Targets Endoplasmic Reticulum Chaperone BiP for Autophagy Through p62 Binding. *Nat. Cell Biol.* **17**, 917-929.
163. Cha-Molstad, H., Yu, J.E., Lee, S.H., Kim, J.G., Sung, K.S., Hwang, J., Yoo, Y.D., Lee, Y.J., Kim, S.T., Lee, D.H., **Ciechanover, A.**, Kim, B.Y., and Kwon, Y.T. (2016). Modulation of SQSTM1/p62 Activity by N-Terminal Arginylation of the Endoplasmic Reticulum Chaperone HSPA5/GRP78/BiP. *Autophagy* **12**, 426-428.
164. Lehmann, G., Udasin, R.G., and **Ciechanover, A.** (2016). On the Linkage Between the Ubiquitin-Proteasome System and the Mitochondria. *Biochem. Biophys. Res. Commun.* **473**, 80-86. doi: 10.1016/j.bbrc.2016.03.055. Epub 2016 Mar 18. PMID: 26996128
165. Lehmann, G., Ziv, T., Braten, O., Admon, A., Udasin, R.G., and **Ciechanover, A.** (2016). Ubiquitination of Specific Mitochondrial Matrix Proteins. *Biochem. Biophys. Res. Commun.* **475**, 13-18. pii: S0006-291X(16)30699-4. doi: 10.1016/j.bbrc.2016.04.150. [Epub ahead of print]. PMID: 27157140

Was highlighted in F1000:

https://f1000.com/prime/726343061?subscriptioncode=a66fe1e7-6fda-40bc-8783-9984e8dfd187&utm_medium=email&utm_source=prime_ypp.

166. Braten, O., Livneh, I., Ziv, T., Admon, A., Kehat, I., Caspi, L., Gonen, H., Bercovich, B., Godzik, A., Jahandideh, S., Jaroszewski, L. Sommer, T., Kwon, Y.T. Guharoy, M., Tompa, P., and **Ciechanover, A.** (2016). Numerous Proteins with Unique Characteristics are Degraded by the 26S Proteasome Following Monoubiquitination. *Proc. Natl. Acad. Sci. USA* **113** (32): E4639-E4647. doi: 10.1073/pnas.1608644113. Epub 2016 Jul 6.

Highlighted in: Ronai, Z.A. (2016). Monoubiquitination in Proteasomal Degradation. *Proc. Natl. Acad. Sci. USA*. 113, 8894-8896.
doi: 10.1073/pnas.1610186113.

167. Cohen-Kaplan, V., Livneh, I., Avni, N., Fabre, B., Ziv, T., Kwon, Y. T., **Ciechanover, A.** (2016). p62- and Ubiquitin-Dependent Stress-Induced Autophagy of the Mammalian 26S Proteasome. *Proc. Natl. Acad. Sci. USA* **113**. E7490-E7499.
www.pnas.org/cgi/doi/10.1073/pnas.1615455113

Highlighted in:

1. Hoeller, D., and Dikic, I. (2016). How the Proteasome is Degraded. *Proc. Natl. Acad. Sci. USA* **113**, 13266-13268.
www.pnas.org/cgi/doi/10.1073/pnas.1616535113
2. Cohen-Kaplan, V., Ciechanover, A.*, and Livneh, I. (2016). p62 at the crossroad of the ubiquitin-proteasome system and autophagy. *Oncotarget*
doi: 10.18632/oncotarget.13805.
PMID: 27974671
***Corresponding author**

168. Lahav-Baratz, S., Kravtsova-Ivantsiv, Y., Golan, S., and **Ciechanover, A.** (2016). The testis-specific USP26 is a deubiquitinating enzyme of the ubiquitin ligase Mdm2. *Biochem Biophys Res Commun*. **482**, 106-111.
doi: 10.1016/j.bbrc.2016.10.135. PMID: 27810359
169. Yoo, Y.D., Lee, D.H., Cha-Molstad, H., Kim, H., Mun, S.R., Ji, C., Park, S.H., Sung, K.S., Choi, S.A., Hwang, J., Park, D.M., Kim, S.K., Park, K.J., Kang, S.H., Oh, S.C., **Ciechanover, A.**, Lee, Y.J., Kim, B.Y., and Kwon Y.T. (2017). Glioma-derived cancer stem cells are hypersensitive to proteasomal inhibition. *EMBO Rep*. **18**, 150-168.
doi: 10.15252/embr.201642360. PMID: 27993939.
170. Lehmann, G., Udasin, R.G., Livneh, I., and **Ciechanover, A.** (2017). Identification of UBact, a Ubiquitin-Like Protein, Along With Other Homologous Components of a Conjugation System and the Proteasome in Different Gram-Negative Bacteria. *Biochem. Biophys. Res. Commun.* doi: information: 10.1016/j.bbrc.2017.01.037; PMID: 28087277

171. Cha-Molstad, H., Yu, J.E., Feng, Z., Lee, S.H., Kim, J.G., Yang, P., Han, B., Sung, K.W., Yoo, Y.D., Hwang, J., McGuire, T., Shim, S.M., Song, H.D., Ganipiseti, S., Wang, N., Jang, J.M., Lee, M.J., Kim, S.J., Lee, K.H., Hong, J.T., **Ciechanover, A.**, Mook-Jung, I., Kim, K.P., Xie, X.Q., Kwon, Y.T., and Kim, B.Y. (2017). p62/SQSTM1/Sequestosome-1 is an N-Recognin of the N-End Rule Pathway which Modulates Autophagosome Biogenesis. *Nature Commun.* **8**, 102.
doi: 10.1038/s41467-017-00085-7. PMID: 28740232
172. Iida, Y., **Ciechanover, A.**, Marzese, D.M., Hata, K., Bustos, M., Ono, S., Wang, J., Salomon, M.P., Tran, K., Lam, S., Hsu, S., Nelson, N., Kravtsova-Ivantsiv, Y., Mills, G.B., Davies, M.A., and Hoon, D.S.B. (2017). Epigenetic Regulation of KPC1 Ubiquitin Ligase Affects the NF- κ B Pathway in Melanoma. *Clin. Cancer Res.* doi: 10.1158/1078-0432.CCR-17-0146.
PMID: 28389511
173. Dong Yoo, Y., Lee, D.H., Cha-Molstad, H., Kim, H., Mun, R.S., Ji, C., Park, S.H., Sung, K.S., Choi, S.A., Hwang, J., Park, D.M., Kim, S.K., Park, K.-J., Kang, S.-H., Oh, S.C., **Ciechanover, A.**, Lee, Y.J., Kim, B.Y., Kwon, Y.T. (2017) Glioma-Derived Cancer Stem Cells are Hypersensitive to Proteasomal Inhibition. *EMBO Rep.* DOI 10.15252/embr.201744761 | Published online 01.09.2017.
174. Magnania, N.D, Dada, L.A., Queisser, M.A. Brazee, P.L., Welch, L.C., Anekalla, K.R., Zhou,G., Vagin,O., Misharin, A.V., Budinger, G.R.S., Iwai, K., ***Ciechanover, A.J.**, and ***Sznajder, J.A.** (2017). HIF and HOIL-1L–Mediated PKC ζ Degradation Stabilizes Plasma Membrane Na,K-ATPase to Protect Against Hypoxia-Induced Lung Injury. *Proc. Natl. Acad. Sci. USA* doi: 10.1073/pnas.1713563114
***co-corresponding authors**
175. Shim, S.-M., Choi, H.-R., Sung, K.-W., Yoon, J.-L., Sung, T.-K., Kim, D., Mun, S.-R., Hwang, J., Cha-Molstad,H., **Ciechanover, A.**, Kim, B.-Y., and Kwon, Y.-T. (2018). The Endoplasmic Reticulum–Residing Caperone BiP is Short-Lived and Metabolized through N-Terminal Arginylation *Sci. Signaling* 11(511). pii: eaan0630. doi: 10.1126/scisignal.aan0630. PMID: 29295953
176. Cha-Molstad, H., Lee, S.-H., Kim, J.-G., Sung, K.-W., Hwang, J., Shim, S.-M., Ganipiseti, S., McGuire, T., Mook-Jung, I., Ciechanover, A., Xie, X.Q., Kim, B.Y., and Kwon, Y.-T. (2017). Regulation of Autophagic Proteolysis by the N-Recognin SQSTM1/p62 of the N-End Rule Pathway. *Autophagy* **20**, 1-6.
doi: 10.1080/15548627.2017.1415190. PMID: 26797053

177. Yoo, Y.D., Mun, S.R., Ji, C.H., Sung, K.W., Kang, K.Y., Heo, A.J., Lee, S.H., An, J.Y., Hwang, J., Xie, X.Q., **Ciechanover, A.**, Kim, B.Y., and Kwon, Y.T. (2018). N-Terminal Arginylation Generates a Bimodal Degron that Modulates Autophagic Proteolysis. *Proc. Natl. Acad. Sci. USA* **115**, E2716-E2724
pii: 201719110. doi: 10.1073/pnas.1719110115. PMID: 29507222
178. Yoo, Y.D., Lee, D.H., Cha-Molstad, H., Kim, H., Mun, S.R., Ji, C., Park, S.H., Sung, K.S., Choi, S.A., Hwang, J., Park, D.M., Kim, S.K., Park, K.J., Kang, S.H., Oh, S.C., **Ciechanover, A.**, Lee, Y.J., Kim, B.Y., and Kwon, Y.T. (2018). Glioma-derived cancer stem cells are hypersensitive to proteasomal inhibition. *EMBO Rep.* **19**, pii: e46380. doi: 10.15252/embr.201846380. PMID: 30185565
179. Sun, H., Mali, S.M., Singh, S.K., Meledin, R., Brik, A., Kwon, Y.T., Kravtsova-Ivantsiv, Y., Bercovich, B., and **Ciechanover, A.** (2019). Diverse Fate of Ubiquitin Chain Moieties: The Proximal is Degraded with the Target, and the Distal Protects the Proximal From Removal, and Recycles. *Proc. Natl. Acad. Sci. USA* **116**, 7805-7812. doi: 10.1073/pnas.1822148116. PMID: 30867293
<http://www.pnas.org/cgi/doi/10.1073/pnas.1822148116>
- Was highlighted by an editor-invited commentary:**
van der Heden, van Noort G.J., Gan, J., and, Ovaa, H. (2019). Synthetic ubiquitinated proteins meet the proteasome: Distinct roles of ubiquitin in a chain. *Proc Natl Acad Sci USA*. **116**, 7614-7616. doi: 10.1073/pnas.1903405116. PMID: 30926663
180. Fabre, B., Livneh, I., Ziv, T., and **Ciechanover, A.** (2019). Modulation of the cell cycle regulating transcription factor E2F1 pathway by the proteasome following amino acid starvation. *Biochim. Biophys. Res. Commun.* **513**, 721-725. doi: 10.1016/j.bbrc.2019.04.066. PMID: 30992132
181. Nawatha, M., Rogers, J.M., Bonn, S.M., Livneh, I., Lemma, B., Mali, S.M., Vamisetti, G.B., Sun, H., Bercovich, B., Huang, Y., **Ciechanover, A.**, Fushman, D., Suga, H., and Brik, A. (2019). *De novo* macrocyclic peptides that specifically modulate Lys48-linked ubiquitin chains. *Nature Chem.* doi.org/10.1038/s41557-019-0278-x
182. Fabre, B., I. Livneh, Ziv, T., and **Ciechanover, A.** (2019). Identification of proteins regulated by the proteasome following induction of endoplasmic reticulum stress. *Biochem. Biophys. Res. Commun.* <https://doi.org/10.1016/j.bbrc.2019.07.040>
183. Ji, C.H., Kim, H.Y., Heo, A.J., Lee, S.H., Lee, M.J., Kim, S.B., Srinivasrao, G., Mun, S.R., Cha-Molstad, H., **Ciechanover, A.**, Choi, C.Y., Lee, H.G., Kim, B.Y., and Kwon, Y.T. (2019). The N-Degron Pathway Mediates ER-phagy *Mol. Cell* **75**, 1058-1072. e9. doi: 10.1016/j.molcel.2019.06.028.

184. Pasca, S., Tomuleasa, C., Teodorescu, P., Ghiaur, G., Dima, D., Moisoiu, V., Berce, C., Stefan, C., **Ciechanover, A.**, and Einsele, H. (2019). KRAS/NRAS/BRAF Mutations as Potential Targets in Multiple Myeloma. *Front. Oncol.* **9**:1137. doi: 10.3389/fonc.2019.01137. eCollection 2019. PMID: 31709194
185. Wang, X., Bustos, M.A., Zhang, X., Ramos, R.I., Tan, C., Iida, Y., Chang, S.-C., Salomon, M.P., Tran, K., Gentry, R., Kravtsova-Ivantsiv, Y., Kelly, D.F., Mills, G.B., **Ciechanover, A.**, Mao, Y., and Hoon, D.S.B. (2020). Downregulation of the Ubiquitin-E3 Ligase RNF123 Promotes Upregulation of the NF- κ B1 Target SerpinE1 in Aggressive Glioblastoma Tumors *Cancers* **12**, 1081; <https://doi.org/10.3390/cancers12051081> (registering DOI)
186. Huang, Y., Nawatha, M., Livneh, I., Rogers, J.M., Sun, H., Singh, S.K., **Ciechanover, A.**, Brik, A., and Suga, H. (2020). Affinity Maturation of Macrocyclic Peptide Modulators of Lys48-Linked Diubiquitin by a Twofold Strategy. *Chemistry* **26**, 8022-8027. doi: 10.1002/chem.202000273.
187. Hakim-Eshed, V., Boulos, A., Cohen-Rosenzweig, C., Libo Yu-Taegerd, L., Ziv, T., Kwon, Y.-T., Riess, O., Nguyen, H.H.P., Ziv, N.E., and **Ciechanover, A.** (2020). Site-specific ubiquitination of pathogenic huntingtin attenuates its deleterious effects. *Proc. Natl. Acad. Sci. USA.* **117**, 18661-18669 www.pnas.org/cgi/doi/10.1073/pnas.2007667117
188. Udasin, R.G., Gottfried, Y., Fabre, B., Bercovich, B., Ziv, T., and Ciechanover, A. (2020). The p105 NF- κ B precursor is a pseudo substrate of the ubiquitin ligase FBXO7, and its binding to the ligase stabilizes it and results in stimulated cell proliferation. *Biochem. Biophys. Res. Commun.* <https://doi.org/10.1016/j.bbrc.2020.08.098>
189. Kravtsova-Ivantsiv, Y., Goldhirsh, G., Ivantsiv, A., Ben Itzhak, O., Kwon, Y.T., Pikarsky, E., and Ciechanover, A. (2020). Excess of the NF- κ B p50 subunit generated by the ubiquitin ligase KPC1 suppresses tumors via PD-L1- and chemokines-mediated mechanisms. *Proc. Natl. Acad. Sci. U S A.* doi: 10.1073/pnas.2019604117.
190. Fang, X., Fang, X., Mao, Y., **Ciechanover, A.**, Xu, Y., An, J., and Huang Z. (2021) A novel small molecule CXCR4 antagonist potently mobilizes hematopoietic stem cells in mice and monkeys. *Stem Cell Res Ther.* **12**, 17. doi: 10.1186/s13287-020-02073-z. PMID: 33413613
191. Wang, J., Liahng, B., Vhen, Y., ², Fuk-Woo Chan, J., Yuan, S., Ye, H., Nie, L., Zhou, J., Wu, Y., Wu, M., Huang, L.S., An, J., Warshel, A., Yuen, K.Y., **Ciechanover, A.**, Huang, Z., and Xu, Y. (2021). A new class of α -ketoamide derivatives with potent anticancer and anti-SARS-CoV-2 activities. *Eur. J. Med. Chem.* **215**, 113267 doi: 10.1016/j.ejmech.2021.113267.

192. Kudriaeva, A.A., Livneh, I., Baranov, M.S., Ziganshin, R.H., Tupikin, A.E., Zaitseva, S.O., Kabilov, M.R., **Ciechanover, A.**, and Belogurov, A.A. Jr. (2021). In-depth characterization of ubiquitin turnover in mammalian cells by fluorescence tracking. *Cell Chem. Biol.* S2451-9456(21)00094-5. doi: 10.1016/j.chembiol.2021.02.009. Online ahead of print. PMID: 33675681
193. Fu, A., Cohen-Kaplan, V., Avni, N., Livneh, I., and **Ciechanover, A.** (2021). p62-containing, proteolytically active nuclear condensates, increase the efficiency of the ubiquitin-proteasome system. *Proc. Natl. Acad. Sci. USA* **118**:e2107321118. DOI: 10.1073/pnas.2107321118. PMID: 34385323

Highlighted in:

1. Erdbrügger, P., and Wilfling, F. (2021). p62 condensates are a hub for proteasome-mediated protein turnover in the nucleus. *Proc. Natl. Acad. Sci USA* **118** e2113647118; <https://doi.org/10.1073/pnas.2113647118>
 2. Fu, A., Livneh, I., **Ciechanover, A.,*** and Cohen-Kaplan, V. (2021). How multi-component cascades operate in cells: lessons from the ubiquitin system-containing liquid-separated condensates. *Molecular & Cellular Oncology*; <https://doi.org/10.1080/23723556.2021.1989939>
*Corresponding author
194. Goldhirsh, G., Kravtsova-Ivantsiv, Y., Satish, G., Ziv, T., Brik, A. and **Ciechanover, A.** (2021). A short binding site in the KPC1 ubiquitin ligase mediates processing of NF- κ B1 p105 to p50: A potential for a tumor-suppressive PROTAC. *Proc. Natl. Acad. Sci. USA*, **118**:e2117254118. doi: 10.1073/pnas.2117254118. PMID: 34873064
195. Heo, A. J. Kim, S. B., Ji, C. H., Han, D., Lee, S. J., Lee, S. H., Lee, M. J., Lee, J. S., **Ciechanover, A.**, Kim, B. Y., and Kwon, Y. T. (2021). The N-terminal Cysteine is a Dual Sensor of Oxygen and Oxidative Stress. *Proc. Natl. Acad. Sci. USA* **118**, e2107993118; <https://doi.org/10.1073/pnas.2107993118>
196. Wang, J., Liang, B., Chen, Y., Fuk-Woo Chan, J., Yuan, S., Ye, H., Nie, L., Zhou, J., Wu, Y., Wu, M., Huang, L.S., An, J., Warshel, A., Yuen, K.Y., **Ciechanover, A.**, Huang, Z., and Xu, Y. (2021). A new Class of α -Ketoamide Derivatives with Potent Anticancer and anti SARS-Cov-2 activities. *Eur. J. Med. Chem.* **215**, 113267. doi: 10.1016/j.ejmech.2021.113267. PMID: 33639344

197. Rogers, J.M., Nawatha, M., Lemma, B., Vamisetti, G.B., Livneh, I., Barash, U., Vlodavsky, I., **Ciechanover, A.**, Fushman, D., Suga, H., and Brik, A. (2021). *In vivo* modulation of ubiquitin chains by N-methylated non-proteinogenic cyclic peptides *RSC Chem. Biol.* **2**, 513-522. doi: 10.1039/d0cb00179a. PMID: 34179781
- Correction to the above: *RSC Chem Biol.* (2021) 2:944. doi: 10.1039/d1cb90015c. eCollection. PMID: 34458819**
198. Nataraj, N. B., Noronha, A., Sang Lee, J., Ghosh, S., Mohan Raju, H. R., Sekar, A., Zuckerman, B., Lindzen, M., Tarcitano, E., Srivastava, S. Selitrennik, M., Livneh, I., Drago-Garcia, D., Rueda, S., Caldas, C., Lev, S., Geiger, T., **Ciechanover, A.**, Ulitsky, I., Seger, R., Ruppin, E., and Yarden, Y. (2022). Nucleoporin-93 Reveals a Common Feature of Aggressive Breast Cancers: Robust Nucleocytoplasmic Transport of Transcription Factors. *Cell Reports* **38**; <https://doi.org/10.1016/j.celrep.2022.110418>
199. Fang, X., Meng, Q., Zhang, H., Fang, X., Huang, L.S., Zhang, X., Schooley, R.T., **Ciechanover, A.**, An, J., Xu, Y., and Huang, Z. (2022). A Fragment Integrational Approach to GPCR Inhibition: Identification of a High Affinity Small Molecule CXCR4 Antagonist. *Eur. J. Med. Chem.* **5**, 231:114150. doi: 10.1016/j.ejmech.2022.114150. PMID: 35124530
200. Fan, T., Liang, B., Nie, L., Wang, J., Zhang, H., **Ciechanover, A.**, Xu, Y., An, J., and Huang, Z. (2022). A Synthetic Bivalent Peptide Ligand of EphB4 with Potent Agonistic Activity. *Eur. J. Med. Chem.* **244**, 114804. doi: 10.1016/j.ejmech.2022.114804. PMID: 36208510
201. Livneh, I., Cohen-Kaplan, V., Fabre, B., Abramovitch, I., Lulu, C., Nataraj, N.B., Lazar., I., Ziv, T., Yarden., Y., Yaniv, Z., Gottlieb, E., and **Ciechanover, A.** (2023). Regulation of Nucleo-Cytosolic 26 Proteasome Translocation by Aromatic Amino Acids via mTOR Signaling is Essential for Cell Survival Under Stress. *Mol. Cell* **83**, 3333-3346.e5. doi: 10.1016/j.molcel.2023.08.016. PMID: 37738964
- Highlighted in: Bauman, Kim (2023). mTOR inhibits starvation-induced nuclear export of the proteasome. *Nature Rev. Mol. Cell Biol.* doi: <https://10.1038/s41580-023-00678-9>. PMID: 37803206**
202. Ashkenazi, I., Beyar, R., Blazer, S., **Ciechanover, A.**, and Skorecki, K.L. (2023). Release Our Hostages Now. *Rambam Maimonides Med. J.* **14**:e0019. doi: 10.5041/RMMJ.10507. PMID: 37917868

203. Nahum-Ankonina, O., Kurtzswald-Josefson, E., **Ciechanover, A.**, Waldman, M., Shwartz-Rohaker, O., Hochhauser, E., Meyer, S.J., Aravot, D., Phillip, M., and Barac, Y.D. (2023). Ubiquitin Proteasome System Role in Diabetes-Induced Cardiomyopathy. *Int. J. Mol. Sci.* 24:15376. doi: 10.3390/ijms242015376. PMID: 37895057
204. Neeman-Egozi, S., Livneh, I., Dolgopyat, I., Nussinovitch, U., Milman, H., Cohen, N., Eisen, B., **Ciechanover, A.***, and Binah, O*. (2024). Stress-Induced Proteasome Sub-Cellular Translocation in Cardiomyocytes Causes Altered Intracellular Calcium Handling and Arrhythmias. *Int. J. Mol. Sci.* 25, 4932; DOI: [10.3390/ijms25094932](https://doi.org/10.3390/ijms25094932) PMID: 38732146
*corresponding authors
205. Boulos, A., Maroun, D., **Ciechanover, A.**, and Ziv, N. (2024). Peripheral Sequestration of Huntingtin Delays Neuronal Death and Depends on N-Terminal Ubiquitination. *Communications Biology* 7, 1014. doi: 10.1038/s42003-024-06733-1. PMID: 39155290
206. Lazar, I., Livneh, I., **Ciechanover, A.**, and Fabre, B. (2024). Tryptophanyl-Transfer RNA Synthetase Is Involved in a Negative Feedback Loop Mitigating Interferon- γ -Induced Gene Expression. *Cells* 13:180. doi: 10.3390/cells13020180. PMID: 38247871
207. Fu, A., Luo, Z., Ziv, T., Bi, X., Lulu-Shimron, C, Cohen-Kaplan, V., and **Ciechanover, A.** (2024). Nuclear p62 condensates stabilize the promyelocytic leukemia nuclear bodies by sequestering their ubiquitin ligase RNF4. *Proc. Natl. Acad. Sci. USA* 121:e2414377121. doi: 10.1073/pnas.2414377121. PMID: 39418304. PMCID: PMC11513912.
208. Kravtsova-Ivantsiv, Y., Goldhirsh, G., and **Ciechanover, A.** (2024). CXCL12 restricts tumor growth by suppressing the Ras, ERK1/2, c-Myc, and the immune checkpoint PD-L1 pathways. *Proc. Natl. Acad. Sci. USA* 121:e2416909121. doi: 10.1073/pnas.2416909121. PMID: 39689179. PMCID: PMC11670100
209. Zhou, Z., Sang, X., Wu, M., Qian, T., **Ciechanover, A.** An, J., Xu, Y., and Huang, Z. (2024). Discovery of Novel Nonpeptidic Proteasome Inhibitors Using Covalent Virtual Screening and Biological Evaluation. *ACS Med. Chem. Lett.* 15, 1741-1748. doi: 10.1021/acsmchemlett.4c00321. eCollection 2024 Oct 10. PMID: 39411540. PMCID: MC11472392.
210. Livneh, I., Fabre, B., Goldhirsh, G., Lulu, C., Zinger, A., Shammai, Y., Kaduri, M., Dahan, A., Ziv, T., Schroeder, A., Ben-Neriah, Y., Zohar, Y., Cohen-Kaplan, V., and **Ciechanover, A.** (2024). Inhibition of Nucleo-Cytoplasmic Proteasome Translocation by the Aromatic Amino Acids or Silencing Sestrin3 - Their Sensing Mediator - is Tumor Suppressive. *Cell Death Differ.* 31:1242-1254. doi: 10.1038/s41418-024-01370-x. PMID: 39266717. PMCID: PMC11445514

211. Gottfried, Y., Lulu-Shimron, C., Goldhirsh, G., Fisher, Y., Ziv, T., Hoon, D.S.B., Kravtsova-Ivantsiv, Y., and **Ciechanover, A.** (2025). Vimentin is a Ubiquitination and Degradation Substrate of the Ubiquitin Ligase KPC1. *Biochem. Biophys. Res. Commun.* **745**:151231. doi: 10.1016/j.bbrc.2024.151231. PMID: 39732122
212. Menachem, R., Nudelman, I., Vorontsova, A., Livneh, I., Sela, M., Benguigui, M., Manobla, B., Shammai, Y., Deo, A., Buxbaum, C., Bessler, R., Raviv, Z., Shklover, J., Sznitman, J., **Ciechanover, A.**, Schroeder, A., and Shaked, Y. (2025). Bone Marrow-Targeted Liposomes Loaded with Bortezomib Overcome Multiple Myeloma Resistance. *ACS Nano* **19**, 11684-11701. doi: 10.1021/acsnano.4c10597. PMID: 40117329.
213. Kegyes, D., Bancos, A., Tigu, A.B., Rus, I., Dima, D., Cenariu, D., Nistor, M., Munteanu, R., Gulei, D., Tanase, A., Colita, A., Buzoianu, A., Iuga, C., Zdrenghea, M., Terpos, E., Ciurea, S.O., **Ciechanover, A.**, Einsele, H., and Tomuleasa, C. (2025). Targeting degradation of IKZF1 and IKZF3 through modulation of the E3 ligase substrates in the context of cellular therapies for multiple myeloma. *Biomark. Res.* **15**;13(1):105. doi: 10.1186/s40364-025-00825-8. PMID: 40817326
214. Sang, X., Jiao, H., Meng, Q., Fang, X., Sundaram, K.S., Zhou, J., Xu, Y., Alvarado, A.I.W., Nuryyev, R.L., Ourenik, J., Ourednik, V., Huang, I.S., Liu, X., Mei, Y., Qian, T., **Ciechanover, A.**, Pizzo, D.P., Lane, M.A., Zholudeva, L.V., An, J., Snyder, E.Y., Hu, H., and Huang, Z. (2025). The cryo-EM-delineated mechanism underlying mimicry of CXCR4 agonism enables widespread stem cell neuroprotection in a mouse model of ALS. *bioRxiv* [Preprint]. 11:2025.07.08.663251. doi: 10.1101/2025.07.08.663251. PMID: 40672153.
215. Wang J, Sang X, Zheng W, Chan JF-W, Zhou J, Xu Y, Han P, Feng Y, Fu L, Tsang JO-L, Yuan S, **Ciechanover A**, An J, Yuen K-Y, Qi J, Huang Z. (2025). Discovery of a potent covalent inhibitor that unusually distorts the catalytic dyad of SARS-CoV-2 main protease. *J. Virol.* **23**;99(10):e0065825. doi: 10.1128/jvi.00658-25. PMID: 40952121
216. Sang, X., Jiao, H., Meng, Q., Fang, X., Sundaram, K.S., Zhou, J., Xu, Y., Alvarado, A.I.W., Nuryyev, R.L., Ourenik, J., Ourednik, V., Huang, I.S., Liu, X., Mei, Y., Qian, T., **Ciechanover, A.**, Pizzo, D.P., Lane, M.A., Zholudeva, L.V., An, J., Snyder, E.Y., Hu, H., and Huang, Z. (2025). The cryo-EM-delineated mechanism underlying mimicry of CXCR4 agonism enables widespread stem cell neuroprotection in a mouse model of ALS. *bioRxiv* [Preprint]. Jul 11:2025.07.08.663251. doi: 10.1101/2025.07.08.663251. PMID: 40672153

217. Qi, P., Yu-Taeger, L., Han, H., Zhou, J., Singer-Mikosch, E., Casadei, N., Riess, O., Ziv, N.E., **Ciechanover, A.**, and Phuc Nguyen, H.H. (2026). Prevention of ubiquitination at K6 and K9 in mutant huntingtin exacerbates disease pathology in a knock-in mouse model. *Proc. Natl. Acad. Sci. USA* **123**, (2):e2527258122. doi: 10.1073/pnas.2527258122. Epub 2026 Jan 8. PMID: 41505525
218. Lulu-Shimron, C., Luo, Z., Brekhman, V., Huang, L., Livneh, I., Kosako, H., Cohen-Kaplan, V., and **Ciechanover A.** (2026). Proteasomal proteolysis in p62 condensates directs tumor suppression or growth depending on their subcellular localization. *Proc Natl Acad Sci USA* **123**, (3):e2529422123. doi: 10.1073/pnas.2529422123. PMID: 41543905
219. Tigu, A.B., Ivancuta, A., Tomuleasa, C., Nistor, M., Kegyes, D., Cenariu, D., Munteanu, R., Buzoianu, A.D., Einsele, H., Federico, M., Kobold, S., and **Ciechanover, A.** (2026). Proteolysis targeting chimeric-based technology in myeloma and lymphoma. *Mol. Cancer Ther.* doi: 10.1158/1535-7163. MCT-25-1148. PMID: 41481115
220. Lipskerov, F., Cohen-Kaplan, V. and **Ciechanover, A.** (2026). Precise Mapping of the Proteasome Interaction Region (PIR) of p62/SQSTM1: Decoupling Condensate Formation from Proteasome Recruitment. *Cells* **15(4)**, 335; <https://doi.org/10.3390/cells15040335>

Review Articles:

1. Hershko, A., and Ciechanover, A. (1982). Mechanisms of Intracellular protein Breakdown. *Annu. Rev. Biochem.* **51**, 335-364.
2. Hershko, A. and Ciechanover, A. (1986). The Ubiquitin Pathway for Degradation of Intracellular Proteins. *Prog. Nucl. Ac. Res. Mol. Biol.* **33**, 18-56.
3. Ciechanover, A. and Schwartz, A.L. (1989). How Are Substrates Recognized by the Ubiquitin-Mediated Proteolytic System? *Trends Biochem. Sci.* **14**, 483-488.
4. Hershko, A. and Ciechanover, A. (1992). The Ubiquitin-Mediated Proteolytic Pathway. *Annu. Rev. Biochem.* **61**, 761-807.
5. Schwartz, A.L., and Ciechanover, A. (1992). Ubiquitin-Mediated Protein Modification and Degradation. *Amer. J. Respir. Cell Mol. Biol.* **7**, 463-468.
6. Ciechanover, A. (1993). The Ubiquitin-Mediated Proteolytic Pathway. *Brain Pathology* **3**, 67-75.
7. Ciechanover, A. and Schwartz, A. L. (1994). The Ubiquitin-Mediated Proteolytic Pathway: Mechanisms of Recognition of the Proteolytic Substrate and Involvement in the Degradation of Native Cellular Proteins. *FASEB J.* **8**, 182-191.
8. Ciechanover, A. (1994). The Ubiquitin-Mediated Proteolytic System: New Insights Into Mechanisms of Action and Cellular Physiology. *Biological Chemistry Hoppe-Seyler* **375**, 565-581.
9. Ciechanover, A. (1994). The Ubiquitin-Proteasome Pathway. *Cell* **79**, 13-21.
10. Ciechanover, A. (1996). Male Sterility and Ubiquitin-Mediated Proteolysis. *Nature Medicine* **2**, 1188-1191.
11. Ciechanover, A., and Schwartz, A.L. (1998). The Ubiquitin-Proteasome Pathway: The Complexity and Myriad Functions of Proteins Death. *Proc. Natl. Acad. Sci. USA* **95**, 2727-2730.
12. Hershko, A. and Ciechanover, A. (1998). The Ubiquitin System. *Annu. Rev. Biochem.* **67**, 425-479.
13. Ciechanover, A. 1998. The Ubiquitin-Proteasome Pathway: On Proteins Death and Cell Life. *EMBO J.* **17**, 7151-7160.
14. Schwartz, A., and Ciechanover, A. (1998). The Ubiquitin-Proteasome Pathway: Involvement in the pathogenesis of Human Diseases. *Annu. Rev. Med.* **50**, 57-74.
15. Kornitzer, D., and Ciechanover, A. (2000). Modes of Regulation of Ubiquitin-Mediated Protein Degradation. *J. Cell. Physiol.* **182**, 1-11.
16. Ciechanover, A., Orian, A., and Schwartz, A.L. (1999). The Ubiquitin-Mediated Proteolytic Pathway: Mode of Action and Clinical Implications. *J. Cell. Biochem.* **S34**, 40-51.
17. Ciechanover, A., Orian, A., and Schwartz, A.L. (2000). Ubiquitin-Mediated Proteolysis: Biological Regulation via Destruction. *BioEssays* **22**, 442-451.

18. **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).
19. **Ciechanover, A.** (2001). Ubiquitin-Mediated Degradation of Cellular Proteins: Why Destruction is Essential for Construction, and How it Got from the Test Tube to the Patient's Bed. *Isr. Med. Assoc. J.* **3**, 319-327.
20. **Ciechanover, A.** (2001). Parkinson's Disease: Linking Ubiquitination, Parkin and Synphilin-1. *Nature Medicine* **7**, 1108-1109.
21. Hershko A., and **Ciechanover A.** (2001). Ubiquitin Conjugation as a Proteolytic Signal: The First Experiments. Published in the "The Great Experiments Series" (ed. Benjamin Lewin). <http://www.ergito.com/servlet/Master?trackID=18291x72&caller=experiments&chap=100&xect=11> (enter e-mail: c_tzachy@netvision.net.il; PW: menucha).
22. **Ciechanover, A.**, and Schwartz, A.L. (2001). Ubiquitin-Mediated Degradation of Cellular Proteins in Health and Disease. *Hepatology* **35**, 3-6.
23. Amir, R., **Ciechanover, A.**, and Cohen, S. (2001). The ubiquitin-proteasome system: the relationship between protein degradation and human diseases. *Harefuah* **140**, 1172-1176 (in Hebrew).
24. Glickman, M., and **Ciechanover, A.** (2002). The Ubiquitin Proteasome Pathway: Destruction for the Sake of Construction. *Physiological Reviews* **82**, 373-428.
25. **Ciechanover, A.** (2003). Introduction and Overview of the Ubiquitin System. *Current Seminars in Cancer Biology* **13**, 1-4.
26. **Ciechanover A.** (2003). The Ubiquitin Proteolytic System and Pathogenesis of Human Diseases: A Novel Platform for Mechanism-Based Drug Targeting. *Biochem. Soc. Trans.* **31**, 474-481.
27. **Ciechanover, A.**, and Brundin, P. (2003). The Ubiquitin-Proteasome System in Neurodegenerative Diseases: Sometimes the Chicken, Sometimes the Egg. *Neuron* **40**, 427-446.
28. Finley, D., **Ciechanover, A.**, and Varshavsky, A. (2004). Ubiquitin as a Central Cellular Regulator. *Cell* **S116**, S29-S32.
29. **Ciechanover, A.**, and Ben-Saadon R. (2004). N-Terminal Ubiquitination: More Protein Substrates Join In. *Trends Cell Biol.* **14**, 103-106
30. **Ciechanover, A.**, and Iwai, K. (2004). The Ubiquitin System: From Basic Mechanisms to the Patient Bed. *IUBMB Life* **56**, 193-201.
31. **Ciechanover, A.**, and Schwartz, A.L. (2004). The ubiquitin system: pathogenesis of human diseases and drug targeting. *Biochim. Biophys. Acta.* **1695**, 3-17.

32. Hermann, J., **Ciechanover, A.**, Lerman, O.L., and Lerman A (2004). The ubiquitin–proteasome system in cardiovascular diseases—a hypothesis extended. *Cardiovascular Res.* **61**, 11-21.
<https://doi.org/10.1016/j.cardiores.2003.09.033>
33. **Ciechanover, A.** (2005). From the Lysosome to Ubiquitin and the Proteasome: The Rise of Proteolysis. *Nature Rev. Mol. Cell Biol.* **6**, 79-86.
34. Hermann, J., **Ciechanover, A.**, Lerman, L.O., and Lerman, A. (2005). The Ubiquitin-Proteasome System – Micro Target for Macro Intervention. *Intl. J. Cardiovascular Intervention* **7**, 5-13.
35. **Ciechanover, A.** (2005). Intracellular Protein Degradation: From a Vague Idea through The Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting (Nobel Lecture). *Cell Death Differ.* **12**, 1178-90.
36. **Ciechanover, A.** (2005). Early Work on the Ubiquitin Proteasome System: An Interview with Aaron Ciechanover. *Cell Death Differ.* **12**, 1167-1177.
37. **Ciechanover, A.** (2005). Intracellular Protein Degradation: From a Vague Idea, through the Lysosome and the Ubiquitin-Proteasome System, and onto Human Diseases and Drug Targeting (Nobel Lecture). *Angew. Chem.* (Int. Ed. Engl.). **44**, 5944-5967.
38. **Ciechanover, A.** (2006). The Ubiquitin Proteolytic System: From a Vague Idea, through Basic Mechanisms, and onto Human Diseases and Drug Targeting. *Neurology* **66** (2 Suppl. 1), S7-19.
39. **Ciechanover, A.** (2006). The Ubiquitin Proteolytic System: From an Idea to the Patient Bed. *Proc. Am. Thor. Soc.* **3**, 21-31.
40. **Ciechanover, A.** (2006). Intracellular Protein Degradation: From a Vague Idea, through the Lysosome and the Ubiquitin Proteasome System, and onto Human Diseases and Drug Targeting . *Exptl. Biol. Med.* **231**, 1197-1211.
41. Reinstein, E., and **Ciechanover, A.** (2006). Protein Degradation and Human Diseases – the Ubiquitin Connection. *Annal. Int. Med.* **145**, 676-684.
42. **Ciechanover, A.** (2006). Intracellular protein degradation: from a vague idea thru the lysosome and the ubiquitin-proteasome system and onto human diseases and drug targeting. *Exp. Biol. Med.* (Maywood). **231**, 1197-1211.
43. **Ciechanover, A.** (2006). Intracellular Protein Degradation: From a Vague Idea, through the Lysosome and the Ubiquitin-Proteasome System, and onto Human Diseases and Drug Targeting (Nobel Lecture). *Isr. J. Chem.* **46**, 121-136.
44. **Ciechanover, A.** (2006). Intracellular Protein Degradation: From a Vague Idea thru the Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting. *Hematology* (Am. Soc. Hematol. Educ. Program.), 1-12.

45. **Ciechanover, A.** (2007). Intracellular Protein Degradation: From a Vague Idea thru the Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting. *Ann. N.Y. Acad. Sci.* **1116**, 1-28.
46. Melino, G., Gallagher, E., Aqeilan, R.I., Knight, R., Peschiaroli, A., Rossi, M., Scialpi, F., Malatesta, M., Zocchi, L., Browne, G., **Ciechanover, A.**, and Bernassola F. (2008). Itch: a HECT-Type E3 Ligase Regulating Immunity, Skin, and Cancer. *Cell Death Differ.* **15**, 1103-1112.
47. Bernassola, F., Karin, M., **Ciechanover, A.**, Melino, G. (2008). The HECT Family of E3 Ubiquitin Ligases: Multiple Players in Cancer Development. *Cancer Cell* **14**, 10-21.
48. Schwartz, A.L., and **Ciechanover, A.** (2009). Targeting Proteins for Destruction by the Ubiquitin System: Implications. for Human Pathobiology. *Annu. Rev. Pharmacol. Toxicol.* **49**, 73-96.
49. **Ciechanover, A.** (2009). Tracing the History of the Ubiquitin Proteolytic System: The Pioneering Article. *Biochem. Biophys. Res. Commun.* **387**, 1-10. [Epub ahead of print on June 17th, 2009].
50. **Ciechanover, A.** (2009). Interview with Aaron Ciechanover. *Biochem. Biophys. Res. Commun.* **387**, 11-12. [Epub ahead of print on June 21st, 2009].
51. **Ciechanover, A.** (2009). The 2008 Lindau Nobel Laureates Meeting: Aaron Ciechanover, Chemistry 2004. *J. Vis. Exp.* July 1;(29). pii: 1559. doi: 10.3791/1559.
52. Navon, A., and **Ciechanover, A.** (2009). The 26S Proteasome - From Basic Mechanisms to Drug Target. *J. Biol. Chem.* **284**, 33713-33718 [Epub ahead of print on October 7th, 2009].
53. Bernasola, F., **Ciechanover, A.**, and Melino, G. (2010). The Ubiquitin Proteasome System and its Involvement in Cell Death Pathways. *Cell Death Differen.* **17**, 1-3.
54. Shabek, N., and **Ciechanover, A.** (2010). Degradation of Ubiquitin: The Fate of the Cellular Reaper. *Cell Cycle* **9**, 523-530 [Epub ahead of print on February 6th, 2010].
55. **Ciechanover, A.** (2010). The Ubiquitin System: Historical Perspective *Proc. Am. Thorac. Soc.* **7**, 11-12.
56. **Ciechanover, A.** (2010). Intracellular Protein Degradation: From a Vague Idea through the Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting. *Medicina (B Aires)* **70**, 105-119.
57. de Bie, P. and **Ciechanover, A.** (2011). Ubiquitination of E3 Ligases: Self-Regulation of the Ubiquitin System via Proteolytic and Non-Proteolytic Mechanisms. *Cell Death Differ.* **18**, 1393-1402. Mar 4, 2011 [Epub ahead of print].

58. **Ciechanover, A.** (2011). Intracellular Protein Degradation: From a Vague Idea thru the Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting. *Biochim. Biophys. Acta.* **1824**, 3-13 [Epub ahead of print, 22 March 2011].
59. Weissman, A.M., Shabek, N., and **Ciechanover, A.** (2011). The Predator Becomes the Prey: Regulating the Ubiquitin System by Ubiquitylation and Degradation. *Nature Rev. Mol. Cell. Biol.* **12**, 605-620.
60. Kravtsova-Ivantsiv, Y., and **Ciechanover A.** (2011). Ubiquitination and Degradation of Proteins. *Methods Mol. Biol.* (Gel-Free Proteomics Methods and Protocols; Kris Gevaert, ed.). Humana Press, Inc. **753**, 335-357.
61. **Ciechanover, A.** (2011). On the Wings of Imagination. *Nature* **478** (7368), S4. doi: 10.1038/478S4a. PMID: 21993824
62. **Ciechanover, A.J.**, and Sznajder, J.I. (2011). Innate and Adaptive Immunity: The 2011 Nobel Prize in Physiology or Medicine. *Am. J. Respir. Crit. Care Med.* **184**, i-ii.
63. Kravtsova-Ivantsiv, Y., and **Ciechanover, A.** (2012). Non-Canonical Ubiquitin-Based Signals for Proteasomal Degradation. *J. Cell Sci.* **125 (Pt 3)**, 539-548.
64. **Ciechanover, A.** (2012). Intracellular Protein Degradation: From a Vague Idea through the Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting. *Neurodegener. Dis.* **10**, 7-22.
65. **Ciechanover, A.** (2012). Why Our Proteins Have to Die So We Shall Live? The Ubiquitin Proteolytic System – From Basic Mechanisms Thru Pathogenesis of Diseases and Onto Drug Targeting. *Allergol. Immunol.* **12**, 197-201.
66. Sznajder, J.I., and **Ciechanover, A.** (2012). Personalized Medicine: The Road Ahead. *Am. J. Respir. Crit. Care Med.* **186**, 945–947.
67. Kravtsova-Ivantsiv, Y., Sommer, T., and **Ciechanover, A.** (2013). The Lysine48-Based Polyubiquitin Chain Proteasomal Signal: Not a Single Child Anymore. *Angew. Chem. Int. Ed. Engl.* **52**, 192-198.
68. **Ciechanover, A.** (2013). Intracellular Protein Degradation: From a Vague Idea through the Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting. *Bioorg. Med. Chem.* **21**, 3400-3410.
69. **Ciechnaover, A.** (2013). An Interview with Aaron Ciechanover. *Trends Biochem. Sci.* **38**, 219-221.
70. **Ciechanover, A.** (2013). A conversation with Aaron Ciechanover. Interview by Ushma S. Neill. *J. Clin. Invest.* **123**, 4093-4094.
71. **Ciechanover, A.** (2013). Intracellular Protein Degradation: From a Vague Idea Through the Lysosome and the Ubiquitin-Proteasome System, and on to Human Diseases and Drug targeting. *Eur. J. Neurodegener. Dis.* **2**, 113-132

72. **Ciechanover, A.**, and Stanhill, A. (2014). The Complexity of Recognition of Ubiquitinated Substrates by the 26S Proteasome. *Biochim Biophys Acta.* **1843**, 86-96.
73. **Ciechanover, A.** (2015). The Unraveling of the Ubiquitin System. *Nature Rev. Mol. Cell. Biol.* **16**, 322-324.
74. **Ciechanover, A.**, and Kwon, Y.T. (2015). Degradation of Misfolded Proteins in Neurodegenerative Diseases: Therapeutic Targets and Strategies. *Exptl. and Mol. Med.* **47**, e147; doi:10:1038/emm.2014.117
75. Kravtsova-Ivantsiv, Y., and **Ciechanover, A.** (2015). The Ubiquitin-Proteasome System and Activation of NF- κ B: Involvement of the Ubiquitin Ligase KPC1 in p105 Processing and Tumor Suppression. *Mol. Cell. Oncol.*
<http://dx.doi.org/10.1080/23723556.2015.1054552>; (e1054552-1)
 ISSN: (Print) 2372-3556 (Online) Journal homepage:
<http://www.tandfonline.com/loi/kmco20>
76. Mollereau, B., Rzechorzek, N.M., Roussel, B.D., Sedru, M., Van denBrink, D., Bailly-Maitre, B., Palladino, F., Medinas, D.B., Domingos, P.M., Hunot, S., Chandran, S., Birman, S., Baron, T., Vivien, D., Duarte, C.B., Ryoo, H.-D., Steller, H., Urano, F., Chevet, E., Kroemer, G., **Ciechanover, A.**, Calabrese, E.J., Kaufman, R.J., and Hetz, C. (2016). Adaptive Preconditioning in Neurological Diseases: Therapeutic Insights from Proteostatic Perturbations. *Brain Research.* pii: S0006-8993(16)30092-0. doi: 10.1016/j.brainres.2016.02.033. [Epub ahead of print] Review. PMID: 26923166
77. Eisenberg-Lerner, A., **Ciechanover, A***, and Merbl, Y*. (2016). Post-translational modification profiling - A novel tool for mapping the protein modification landscape in cancer. *Exptl. Biol. Med.* (Maywood) **241**, 1475-1482.
 pii: 1535370216651732. PMID: 27229346
 doi: 10.1177/1535370216651732.
78. Cohen-Kaplan, V., Livneh, I., Avni, N., Cohen-Rosenzweig, C., and **Ciechanover, A.** (2016). The Ubiquitin-Proteasome System and Autophagy: Coordinated and Independent Activities. *Int. J. Biochem. Cell Biol.* **79**, 403-418.
 pii: S1357-2725(16)30193-5. doi: 10.1016/j.biocel.2016.07.019.
 [Epub ahead of print]
79. Livneh, I., Cohen-Kaplan, V., Cohen-Rosenzweig, C., Avni, N., and **Ciechanover, A.** (2016). The Life Cycle of the 26S Proteasome – From Birth, through Regulation and Function, and on to its Death. *Cell Res.* **26**, 869-885.
 doi: 10.1038/cr.2016.86. Epub 2016 Jul 22.
80. Kosik, K.S., Sejnowski, T.J., Raichle, M.E., **Ciechanover, A.**, and Baltimore D. (2016). A Path Toward Understanding Neurodegeneration. *Science* **353**, 872-873.
 doi: 10.1126/science.aai7622

81. Cohen-Kaplan, V., **Ciechanover, A.***, and Livneh, I. (2016). p62 at the Crossroad of the Ubiquitin-Proteasome System and Autophagy. *Oncotarget* **7**, 83833-83834. doi: 0.18632/oncotarget.13805. PMID: 27974671.
- *Corresponding author**
82. Kravtsova-Ivantsiv, Y., Kwon, Y.T., and **Ciechanover, A.** (2016). Role of the Ubiquitin Ligase KPC1 in NF- κ B activation and Tumor Suppression. *J. Anal. Sci. and Technol.* **7:8**. DOI 10.1186/s40543-016-0087-4
83. Cohen-Kaplan, V., **Ciechanover, A.***, and Livneh, I. (2017). Stress-induced Polyubiquitination of Proteasomal Ubiquitin Receptors Targets the Proteolytic Complex for Autophagic Degradation. *Autophagy* **13**, 1-2. <http://dx.doi.org/10.1080/15548627.2016.1278327>.
- *Corresponding author**
84. Etzioni, A.* , **Ciechanover, A.***, and Pikarsky, E.* (2017). Immune defects caused by mutations in the ubiquitin system. *J. Allerg. Clin. Immunol.* **139**, 743-753.
- *equal contributing authors**
85. Barac, Y.D., Emrich, F., Krutzwakd-Josefson, E., Schrepfer, S., Sampaio, L.C., Willerson, J.T., Robbins, R.C., **Ciechanover, A.**, Mohr, F.W., Aravot, D., and Taylor, D.A.. (2017). The ubiquitin-proteasome system: A potential therapeutic target for heart failure. *J Heart Lung Transplant.* pii: S1053-2498(17)31621-2. doi: 10.1016/j.healun. 2017.02.012.
86. **Ciechanover, A.**, and Kwon, Y.-T. (2017). Protein Quality Control by Molecular Chaperones in Neurodegeneration. *Front. Neurosci.* **11** (article 185). doi: 10.3389/fnins.2017.00185. Epub, April 6, 2017.
87. Livneh, I., Kravtsova-Ivantsiv, Y., Braten, O., Kwon, Y. T., and **Ciechanover, A.** (2017). Monoubiquitination Joins Polyubiquitination as an Esteemed Proteasomal Targeting Signal. *BioEssays* **39**, DOI: 10.1002/bies.201700027. PMID: 28493408

Was selected as the highlight of the issue:

<http://onlinelibrary.wiley.com/doi/10.1002/bies.v39.6/issuetoc>

Was highlighted on the news website “Advanced Science News” (<http://www.advancedsciencenews.com/>).

Accessing the highlight article here:

<http://www.advancedsciencenews.com/monoubiquitination-new-signal-proteasomal-degradation/>

88. Kwon, Y.T., and **Ciechanover, A.** (2017). The Ubiquitin Code in the Ubiquitin-Proteasome System and Autophagy. *Trends Biochem Sci.* pii: S0968-0004(17)30169-X. doi: 10.1016/j.tibs.2017.09.002.

89. **Ciechanover, A.** (2017). Intracellular Protein Degradation: From a Vague Idea thru the Lysosome and the Ubiquitin-Proteasome System and Onto Human Diseases and Drug Targeting. *Best Pract. Res. Clin. Haematol.* **30**, 341-355.
doi: 10.1016/j.beha.2017.09.001. PMID: 29156207
90. Galuzzi, L., Vitale, I., et al. (2018). Molecular Mechanisms of Cell Death: Recommendations of the Nomenclature Committee on Cell Death 2018. *Cell Death and Differentiation.*
<https://doi.org/10.1038/s41418-017-0012-4>

Complete list of authors: Galluzzi, L., Vitale, I., Aaronson, S.A., Abrams, J.M., Adam, D., Agostinis, P., Alnemri, E.S., Altucci, L., Amelio, I., Andrews, D.W., Annicchiarico-Petruzzelli, M., Antonov, A.V., Arama, E., Baehrecke, E.H., Barlev, N.A., Bazan, N.G., Bernassola, F., Bertrand, M.J.M., Bianchi, M., Blagosklonny, M.V., Blomgren, K., Borner, C., Boya, P., Brenner, C., Campanella, M., Candi, E., Carmona-Gutierrez, D., Cecconi, F., Chang, F. K.-M., Chandel, N.S., Cheng, E.H., Chipuk, J.E., Cidlowski, J.A., **Ciechanover, A.**, Cohen, G.M., Conrad, M., Cubillos-Ruiz, J.R., Czabotar, P.E., D'Angiolella, V., Dawson, T.M., Dawson, V.L., De Laurenzi, V., De Maria, R., Debatin, K.M. DeBerardinis, R.J., Deshmukh, M., a Di Daniele, N., Di Virgilio, F., Dixit, V.M., Dixon, S.J., Duckett, C.S., Dynlacht, B.D., El-Deiry, W.S., Elrod, J.W., Fimia, G.M., Fulda, S., García-Sáez, A.J., Garg, A.D., Garrido, C., Gavathiotis, E., Golstein, P., Gottlieb, E., Green, D.R., Greene, L.A., Gronemeyer, H., Gross, A., Hajnoczky, G., Hardwick, J.M., Harris, I.S., Hengartner, M.O., Hetz, C., Ichijo, H., Jäättelä, M., Joseph, B., Jost, P.J., Juin, P.P., Kaiser, W.J., Karin, M., Kaufmann, T., Kepp, O., Kimchi, A., Kitsis, R.N., Klionsky, D.J., Knight, R.A., Kumar, S., Lee, S.W., Lemasters, J.J., Levine, B., Linkermann, A., Lipton, S.A., Lockshin, R.A., López-Otín, C., Lowe, S.W., Luedde, t., Lugli, l., MacFarlane, M., Madeo, F., Malewicz, M., Malorni, W., Manic, G., Marine, J.-C., Martin, S.J., Martinou, J.-C., Medema, J.P., Mehlen, P., Meier, P., Melino, S., Miao, E.A., Molkenkin, J.D., Moll, U.M., Muñoz-Pinedo, C., Nagata, S., Nuñez, G., Oberst, A., Oren, M., Overholtzer, M., Pagano, M., Panaretakis, T., Pasparakis, M., Penninger, J.M., Pereira, D.M., Pervaiz, S., Peter, M.E., Piacentini, M., Pinton, P., Prehn, J.H.M., Puthalakath, H., Rabinovich, G.A., Rehm, M., Rizzuto, R., Rodrigues, C.M.P., Rubinsztein, D.C., Rudel, T., Ryan, K.M., Sayan, E., Scorrano, L., Shao, F., Shi, Y., Silke, J., Simon, H.-U., Sistigu, A., Stockwell, S.R., Strasser, A., Szabadkai, G., Tait, S.W.G., Tang, D., Tavernarakis, N., Thorburn, A., Tsujimoto, Y., Turk, B., Vanden Berghe, T., Vandenabeele, P., Vander Heiden, M.G., Villunger, A., Virgin, H.W., Vousden, K.H., Vucic, D., Wagner, E.F., Walczak, H., Wallach, D., Wang, Y., Wells, J.A., Wood, W., Yuan, J., Zakeri, Z., Zhivotovsky, B., Zitvogel, L., Melino, G. and Kroemer, G.

91. Cohen-Kaplan, V., Livneh, I., Kwon, Y.T., and **Ciechanover, A.** (2019). Monitoring Stress-Induced Autophagic Engulfment and Degradation of the 26S Proteasome in Mammalian Cell. In: **Methods in Enzymology: Ubiquitination and Protein Stability**, **619**, 337-366. doi: 10.1016/bs.mie.2018.12.022. Elsevier Publishing
92. Cohen-Kaplan, V., Livneh, I., and **Ciechanover, A.** (2020). Proteasome phase separation: a novel layer of quality control. **Cell Res.** **30**, 374-375, doi: 10.1038/s41422-020-0306-9. PMID: 32265504
93. Ziv, N.E., and **Ciechanover, A.** (2020). A possible non-proteolytic role of ubiquitin conjugation in alleviating the pathology of Huntingtin's aggregation. **Cell Death Differ.** doi: 10.1038/s41418-020-00617-7. PMID: 32913226.
94. **Ciechanover, A.** (2021). The bedside-bench-bedside cycle: Robert Lefkowitz and GPCRs. **Sci. Signal.** **14**, eabj1753 (2021).
95. Verheijen, B.M., and **Ciechanover, A.** (2021). Fred W. van Leeuwen (1949-2021). **Molecular neurodegeneration.** **16**, 20.
96. **Ciechanover, A.** (2021). Targeted Degradation of Proteins: The Ubiquitin System. **Frontiers for Young Minds**, the Nobel Collection. doi: 10.3389/frym.2021.662619
<https://kids.frontiersin.org/articles/10.3389/frym.2021.662619>
97. Fu, A., Livneh, I., **Ciechanover, A.,*** and Cohen-Kaplan, V. (2021). How multi-component cascades operate in cells: lessons from the ubiquitin system-containing liquid-separated condensates. **Molecular & Cellular Oncology**; <https://doi.org/10.1080/23723556.2021.1989939>
***Corresponding author**
98. Drula, R., Iluta, S., Gulei, D., Iuga, C., Dima, D., Ghiaur, G., Buzoianu, A.D., **Ciechanover, A.**, and Tomuleasa, C. (2022). Exploiting the Ubiquitin System in Myeloid Malignancies: From Basic Research to Drug Discovery in MDS and AML. **Blood Rev.** **16**, 100971. doi: 10.1016/j.blre.2022.100971. PMID: 35595613
99. Kravtsova-Ivantsiv, Y., Goldhirsh, G., Tomuleasa, C., Pikarsky, E., and **Ciechanover A.** (2023). The NF- κ B p50 subunit generated by KPC1-mediated ubiquitination and limited proteasomal processing, suppresses tumor growth. **Cancer Cell Intl.** **23**, 67. doi: 10.1186/s12935-023-02919-5. PMID: 37055826
100. Gulei, D., Drula, R., Ghiaur, G., Buzoianu, A.D., Kravtsova-Ivantsiv, Y., Tomuleasa, C., and **Ciechanover, A.** (2023). The tumor suppressor functions of ubiquitin ligase KPC1: from cell cycle control to NF- κ B regulator. **Cancer Res.** CAN-22-3739. doi: 10.1158/0008-5472.CAN-22-3739. PMID: 36880841
101. Vitale, I., Pietrocola, F., Guilbaud, E., Aaronson, S.A., Abrams J.M., Adam, D., Agostini, M., Agostinis, P., Alnemri, E.S., Altucci, L., Amelio, I., Andrews, D.W., Aqeilan, R.I., Arama, E., Baehrecke, E.H., Balachandran, S., Bano, D., Barlev, N.A., Bartek, J., Bazan, N.G., Becker, C., Bernassola, F., Bertrand, M.J.M., Bianchi, M.E.,

Blagosklonny, M.V., Blander, J.M., Blandino, G., Blomgren, K., Borner, C., Bortner, C.D., Bove, P., Boya, P., Brenner, C., Broz, P., Brunner, T., Damgaard, R.B., Calin, G.A., Campanella, M., Candi, E., Carbone, M., Carmona-Gutierrez, D., Cecconi, F., Chan, F.K., Chen, G.Q., Chen, Q., Chen, Y.H., Cheng, E.H., Chipuk, J.E., Cidlowski, J.A., **Ciechanover, A.**, Ciliberto, G., Conrad, M., Cubillos-Ruiz, J.R., Czabotar, P.E., D'Angiolella, V., Daugaard, M., Dawson, T.M., Dawson, V.L., De Maria, R., De Strooper, B., Debatin, K.M., Deberardinis, R.J., Degterev, A., Del Sal, G., Deshmukh, M., Di Virgilio, F., Diederich, M., Dixon, S.J., Dynlacht, B.D., El-Deiry, W.S., Elrod, J.W., Engeland, K., Fimia, G.M., Galassi, C., Ganini, C., Garcia-Saez, A.J., Garg, A.D., Garrido, C., Gavathiotis, E., Gerlic, M., Ghosh, S., Green, D.R., Greene, L.A., Gronemeyer, H., Häcker, G., Hajnóczky, G., Hardwick, J.M., Haupt, Y., He, S., Heery, D.M., Hengartner, M.O., Hetz, C., Hildeman, D.A., Ichijo, H., Inoue, S., Jäättelä, M., Janic, A., Joseph, B., Jost, P.J., Kanneganti, T.D., Karin, M., Kashkar, H., Kaufmann, T., Kelly, G.L., Kepp, O., Kimchi, A., Kitsis, N.K., Klionsky, D.J., Kluck, R., Krysko, D.V., Kulms, D., Kumar, S., Lavandro, S., Lavrik, I.N., Lemasters, J.J., Liccardi, G., Linkermann, A., Lipton, S.A., Lockshin, R.A., López-Otín, C., Luedde, T., MacFarlane, M., Madeo, F., Malorni, W., Manic, G., Mantovani, R., Marchi, S., Marine, J.-C., Martin, S.J., Martinou, J.-C., Mastroberardino, P.G., Medema, J.P., Mehlen, P., Meier, P., Melino, G., Melino, S., Miao, E.A., Moll, U.M., Muñoz-Pinedo, C., Murphy, D.J., Niklison-Chirou, M.V., Novelli, F., Núñez, G., Oberst, A., Ofengeim, D., Opferman, J.T., Oren, M., Pagano, M., Panaretakis, T., Pasparakis, M., Penninger, J.M., Pentimalli, F., Pereira, D.M., Pervaiz, S., Peter, M.E., Pinton, P., Porta, G., Prehn, J.H.M., Puthalakath, H., Rabinovich, G.A., Rajalingam, K., Ravichandran, K.S., Rehm, M., Ricci, J.-E., Rizzuto, R., Robinson, N., Rodrigues, C.M.P., Rotblat, B., Rothlin, C.V., Rubinsztein, D.C., Rudel, T., Rufini, A., Ryan, K.M., Sarosiek, K.A., Sawa, A., Sayan, E., Schroder, K., Scorrano, L., Sesti, F., Shao, F., Shi, Y., Sica, G.S., Silke, J., Simon, H.-U., Sistigu, A., Stephanou, A., Stockwell, B.R., Strapazzon, F., Strasser, A., Sun, L., Sun, E., Sun, Q., Szabadkai, G., Tait, S.W.G., Tang, D., Tavernarakis, N., Troy, C.M., Turk, B., Urbano, N., Vandenabeele, P., Vanden Berghe, T., Vander Heiden, M.G., Vanderluit, J.L., Verkhatsky, A., Villunger, A., von Karstedt, S., Voss, K.A., Vousden, K.H., Vucic, D., Vuri, D., Wagner, E.F., Walczak, H., Wallach, D., Wang, R., Wang, Y., Weber, A., Wood, W., Yamazaki, T., Yang, H.-T., Zakeri, Z., Zawacka-Pankau, J.E., Zhang, L., Zhang, H., Zhivotovsky, B., Zhou, W., Piacentini, M., Kroemer, G., and Galluzzi, L. (2023). Apoptotic cell death in disease-Current understanding of the NCCD 2023. *Cell Death Differ.*, **30**, 1097-1154. PMID: 37100955. PMID: [PMC10130819](https://pubmed.ncbi.nlm.nih.gov/37100955/); DOI: [10.1038/s41418-023-01153-w](https://doi.org/10.1038/s41418-023-01153-w)

102. Kegeyesa, D., Guleia, D., Drulaa, R., Cenariua, D., Tigua, B., Dimab, D., Tanasec, A., Badelitac, S., Buzoianud, A.-D., Ciureae, S., Ghiaura, G., Terposg, E., **Ciechanover, A.**, Einselei, H., and Tomuelasa, C. (2023). Proteasome Inhibition in Combination with Immunotherapies: State-of-the-Art in Multiple Myeloma. *Blood Rev.* <https://doi.org/10.1016/j.blre.2023.101100>
103. **Ciechanover, A.**, and Primorac, D. (2024). Personalized Medicine: The Future is Here. *Croat. Med. J.* **65**, 169-173. <https://doi.org/10.3325/cmj.2024.65.169>
104. Cech T.R., Charpentier, E., **Ciechanover, A.**, Lefkowitz, R.J., and Wüthrich, K. (2024). Reflections from Nobel laureates in chemistry. *Cell Chem Biol.* **31**, 1388-1390. doi: 10.1016/j.chembiol.2024.07.016. PMID: 39151404
105. Beyar, R., Blazer, S., Breuer, E., Carmi, R., **Ciechanover, A.**, Clarfield, A.M., Glick, S., Magen, D., Manor, O., Paltiel, O., and Skorecki, K. (2024). Moral clarity at WHO needs to be clearer. *Lancet* **403** (10430):905. doi: 10.1016/S0140-6736(24)00065-5. PMID: 38373434
106. Lulu-Shimron, C., **Ciechanover, A.**, and Cohen-Kaplan, V. (2025). Role of p62 nuclear condensates in regulating ubiquitin-mediated proteasomal degradation. *Essays Biochem.* EBC20253033. doi: 10.1042/EBC20253033. PMID: 41247240
107. **Ciechanover, A.**, and Livneh I. (2025). Protein quality control systems in neurodegeneration - culprits, mitigators, and solutions? *Front Neurol.* 3;16:1604076. doi: 10.3389/fneur.2025.1604076. PMID: 40969213

Book Chapters:

1. Hershko, A., Heller, H., Ganoth, D. and **Ciechanover, A.** (1978). Mode of Degradation of Abnormal Globin Chains in Rabbit Reticulocytes. **In:** Protein Turnover and Lysosome Function (H.L. Segal and D.J. Doyle, eds.) Academic Press, New York. pp. 149-169.
2. Schwartz, A.L., **Ciechanover, A.J.**, Lodish, H.F., Slot, J.W., Strous, G.J.A.M. and Geuze, H.J. (1983). Receptor Mediated Endocytosis of the Hepatic Asialoglycoprotein Receptor. **In:** Structural Carbohydrates of the Liver (H. Popper, W. Reutter, F. Gudat and E. Kottgen, eds.) MTP Press Limited, Lancaster, England. pp. 589-593.
3. **Ciechanover, A.**, Finley, D. and Varshavsky, A. (1984). The Ubiquitin Mediated Proteolytic Pathway and Mechanisms of Energy Dependent Intracellular Protein Degradation. **In:** Protein Transport and Secretion. (D.L. Oxender, ed.). Alan R. Liss, New York. pp. 137-163.
4. **Ciechanover, A.**, Schwartz, A.L. and Lodish, H.F. (1984). Sorting and Recycling of Cell Surface Receptors and Endocytosed Ligands: The Asialoglycoprotein and the Transferrin Receptors. **In:** Protein Transport and Secretion (D.L. Oxender, ed.) Alan R. Liss, New York. pp. 113-136.
5. Patel, V.P., **Ciechanover, A.**, Platt, O. and Lodish, H.F. (1985). Loss of Adhesion of Erythrocyte Precursors to Fibronectin during Erythroid Differentiation. **In:** Hematopoietic Stem Cell Physiology (E.P. Cronkite, N. Dainiak, R.P. McCaffrey, J. Palek and P.J. Quesenberry, eds.). Alan R. Liss, New York. pp. 355-368.
6. **Ciechanover, A.**, Schwartz, A.L. and Lodish, H.F. (1986). Sorting and Recycling of Cell Surface Receptors and Endocytosed Ligands: The Asialoglycoprotein and Transferrin Receptors. **In:** Mechanisms of Receptor Regulation: New Horizons in Therapeutics (S.T. Crooke and G. Poste, eds.) Plenum Press, New York. pp. 225-253.
7. **Ciechanover, A.** (1987). The Ubiquitin Mediated Pathway and Energy Dependent Mechanisms for Intracellular Protein Degradation. **In:** Lysosomes: Their Role in Protein Breakdown. (H. Glaumann and F.J. Ballard, eds.) Academic Press, New York and London. pp. 561-602.
8. **Ciechanover, A.** (1987). Regulation of the Ubiquitin Mediated Proteolytic Pathway: Role of the Substrate α -NH₂ Group and of Transfer RNA. **In:** Proteases in Biological Control and Biotechnology. (D. Cunningham and G. Long, eds.) Alan R. Liss, New York. pp. 197-216.
9. **Ciechanover, A.** (1988). Role of Transfer RNA in the Degradation of Selective Substrates of the Ubiquitin- and ATP-dependent Proteolytic System. **In:** Ubiquitin (M. Rechsteiner, ed.) Plenum press, New York. pp. 271-286.

10. **Ciechanover, A.** (1988), Role of Transfer RNA in the Degradation of Acidic N-Termini Substrates of the Ubiquitin Pathway. **In:** The Ubiquitin System (M.J. Schlesinger and A. Hershko, eds.). Cold Spring Harbor Laboratory, Cold Spring Harbor, New York. pp. 84-90.
11. Kulka, R.G., Raboy, B., Schuster, R., Parag, H.A., Diamond, G., **Ciechanover, A.** and Marcus M. (1988). The Heat-Shock Response in a Chinese Hamster Cell Mutant with a Temperature-Sensitive Ubiquitin-Activating Enzyme, E1. **In:** The Ubiquitin System (M.J. Schlesinger and A. Hershko, eds.). Cold Spring Harbor Laboratory, Cold Spring Harbor, New York. pp. 195-200.
12. **Ciechanover, A.** and Schwartz, A.L. (1989). The Ubiquitin-Dependent Proteolytic Pathway: Specificity of Recognition of the Proteolytic Substrates. **In:** Current Trends in Intracellular Protein Degradation (S. Grisolia and E. Knecht, eds.) Springer-Verlag. pp. 217-234.
13. Stoorvogel, W., Strous, G.J., **Ciechanover, A.**, and Schwartz, A.L. (1991). Trafficking of the Transferrin Receptor. **In:** Liver Diseases: Targeted Diagnosis and Therapy Using Specific Receptoysr and Ligands. (G.Y. Wu, and C. H. Wu, eds.). Marcel Dekker, Inc., New York, Basel, Hong Kong. pp. 267-304.
14. **Ciechanover, A.**, Dunn, W.A., Jr., and Schwartz, A.L. (1993). The Ubiquitin-Mediated Proteolytic System: Studies on the Degradation of N- γ -Acetylated Proteins and on the Linkage to the Lysosomal Proteolytic Pathway. **In:** Proteolysis and Protein Turnover (J. S. Bond and A. J. Barrett, eds.). Portland Press, London and Chapel Hill pp. 89-96.
15. **Ciechanover, A.J.** and Schwartz, A. L. (1994). The Ubiquitin-Mediated Proteolytic Pathway: Mechanisms of Recognition of the Proteolytic Substrate and Involvement in the Degradation of Native Cellular Proteins. **In:** Modern Cell Biology: Cellular Proteolytic Systems. (series editor, Harford, J. B.). Wiley-Liss, New York, New York. pp. 3-22.
16. **Ciechanover, A.** (1995). Intracellular Protein Degradation Via The Ubiquitin-Mediated Proteolytic Pathway. **In:** Expression of Tissue Proteinases and Regulation of Protein Degradation as Related to Meat Quality (A. Ouali, Demeyer, D., and Smulders, F. J. M., eds.). ECCEAMST-European Consortium for Continuing Education in Advanced Meat Science and Technology, Utrecht, The Netherlands. pp. 97-116.
17. **Ciechanover, A.**, Stancovski, I., Laszlo, A., Schwartz, A.L., and Bercovich, B. (1997). Ubiquitin-Mediated Proteolysis and the Molecular Chaperone Hsc70. **In:** Proteolysis in Cell Function (V.K. Hopsu-Havu, Jarvinen, M., and Kirschke, H. eds.). IOS Press, Amsterdam. pp. 47-54.
18. **Ciechanover, A.**, and Wiederanders, B.(1999). Protein Degradation in Mammalian Cells. **In:** Post-translational Processing: A Practical Approach (S.J. Higgins and B.D.Hames, eds.). Oxford University Press, Oxford, UK . pp. 225-264.

19. **Ciechanover, A.**, Orian, A., and Schwartz, A.L. (2000). The Ubiquitin-Proteasome Pathway in Mammals: Mechanisms of Action and Involvement in Pathogenesis of Diseases. **In:** Proteasomes: The World of Regulatory Proteolysis (W. Hilt and D.H. Wolf, eds.). Landes Bioscience Press, Georgetown, and Eurekah.com, Austin, Texas, USA. pp. 216-235.
20. **Ciechanover, A.** (2002). Ubiquitin, Human. **In:** Wiley Encyclopedia of Molecular Medicine. Volume 5, pp. 3301-3303. John Wiley and sons, Inc.
21. **Ciechanover, A.** (2002). Protein (Degradation). **In:** McGraw Hill Encyclopedia of Science and Technology. Volume 14, pp. 496-499. McGraw Hill, New York. 9th Edition.
22. **Ciechanover, A.**, and Kornitzer, D. (2003). Proteasomes/Ubiquitination. **In:** Handbook of Cell Signalling (Ralph A. Bradshaw, and Edward A. Dennis, eds.). Elsevier Science, San Diego, California, USA, and Academic Press. Vol. 3, Chapter 290, pp. 129-133.
23. **Ciechanover, A.**, and Glickman, M.H. (2004). The Ubiquitin-Mediated Proteolytic System. **In:** Life Sciences for the 21st Century (E. Keynan, M. Schechter, and M. Sela, eds.). Wiley-VCH, Weinheim, Germany. pp. 93-150
24. **Ciechanover, A.**, and Glickman, M. (2004). The Ubiquitin-Proteasome System. **In:** Encyclopedia of Biological Chemistry (W.J. Lennarz and M.D. Lane, eds.). Academic Press/Elsevier Science, San Diego, USA. Vol. 4, pp. 299-303.
25. **Ciechanover, A.** (2005). N-terminal ubiquitination. **In:** Methods in Molecular Biology Volume 301. Series: Ubiquitin-Proteasome Protocols (C. Patterson and D.M. Cyr, eds.). Humana Press, pp. 255-270.
26. **Ciechanover, A.** (2005). N-terminal ubiquitination. **In:** Protein Degradation Handbook (R.J. Mayer, M. Rechsteiner, and A. Ciechanover, Eds.). Wiley-VCH, Weinheim, Germany. pp. 10-20.
27. Glickman, M.H., and **Ciechanover, A.** (2005). The Ubiquitin-Proteasome System for Controlling Cellular Protein Levels. **In:** The Encyclopedia of Molecular Cell Biology and Molecular Medicine, 2nd edition (R.A. Meyers, ed). Wiley-VCH Verlag, GmbH & Co., Weinheim, Germany. Vol. 15, pp. 89-109.
28. **Ciechanover, A.** (2005). Methods in Protein Ubiquitination. **In:** Cell Biology: A Laboratory Handbook (J. Celis, ed.). 3rd Edition. Elsevier Science and Academic/Harcourt Press. Vol. 4, pp. 351-360.
29. **Ciechanover, A.** (2007). Protein Degradation. **In:** McGraw Hill Encyclopedia of Science and Technology. McGraw Hill, New York. 10th Edition (submitted; will be on line in 2005).
30. **Ciechanover, A.** (2005). Biography. **In:** Les Prix Nobel. The Nobel Foundation, Stockholm, Sweden. Pp. 125-150.

31. **Ciechanover, A.** (2005). Intracellular Protein Degradation: From a Vague Idea thru the Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting. **In:** Les Prix Nobel. The Nobel Foundation, Stockholm, Sweden. pp. 151-175.
32. **Ciechanover, A.** (2007). Intracellular Protein Degradation: From a Vague Idea thru the Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting. **In:** The UPS in the Nervous System: From Physiology to Pathology (M. Di Napoli and C. Wójcik, eds.). Nova Science Publishers, Inc. pp. 15-40.
33. **Ciechanover, A.** (2008). Introduction. **In:** Ubiquitin-Mediated Proteolysis (X.-B. Qiu, C. Wang, and L. Wang, eds.). Peking Union Medical College Press, pp. 1-6.
34. Kornitzer, D., and **Ciechanover, A.** (2008). Proteasomes/Ubiquitination. **In:** Handbook of Cell Signalling, 2nd ed. (Ralph A. Bradshaw, and Edward A. Dennis, eds.). Elsevier Science, San Diego, California, USA, and Academic Press (in press).
35. Navon, A., and **Ciechanover, A.** (2008). The Ubiquitin Proteasome Pathway. **In:** Wiley Encyclopedia of Chemical Biology. John Wiley & Sons. [DOI: 10.1002/9780470048672.wecb616](https://doi.org/10.1002/9780470048672.wecb616).
Article Online Posting Date: May 15, 2008
39. **Ciechanover, A.** (2011). Intracellular Protein Degradation: From a Vague Idea thru the Lysosome and the Ubiquitin-Proteasome System and onto Human Diseases and Drug Targeting. **In:** The Scientific Legacy of the 20th Century: Proceedings of the Plenary Session of the Pontifical Academy of Sciences, Vatican City, October 28th - November 1st, 2010. Volume 21, pp. 286-310, 372-376.
40. Kravtsova-Ivantsiv, Y., and **Ciechanover A.** (2011). Ubiquitination and Degradation of Proteins. **In:** Methods in Molecular Biology: Gel-Free Proteomics Methods and Protocols (Kris Gevaert, ed.). Humana Press, Inc. Totowa, NJ, USA **753**, 335-357.
41. **Ciechanover, A.** 2021. Preocupaciones Bioéticas en la Medicina: La Pandemia del Coronavirus y Más Allá. **In:** 2021 Retos Vitales para Una Nueva Era. ed: Cecilia Kindelán Amorrích. Publisher: McGraw Hill along with the Royal European Academy of Doctors. pp. 55-72.
39. **Ciechanover, A.** 2021. Preocupaciones Bioéticas en la Medicina: La Pandemia del Coronavirus y Más Allá. **In:** 2021 Retos Vitales para Una Nueva Era. ed: Cecilia Kindelán Amorrích. Publisher: McGraw Hill along with the Royal European Academy of Doctors. pp. 55-72.
40. Legato, M.J.*, Ciechanover, A.*, and Glezerman, M*. (2023). A critical view of the revolution of precision medicine: genetics, epigenetics, sex, and gender. **In:** Sex, Gender and Epigenetics: From Molecule to Bedside. Legato, M.J., Feldberg, D., and Glezerman, M. (eds.). Academic Press, Elsevier. pp. 9-25.
*equal contribution

Books, Special Journal Issues Edited, and Podcasts:

1. **Ciechanover, A.J.** and Schwartz, A. L. eds. (1994). Modern Cell Biology: Cellular Proteolytic Systems. (series editor, Harford, J. B.). Wiley-Liss, New York, New York. pp. 1-233.
2. **Ciechanover, A.J.**, and Masucci, M.G. (eds.) (2002). The Ubiquitin-Proteasome Proteolytic System: From Classical Biochemistry to Human Diseases. **In:** Recent Advances in Human Biology. Volume 9 (Charles E. Oxnard, Series Editor). World Scientific. New Jersey, London, Singapore and Hong Kong. pp. 1-220.
3. **Ciechanover, A.** (ed.) (2003). *Current Seminars in Cancer Biology*. **13**, 1-89. Special issue on The Ubiquitin Proteolytic System and Pathogenesis of Cancer. Academic Press and Elsevier Science, Ltd., The Netherlands.
4. Mayer, R.J., **Ciechanover, A.**, Rechsteiner, M., and (2005). Protein Degradation Handbook, **Volume 1** (R.J. Mayer, **A. Ciechanover**, and M. Rechsteiner, Eds.). Volume 1. Wiley-VCH, Weinheim, Germany. pp. I-XVI, 1-377.
5. Mayer, R.J., **Ciechanover, A.**, and Rechsteiner, M. (2006). Protein Degradation Handbook, **Volume 2** (R.J. Mayer, **A. Ciechanover**, and M. Rechsteiner, Eds.). Volume 2. Wiley-VCH, Weinheim, Germany. pp. I-XIV, 1-286.
6. Mayer, R.J., **Ciechanover, A.**, and Rechsteiner, M. (2006). Protein Degradation Handbook, **Volume 3** (R.J. Mayer, **A. Ciechanover**, and M. Rechsteiner, Eds.). Volume 3. Wiley-VCH, Weinheim, Germany. pp. I-XIV, 1-238.
7. Mayer, R.J., **Ciechanover, A.**, and Rechsteiner, M. (2008). Protein Degradation Handbook, **Volume 4** (R.J. Mayer, **A. Ciechanover**, and M. Rechsteiner, Eds.). Volume 4. Wiley-VCH, Weinheim, Germany. pp. I-XV, 1-242.
8. **Ciechanover, A.** (2017). Podcast with Dan Bernard, editor in chief - *Developmental Medicine and Child Neurology*
<https://www.youtube.com/watch?v=N5G5ajSb4oA&feature=youtu.be>
9. Barilan, Y.M., Brusa, M., and **Ciechanover, A.** (eds.) (2022). Can Precision Medicine Be Personal? Can Personalized Medicine Be Precise? Oxford University Press, pp. 352. ISBN10 – 0198863462; ISBN13 - 9780198863465

Current Patents: Patents:

DETECTION AND CLASSIFICATION USING A SINGLE MACHINE LEARNING MODEL											
A	B	C	D	E	F	G	H	I	J	K	
Patent ID	Title	Main Researcher	Researchers (Patent Family)	Patent Country	Status	Application Date	Application Number	Publication Number	Patent Date	Patent Number	
1	1978-02	Ciechanover Aaron	Cohen-Kaplan Victoria ,Ciechanover Aaron ,Kravtsova Yelena ,Shomer Inna	United States	Granted	05/01/2016	15/544,523	US20180140667	27/09/2022	11,452,759	
2	1978-03	Ciechanover Aaron	Cohen-Kaplan Victoria ,Ciechanover Aaron ,Kravtsova Yelena ,Shomer Inna	Israel	Abandoned	05/01/2016	253559	253559			
3	1978-04	Ciechanover Aaron	Cohen-Kaplan Victoria ,Ciechanover Aaron ,Kravtsova Yelena ,Shomer Inna	Europe	Examination	05/01/2016	16739877.5	3265112			
4	1978-05	Ciechanover Aaron	Cohen-Kaplan Victoria ,Ciechanover Aaron ,Kravtsova Yelena ,Shomer Inna	United States (divisional)	Published	05/01/2016	17/887,828	US20230095010			
5											
6	2004-03	Ciechanover Aaron	Goldhirsh Gilad ,Ciechanover Aaron ,Kravtsova Yelena	United States	Examination	27/11/2019	17/284,966	US20210348152			
7	2004-04	Ciechanover Aaron	Goldhirsh Gilad ,Ciechanover Aaron ,Kravtsova Yelena	Europe	Published	27/11/2019	19891300.6	3886889			
8	2004-05	Ciechanover Aaron	Goldhirsh Gilad ,Ciechanover Aaron ,Kravtsova Yelena	Hong Kong	Filed	27/11/2019	62022047812.2	40059458			
9											
10	2020027-03	Ciechanover Aaron	Goldhirsh Gilad ,Fabre Bertrand Francois ,Lavi Noa ,Zohar Yaniv ,Cohen-Kaplan Victoria ,Livneh Ido ,Ciechanover Aaron	United States	Examination	08/07/2021	18/004,821	US20230330064			
11	2020027-04	Ciechanover Aaron	Goldhirsh Gilad ,Fabre Bertrand Francois ,Lavi Noa ,Zohar Yaniv ,Cohen-Kaplan Victoria ,Livneh Ido ,Ciechanover Aaron	Europe	Examination	08/07/2021	21837959.2	4178563			
12	2020027-05	Ciechanover Aaron	Goldhirsh Gilad ,Fabre Bertrand Francois ,Lavi Noa ,Zohar Yaniv ,Cohen-Kaplan Victoria ,Livneh Ido ,Ciechanover Aaron	Canada	Filed	08/07/2021	3,185,236				
13	2020027-06	Ciechanover Aaron	Goldhirsh Gilad ,Fabre Bertrand Francois ,Lavi Noa ,Zohar Yaniv ,Cohen-Kaplan Victoria ,Livneh Ido ,Ciechanover Aaron	China	Published	08/07/2021	202180061830.3	CN116406294			
14											
15	2020082-02	Ciechanover Aaron	Brik Ashraf ,Goldhirsh Gilad ,Ciechanover Aaron ,Kravtsova Yelena	PCT	Abandoned	03/03/2022	PCT/IL2022/050243				
16											
17	2022029-02	Ciechanover Aaron	Ciechanover Aaron ,Cohen-Kaplan Victoria ,Livneh Ido ,Fabre Bertrand Francois	PCT	Filed	17/11/2023	PCT/IL2023/051191				PCT national phase due 18/05/2025
18											
19	2022072-01	Ciechanover Aaron	Elad Michael ,Golts Alona ,Ciechanover Aaron ,Zohar Yaniv ,Livneh Ido	PCT	Filed	29/09/2023	PCT/IL2023/051049				PCT national phase due 04/04/2025
20											
21											