

NIKI CHONDROGIANNI, Ph.D
Research Associate Professor
National Hellenic Research Foundation
Institute of Biology, Medicinal Chemistry and Biotechnology
48 Vas. Constantinou Ave., 116 35 Athens, GREECE
Tel: +30-210-7273768
Fax: +30-210-7273677
[nikichon@eie.gr](mailto:nkichon@eie.gr)

Niki Chondrogianni is a biologist. She obtained her PhD in Biochemistry and Molecular Biology from the University of Athens in Greece while she was a short-term visitor at the University Denis Diderot - Paris 7 in France and at the University of Bristol in UK. She conducted her post-doctoral studies at the National Hellenic Research Foundation in Athens. During her post-doc, she was also trained in the use of the model organism *C. elegans* at the Foundation of Research and Technology-Hellas, Institute of Molecular Biology and Biotechnology in Greece. She became Research Assistant Professor at the National Hellenic Research Foundation in 2009 and since 2013 she is Research Associate Professor.

Chondrogianni focuses on the genetic and environmental factors that govern ageing, longevity and age-related diseases with emphasis on the regulation of the proteasome. She is interested in revealing proteasome regulation in terms of expression but also function. She is seeking for natural or chemically-synthesized compounds that may act as proteasome activators and thus may serve as anti-ageing agents. She is equally interested in identifying compounds that can decelerate the progression of various proteinopathies with emphasis on Alzheimer's disease using *C. elegans* as a model in combination with human cells of neuronal origin and murine primary neurons. She is a national and international patent holder that resulted in the development of novel anti-ageing products that act through activation of the proteasome system (two relative product series are currently in the national and international market).

Publications

1. Protein ingestion preserves proteasome activity during intense aseptic inflammation and facilitates skeletal muscle recovery in humans.
Draganidis D., **Chondrogianni N.**, Chatzinikolaou A., Terzis G., Karagounis L.G., Sovatzidis A., Avloniti A., Lefaki M., Protopappa M., Deli C.K., Papanikolaou K., Jamurtas A.Z., Fatouros I.G. (2017) Br. J. Nutr. (*accepted*)
2. 2,3-Dehydrosilybin A/B as a pro-longevity and anti-aggregation compound.
Filippopoulou K., Papaevgeniou N., Lefaki M., Paraskevopoulou A., Biedermann D, Kren V. and **Chondrogianni N.** (2017) Free Rad. Biol. Med. 103:256-267.
3. Proteasome activation enhances stemness and lifespan of human mesenchymal stem cells.
Kapetanou M., **Chondrogianni N.**, Petrakis S., Koliakos G. and Efsthathios S. Gonos (2017) Free Rad. Biol. Med. 103:226-235. (**co-corresponding author**)
4. 18 α -glycyrrhetic acid proteasome activator decelerates aging and alzheimer's disease progression in *C. elegans* and neuronal cultures.
Papaevgeniou N.*, Sakellari M., Jha S., Tavernarakis N., Holmberg C.I., Gonos E.S and **Chondrogianni N.** (2016) Antiox. Redox Signal. 25: 855-869 (**cover page**)
5. 20S proteasome activation promotes life span extension and resistance to proteotoxicity in *Caenorhabditis elegans*.
Chondrogianni N., Georgila K., Kourtis N., Tavernarakis N., Gonos E.S. (2015) FASEB J 29: 611-622 (**co-corresponding author**)
6. Microwave-assisted synthesis of 3,5-disubstituted isoxazoles and evaluation of their anti-ageing activity.
Koufaki M*, Fotopoulou T., Kapetanou M., Heropoulos GA*, Gonos E.S, **Chondrogianni N***. (2014) Eur. J. Med. Chem. 83: 508-515 (*** equal contribution**)
7. The 19S proteasome subunit Rpn7 stabilizes DNA damage foci upon genotoxic insult.
Tsolou A., Nelson G.; Trachana V., **Chondrogianni N.**, Saretzki G., von Zglinicki T.; Gonos E.S. (2012) IUBMB Life 64: 432-442.
8. Chemical Analysis of Greek Pollen - Antioxidant, antimicrobial and proteasome activation properties.

- Graikou K., Kapeta S., Aligiannis N., Sotiroidis G., **Chondrogianni N.**, Gonos E.S. and Chinou I. (2011) *Chem Cent J*. 5: 33.
9. Anti-ageing and rejuvenating effects of quercetin.
Chondrogianni N., Kapeta S., Chinou I., Vassilatou K., Papassideri I. and Gonos E.S. (2010) *Exp. Gerontol.* 45: 763-771 (**co-corresponding author**)
 10. Nrf2 mediated proteasome activation delays senescence in human fibroblasts.
Kapeta S., **Chondrogianni N.** and Gonos E.S. (2010) *J. Biol. Chem.* 285: 8171-8184 (**co-corresponding author**)
 11. Genome-wide transcriptome profile of the human osteosarcoma Sa OS and U-2 OS cell lines.
Trougakos I.P., **Chondrogianni N.**, Amarantos I., Blake J., Schwager C., Ansorge W. and Gonos E.S. (2010) *Cancer Genet Cytogenet.* 196: 109-118
 12. The proteasome is an integral part of solar ultraviolet a radiation-induced gene expression.
Catalgol B., Ziaja I., Breusing N., Jung T., Hoehn A., Alpertunga B., Schroeder P., **Chondrogianni N.**, Gonos E.S., Petropoulos I., Friguet B., Klotz L.O., Krutmann J. and Grune T. (2009) *J. Biol. Chem.* 284: 30076-30086
 13. Transcriptional and post-translational regulation of clusterin by the two main cellular proteolytic pathways.
Balantinou E., Trougakos I.P., **Chondrogianni N.**, Margaritis L.H. and Gonos E.S. (2009) *Free Rad. Biol. Med.* 46:1267-1274
 14. Partial proteasome inhibition in human fibroblasts triggers accelerated M1 senescence or M2 crisis depending on p53 and Rb status.
Chondrogianni N., Trougakos I.P., Kletsas D., Chen Q.M. and Gonos E.S. (2008) *Aging Cell*, 7: 717-732 (**journal's highlight**)
 15. Exposure of human diploid fibroblasts to hypoxia extends proliferative lifespan.
Poulios E., Trougakos I.P., **Chondrogianni N.** and Gonos E.S. (2007) *Ann. N. Y. Acad. Sci.* 1119: 9-19
 16. Overexpression of hUMP1/POMP proteasome accessory protein enhances proteasome-mediated antioxidant defence.
Chondrogianni N. and Gonos E.S. (2007) *Exp. Gerontol.* 42: 899-903
 17. The olive constituent oleuropein exhibits proteasome stimulatory properties in vitro and confers lifespan extension of human embryonic fibroblasts.
Katsiki M., **Chondrogianni N.**, Chinou I., Rivett A.J., and Gonos E.S. (2007) *Rejuvenation Res.* 10: 157-172
 18. Proteasome response to interferon-gamma is altered in senescent human fibroblasts.
Stratford F.L., **Chondrogianni N.**, Trougakos I.P., Gonos E.S. and Rivett A.J. (2006) *FEBS Lett.* 580: 3989-3994
 19. Overexpression of proteasome beta 5 subunit increases the amount of assembled proteasome and confers ameliorated response to oxidative stress and higher survival rates.
Chondrogianni N., Tzavelas C., Pemberton A.J., Nezis I.P., Rivett A.J. and Gonos E.S. (2005) *J. Biol.Chem.* 280: 11840-11850
 20. Cloning of differentially expressed genes in skin fibroblasts from centenarians.
Chondrogianni N., Simoes D.C.M., Francheschi C. and Gonos E.S. (2004) *Biogerontology* 5: 401-409
 21. Alterations of senescence biomarkers in human cells by exposure to CrVI in vivo and in vitro.
Katsiki M., Trougakos I.P., **Chondrogianni N.**, Alexopoulos E.C., Makropoulos V. and Gonos E.S. (2004) *Exp. Gerontol.* 39: 1079-1087
 22. Proteasome inhibition induces a senescence-like phenotype in primary human fibroblasts cultures
Chondrogianni N. and Gonos E.S. (2004) *Biogerontology* 5: 55-61
 23. Central role of the proteasome in senescence and survival of human fibroblasts: induction of a senescence-like phenotype upon its inhibition and resistance to stress upon its activation.
Chondrogianni N., Stratford F.L.L., Trougakos I.P., Friguet B., Rivett A.J. and Gonos E.S. (2003) *J. Biol. Chem.* 278: 28026–28037
 24. Correlation of *in vitro* cytotoxicity and clinical response to therapy in ovarian and breast cancer patients.
Agiostratidou G., Sgouros I., Galani A., Voulgari A., **Chondrogianni N.**, Samantas E., Demopoulos M.A., Skarlos D. and Gonos E.S. (2001) *Anticancer Res.* 21: 455-459
 25. Fibroblast cultures from healthy centenarians have an active proteasome.
Chondrogianni N., Petropoulos I., Franceschi C., Friguet B., and Gonos E.S. (2000) *Exp. Gerontol.* 35: 721-728

Reviews

1. Redox regulation of proteasome function.
Lefaki M., Papaevgeniou N. and **Chondrogianni N.** (2017) *Redox Biology* (*accepted*)
2. European contribution to the study of ROS: A summary of the findings and prospects for the future from the COST action BM1203 (EU-ROS).
Egea J, Fabregat I, Frapart YM, Ghezzi P, Görlach A, Kietzmann T, Kubaichuk K, Knaus UG, Lopez MG, Olasso-Gonzalez G, Petry A, Schulz R, Vina J, Winyard P, Abbas K, Ademowo OS, Afonso CB, Andreadou I, Antelmann H, Antunes F, Aslan M, Bachschmid MM, Barbosa RM, Belousov V, Berndt C, Bernlohr D, Bertrán E, Bindoli A, Bottari SP, Brito PM, Carrara G, Casas AI, Chatzi A, **Chondrogianni N.**, Conrad M, Cooke MS, Costa JG, Cuadrado A, My-Chan Dang P, De Smet B, Debelec-Butuner B, Dias IHK, Dunn JD, Edson AJ, El Assar M, El-Benna J, Ferdinandy P, Fernandes AS, Fladmark KE, Förstermann U, Giniatullin R, Giricz Z, Görbe A, Griffiths H, Hampl V, Hanf A, Herget J, Hernansanz-Agustín P, Hillion M, Huang J, Ilikay S, Jansen-Dürr P, Jaquet V, Joles JA, Kalyanaraman B, Kaminsky D, Karbaschi M, Kleanthous M, Klotz LO, Korac B, Korkmaz KS, Koziel R, Kračun D, Krause KH, Křen V, Krieg T, Laranjinha J, Lazou A, Li H, Martínez-Ruiz A, Matsui R, McBean GJ, Meredith SP, Messens J, Miguel V, Mikhed Y, Milisav I, Milković L, Miranda-Vizuete A, Mojić M, Monsalve M, Mouthuy PA, Mulvey J, Münzel T, Muzykantov V, Nguyen ITN, Oelze M, Oliveira NG, Palmeira CM, Papaevgeniou N, Pavićević A, Pedre B, Peyrot F, Phylactides M, Pircalabioru GG, Pitt AR, Poulsen HE, Prieto I, Rigobello MP, Robledinos-Antón N, Rodríguez-Mañas L, Rolo AP, Rousset F, Ruskovska T, Saraiva N, Sasson S, Schröder K, Semen K, Seredenina T, Shakirzyanova A, Smith GL, Soldati T, Sousa BC, Spickett CM, Stancic A, Stasia MJ, Steinbrenner H, Stepanić V, Steven S, Tokatlidis K, Tuncay E, Turan B, Ursini F, Vacek J, Vajnerova O, Valentová K, Van Breusegem F, Varisli L, Veal EA, Yalçın AS, Yelisyeyeva O, Žarković N, Zatloukalová M, Zielonka J, Touyz RM, Papapetropoulos A, Grune T, Lamas S, Schmidt HHHW, Di Lisa F, Daiber A. (2017) *Redox Biol.* 13: 94-162.
3. Identification of anti-aging and anti-aggregation polyphenolic compounds using *C. elegans* as a model organism.
Papaevgeniou N. and **Chondrogianni N.** (2017) *Curr Pharm Des.* (*accepted*)
4. Proteasome activation: An innovative promising approach for delaying aging and retarding age-related diseases.
Chondrogianni N., Voutetakis K., Kapetanou M., Delitsikou V., Papaevgeniou N., Sakellari M., Lefaki M., Filippopoulou K. and Gonos E.S. (2015) *Ageing Res. Rev.* 23 (Pt A): 37-55 (**co-corresponding author**)
5. Proteasome activation delays aging *in vitro* and *in vivo*.
Chondrogianni N., Sakellari M., Lefaki M., Papaevgeniou N., Gonos E.S. (2014) *Free Radical Biol. Med.* 71: 303-320 (**corresponding author**)
6. The ubiquitin proteasome system in *Caenorhabditis elegans* and its regulation.
Papaevgeniou N, **Chondrogianni N.** (2014) *Redox Biol.* 2: 333-347.
7. Protein damage, repair and proteolysis.
Chondrogianni N., Petropoulos I., Grimm S., Georgila K., Catalgol B., Friguet B., Grune T., Gonos E.S. (2014) *Mol. Aspects Med.* 35: 1-71 (**co-corresponding author**)
8. Molecular strategies to prevent, inhibit and degrade advanced glycoxidation and advanced lipoxidation end products.
Aldini G, Vistoli G, Stefek M, **Chondrogianni N.**, Grune T, Sereikaite J, Sadowska-Bartosz I, Bartosz G. (2013) *Free Radic Res.* 47 Suppl 1:93-137 (**corresponding author for the degradation part**)
9. Proteasome function determines cellular homeostasis and the rate of aging.
Chondrogianni N. and Gonos E.S. (2010) *Adv. Exp. Med. Biol.* 694: 38-46.
10. Proteasome activation as a novel anti-aging strategy.
Chondrogianni N. and Gonos E.S. (2008) *IUBMB Life* 60: 651-655
11. Preface.
Gonos E.S., Trougakos I.P. and **Chondrogianni N.** (2007) *Ann. N. Y. Acad. Sci.* 1119: xi-xii
12. Proteasome dysfunction and mammalian aging: involved steps and factors.
Chondrogianni N. and Gonos E.S. (2005) *Exp. Gerontol.* 40: 931-938. Review
13. Protein degradation during aging: the lysosome-, the calpain- and the proteasome-dependent cellular proteolytic systems.

- Chondrogianni N.**, Fragoulis E.S. and Gonos E.S. (2002) *Biogerontology* 3: 121-123. Review
14. Protein degradation by the proteasome and its implication in ageing.
Friguet B., Bulteau A-L., **Chondrogianni N.**, Conconi M. and Petropoulos I. (2000)
Ann. N. Y. Acad. Sci. 908: 143-154. Review
15. Ageing and longevity: A paradigm of complementation between genetic control and failure of homeostasis?
Petropoulou C., **Chondrogianni N.**, Simoes D., Agiostratidou G., Drosopoulos N., Kotsota V. and Gonos E.S. (2000) *Ann. N. Y. Acad. Sci.* 908: 133-142. Review

Chapters in books

1. UPS activation in the battle against aging and aggregation-related diseases: An extended review.
Papaevgeniou N. and **Chondrogianni N.** (2016) Rune Matthiesen (ed.), *Proteostasis: Methods and Protocols*, *Methods in Molecular Biology*, vol. 1449, pp.1-70 Springer Science+Business Media New York, USA
2. The Proteasomal System in Aging and Disease: Structure and Function of the Ubiquitin-Proteasome System: Modulation of components.
Chondrogianni N. and Gonos E.S. (2012) In Grune's *Progress in Molecular Biology and Translational Science* (M. Conn, ed.) vol. 109, pp. 41–74 Elsevier, USA
3. Aging Research in Greece.
Gonos E.S. Trougakos I.P., and **Chondrogianni N.** (2008). In: Palmore, E., Whittington, F. and Kunkel, S. (eds): *The International Handbook of Aging: current research and development*. pp 249-257, Praeger Publishers, Connecticut, USA.
4. Anti-aging properties of the olive constituent oleuropein in human cells.
Chondrogianni N., Chinou I. and Gonos E.S. (2008) In: V.R. Preedy and R.R. Watson (eds): *Olives and olive oil in Health and Disease Prevention*. Oxford: Academic Press, 2010, pp. 1335-1343.
5. Slowing down cellular ageing *in vitro*.
Trougakos I.P., **Chondrogianni N.**, Pimenidou A., Katsiki M., Tzavelas C. and Gonos E.S. (2003) S.I.S. Rattan (ed): *Modulating Aging and Longevity* 65-83 Kluwer Academic Publishers.