CURRICULUM VITAE

PERSONAL DATA

Name: George A. Stravodimos
Address: Department of Biochemistry and Biotechnology, University of Thessaly, Biopolis, 41500, Larissa, Greece. Tel. +30 6972154878
Email: stravodi@bio.uth.gr

HIGHER EDUCATION

9/2013 – 10/2018 **PhD in Biochemistry and Structural Biology, Department of Biochemistry and Biotechnology, University of Thessaly, Greece**

Grade: 10/10 (Excellent)

Title of Dissertation: Biochemical studies of enzymes in glycogen metabolism

Supervisor: Prof. D.D. Leonidas

3/2012–7/2013 **M.Sc. in Biotechnology: Nutrition and Environment, Department of Biochemistry and Biotechnology, University of Thessaly, Greece**

Grade: 8.72/10 (Excellent)

Thesis: Assessment of polyphenolic extracts from by-products of the pomegranate and grape industrial process for hypoglycaemic activity by biochemical methods

Supervisor: Prof. D.D. Leonidas

2007 - 2012 **B.Sc. Biochemistry and Biotechnology, Department of Biochemistry and Biotechnology, University of Thessaly, Greece**

Grade: 6.42/10 (Good)

B.Sc. Thesis: Proteomics analysis of *Bactrocera oleae* with emphasis in sex separation and insecticide resistance systems

Supervisor: Assist. Prof. M. Kontou

SCHOLARSHIPS

- PhD Fellowship, by the Hellenic State Scholarships Foundation Action (IKY) "Support of human research resources through doctoral research" funded by the "Operational Programme Education and Lifelong Learning" co-funded by the European Social Fund (ESF) and National Resources, (15.05.17 - 15.03.18)
- (Member of the Research team), TRIFORC: Triterpenes For Commercialization, A pipeline for the discovery, sustainable production and commercial utilization of known and novel high-value triterpenes with new or superior biological activities, EU, [KBBE.2013.3.1.01] Plant High Value Products – from discovery to final product of the European Union's Seventh Framework Programme FP7/2007-2013/ under REA grant agreement n° [613692]

PUBLICATIONS

1. Szabo, K., Kyriakis, E. Psarra, A.M.G., Karra, A., Sipos, A., Docsa, T., ***Stravodimos, G.***, Katsidou, E., Skamnaki, V.T., Liggri, P., Zographos, S., Mandi, A., Király, S., Kurtán, T., Leonidas, D.D., Somsák, L., (2019) *Glucopyranosylidene-spiro-imidazolinones, a new ring system: Synthesis and evaluation as glycogen phosphorylase inhibitors by enzyme kinetics and X-ray crystallography* ***J. Med. Chem.*** in press.
2. Fischer, T., Koulas, S.M., Tsagkarakou, A.S., Kyriakis, E., ***Stravodimos, G.A***., Skamnaki, V.T., Liggri, G.V.P., Zographos, S.E., Riedl, R., Leonidas, D.D. (2019). *High consistency of structure-based design and X-ray crystallography: Design, synthesis, kinetic evaluation and crystallographic binding mode determination of biphenyl-N-acyl-β-D-glucopyranosylamines as glycogen phosphorylase inhibitors.* **Molecules** 24, 1322
3. Kyriakis, E., Solovou, T.G.A., Kun, S., Czifrák, K., Szőcs, B., Juhász, L., Bokor, É., ***Stravodimos, G.A.***, Kantsadi, A.L., Chatzileontiadou, D.S.M., Skamnaki, T., Somsák, L., Leonidas, D.D. (2018). *Probing the β-pocket of the active site of human liver glycogen phosphorylase with 3-(C-β-d-glucopyranosyl)-5-(4-substituted-phenyl)-1, 2, 4-triazole inhibitors.* **Bioorg Chem.** 77:485-493.
4. Kun, S., Begum, J., Kyriakis, E., Stamati, E.C.V., Barkas, T.A., Szennyes, E., Bokor, É., Szabó, K.E., ***Stravodimos, G.A.***, Sipos, Á., Docsa, T., Gergely, P., Moffatt,C., Patraskaki, M.S., Kokolaki, M.C., Gkerdi, A., Skamnaki, V.T., Leonidas, D.D., Somsák, L., Hayes, J.M. (2018). *A multidisciplinary study of 3-(β-d-glucopyranosyl)-5-substituted-1,2,4-triazole derivatives as glycogen phosphorylase inhibitors: Computation, synthesis, crystallography and kinetics reveal new potent inhibitors.* **Eur J Med Chem** 10; 147:266-278.
5. Bokor, E., Kyriakis, E., Solovou, T.G.A., Koppány, C., Kantsadi, A.L., Szabó, K.E., Szakács, A., ***Stravodimos, G.A.,*** Docsa, T., Skamnaki, V.T., Zographos, S.E., Gergely, P., Leonidas, D.D., Somsák, L. *Nanomolar inhibitors of glycogen phosphorylase based on β-D-glucosaminyl heterocycles: a combined synthetic, enzyme kinetic and protein crystallography study.* ***J. Med. Chem.*** 7b 01056

6. Kyriakis, E., Solovou, T.G.A., Kun, S., Czifrák, K., Szőcs B., Juhász, L., Bokor, E., Stravodimos G., A., Kantsadi, A.L., Chatzileontiadou, D.S.M., Skamnaki, V.T., Somsák, L., Leonidas, D.D. (2017) *Probing the β-pocket of the active site of human liver glycogen phosphorylase with 3-(C-β-D-glucopyranosyl)-5-(4-substituted-phenyl)-1,2,4-triazole inhibitors* ***Bioorg Chem.*** 2018 10.1016/j.bioorg.2018.02.008.
7. ***Stravodimos, G.A.,*** Kantsadi, A.L., Apostolou, A., Kyriakis, E., Kafaski-Kanelli, V-N., Gatzona, P., Liggri, P.G.V., Theofanous, S., Gorgogietas, V.A., Kissa, A., Psachoula, C., Lemonakis, A., Chatzileontiadou, D.S.M., Psarra, A. M., Skamnaki, V.T., Haroutounian, S.A., and Leonidas, D.D. (2018) *Affinity crystallography reveals the most bioactive ingredients of polyphenolic extracts Punica granatum against glycogen phosphorylase.,* ***Curr. Drug Disc. Technol.*** 14(4):1570-1638
8. Kantsadi, A.L., ***Stravodimos, G.A.,*** Kyriakis, E., Chatzileontiadou, D.S.M., Solovou, T.G., Kun, S., Bokor, E., Somsák, L, Leonidas, D.D. (2017) *Van der Waals interactions govern C-β-D-glucopyranosyl triazoles' nM inhibitory potency in human liver glycogen phosphorylase.* ***J. Struct. Biol.***199(1):57-67
9. Spanidis, Y., Priftis, A., Stagos, D., ***Stravodimos, G.A.,*** Leonidas, D.D., Spandidos, D.A., Tsatsakis A.M., Kouretas D. (2017) *Oxidation of human serum albumin exhibits inter-individual variability after an ultra-marathon mountain race* ***Exp. Therap. Med.*** 13(5): 2382-2390
10. ***Stravodimos, G.A.,*** Chetter, B.A., Kyriakis, E., Kantsadi, A.L., Chatzileontiadou, D.S.M., Skamnaki, V.T., Kato, A., Hayes, J.M., Leonidas, D.D., (2017) *Phytogenic polyphenols as glycogen phosphorylase inhibitors: the potential of triterpenes and flavonoids for the treatment and management of type 2 diabetes*. ***Curr. Med. Chem.*** 24, 384-403
11. Kantsadi, A.L, Bokor, É, Kun, S, ***Stravodimos, G.A.,*** Chatzileontiadou, D.S., Leonidas, D.D., Juhász-Tóth, É., Szakács, A., Batta, G., Docsa, T., Gergely, P., Somsák, L. (2016) *Synthetic, enzyme kinetic, and protein crystallographic studies of C-β-d-glucopyranosyl pyrroles and imidazoles reveal and explain low nanomolar inhibition of human liver glycogen phosphorylase.* ***Eur. J. Med. Chem.,*** 123, 737-745.
12. Chatzileontiadou, D.S., Tsirkone, V.G., Dossi, K., Kassouni, A.G., Liggri, P.G., Kantsadi, A.L., ***Stravodimos, G.A.,*** Balatsos, N.A., Skamnaki, V.T., Leonidas, D.D. (2016) *The ammonium sulfate inhibition of human angiogenin.* ***FEBS Lett.*** 590, 3005-3018.
13. Delis, C., Krokida, A., Tomatsidou. A., Tsikou, D., Beta, R.A., Tsioumpekou, M., Moustaka, J., ***Stravodimos, G.A.,*** Leonidas, D.D., Balatsos, N.A., Papadopoulou, K.K. (2016) *AtHESPERIN: a novel regulator of circadian rhythms with poly (A)-degrading activity in plants*. ***RNA Biology*** 13, 68-82.
14. Kantsadi, A.L., Parmenopoulou, V., Bakalov, D.N., Snelgrove, L., ***Stravodimos, G.A.***, Chatzileontiadou, D.S.M., Manta, S., Panagiotopoulou, A., Hayes, J.M., Komiotis, D., Leonidas, D.D. (2015) *Glycogen phosphorylase as a target for type 2 diabetes: synthetic, biochemical, structural and computational evaluation of novel N-acyl-N′-(β-D-glucopyranosyl) urea inhibitors.* ***Curr. Top. Med. Chem.*** 15, 2373-2389.

15. Kyriakis, E., ***Stravodimos, G.A.,*** Kantsadi, A.L., Chatzileontiadou, D.S.M., Skamnaki, V.T., Leonidas, D.D. (2015) *Natural flavonoids as antidiabetic agents. The binding of gallic and ellagic acids to glycogen phosphorylase b*, ***FEBS Lett*** *589,* 1787-1794.
16. Kantsadi, A.L., Apostolou, A., Theofanous, S., ***Stravodimos, G.A.,*** Kyriakis, E., Gorgogietas, V. A., Chatzileontiadou, D. S., Pegiou, K., Skamnaki, V.T., Stagos, D., Kouretas, D., Psarra, A.M., Haroutounian, S.A., and Leonidas, D.D. (2014) *Biochemical and biological assessment of the inhibitory potency of extracts from vinification byproducts of Vitis vinifera extracts against glycogen phosphorylase*, ***Food Chem. Toxicol.*** *67,* 35-43.

CHAPTER BOOKS

- Skamnaki, V.T., Kantsadi, A.L., Chatzileontiadou, D.S.M., ***Stravodimos, G.A,*** Leonidas, D.D., *Glycogen Metabolism Enzymes as Molecular Targets for Drug Development*. ***In "Glycogen: Structure, Functions in the Body and Role in Disease"*** (2013) edited by Pedro L. Weiss and Brian D. Faulkner: Biochemistry Research Trend

ORAL PRESENTATIONS

1. *Affinity crystallography, a promising time-saving approach to determine the complete 3D structures of high-affinity, but low abundance drug target ligands.* ***69th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Larisa, 2018***

2. *Expression of the catalytic g subdomain of human liver phosphorylase kinase.* ***1st International Spring Meeting of the Hellenic Crystallographic Association's Young Researchers, Athens, 2017***
3. *Expression of the regulatory a subdomain of the kinase phosporylase. New approaches to an old legend.* **22nd Hellenic Congress in Chemistry, Thessaloniki,** ***2016***

SELECTED POSTERS IN CONFERENCES

1. 2018: 69th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Larisa. Affinity crystallography, a promising time-saving approach to determine the complete 3D structures of high-affinity, but low abundance drug target ligands. Stravodimos, G.A., Kyriakis, E., Papaioannou, O.S.E., Solovou, T.G.A., Skamnaki, V.T., Leonidas, D.D. (oral)
2. 2018: 69th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Larisa. Glycogen phosphorylase as a model for high-throughput crystallography (HTC). Drakou, C.E., Adamou-Androulaki, V., Stravodimos, G.A., Kantsadi, A.L., Leonidas, D.D., Skamnaki, V.T. (poster)
3. 2018: 69th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Larisa. Purification and crystallization of potato α-Glucan Phosphorylase. Koulas S.M.,

Kyriakis, E., Solovou, T.G.A., Stravodimos, G.A., Skamnaki, V.T., Leonidas, D.D. (poster)

4. 2018: 69th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Larisa. Structure-based inhibitor design studies targeting human liver Glycogen Phosphorylase. Kyriakis, E., Solovou, T.G.A., Papaioannou, O.S.E., Koulas S.M., Tsagkarakou, A.S., Stravodimos, G.A., Skamnaki, V.T., Leonidas, D.D. (poster)
5. 2018: 69th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Larisa. Studies on the role of the C-terminal segment of human Angiogenin in defining biological efficiency. Papaioannou, O.S.E., Patraskaki, M., Kyriakis, E., Solovou, T.G.A., Stravodimos, G.A., Papadopoulos, G. Leonidas, D.D. (poster)
6. 2018: 69th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Larisa. Unravelling the structure-activity relationship of Lj-GSK3b, a 'green' GSK kinase. Solovou, T.G.A., Kyriakis, E., Papaioannou, O.S.E., Stravodimos, G.A., Garagounis, C., Papadopoulou, K.K., Leonidas, D.D. (poster)
7. 2018: 69th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Larisa. Rational mutagenesis to enhance solubility of N'-terminal domain (PHKA140-400) of alpha regulatory subunit of PhK. Politi, E., Tsagkarakou, A.S., Solovou, T.G.A., Stravodimos, G.A., Papadopoulos, G.E., Leonidas, D.D., Skamnaki, V.T. (poster)
8. 2018: 9th Conference of Hellenic Crystallographic Association, Patras. Heterologous expression of the in silico predicted glucoamylase domain of regulatory a subunit (PHKA140-400) of human muscle glycogen phosphorylase kinase. Politi, E., Solovou, T.G.A., Stravodimos, G.A., Papadopoulos, G., Leonidas, D.D., Skamnaki, V.T. (poster)
9. 2018: 9th Conference of Hellenic Crystallographic Association, Patras. Biochemical studies on human angiogenin. Papaioannou, O.S.E., Patraskaki, M.S, Kyriakis, E., Solovou, T.G.A., Stravodimos, G.A., Papadopoulos, G.E., Leonidas, D.D. (poster)
10. 2018: 9th Conference of Hellenic Crystallographic Association, Patras. Structure based design of glucose analogues to inhibit glycogen phosphorylase, a pharmaceutical target for diabetes type 2. Koulas, S., Tsagkarakou, A.S, Kyriakis, E., Stravodimos, G.A., Skamnaki, V.T., Leonidas, D.D. (poster)
11. 2018: 9th Conference of Hellenic Crystallographic Association, Patras. Assessment of a series of coumarin analogues for inhibitory potency against glycogen phosphorylase kinase. Insights for specificity. Gkouskou, A., Hayes, J., Stravodimos, G.A., Kyriakis, E., Katounis, D., Papadopoulos, G., Leonidas, D.D., Skamnaki, V.T. (poster)
12. 2017: 68th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Athens. Expression, Purification and Crystallization of the catalytic γ subunit of human liver (hlPhK) glycogen phosphorylase kinase for structure determination. Stravodimos, G.A., Kyriakis, E., Solovou, T.G.A., Leonidas, D.D., Skamnaki, V.T. (poster)
13. 2017: 68th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Athens. β-D-glucosaminyl heterocycles as nanomolar inhibitors of human liver glycogen phosphorylase A kinetics and protein crystallography study. Kyriakis, E., Solovou, T.G.A., Stravodimos, G.A., Kantsadi, A.L., Chatzileontiadou, D.S.M., Leonidas, D.D., Skamnaki, V.T. (poster)

14. 2017: 1st International Spring Meeting of the Hellenic Crystallographic Association's Young Researchers, Athens. Expression of the catalytic g subdomain of human liver phosphorylase kinase. Stravodimos, G.A., Solovou, T.G.A., Gkouskou, A. D., Kyriakis, E., Leonidas, D.D., Skamnaki, V.T. (oral)
15. 2016: 8th Conference of Hellenic Crystallographic Association, Athens. The binding of β-D-glucopyranosyl triazoles to glycogen phosphorylase. Kinetic and crystallographic studies, Kyriakis, E., Solovou, T.G.A., Stravodimos, G.A., Kantsadi, A.L., Chatzileontiadou, D.S.M., Skamnaki, V.T., Leonidas, D.D. (poster)
16. 2016: 8th Conference of Hellenic Crystallographic Association, Athens. High yield expression of "challenging" proteins for structural studies. The case of human liver glycogen phosphorylase (hlGP), Solovou, T.G.A., Stravodimos, G.A., Gkouskou, A.D., Kyriakis, E., Leonidas, D.D., Skamnaki, V.T. (poster)
17. 2016: 22nd Hellenic Congress in Chemistry, Thessaloniki. Expression of the regulatory a subdomain of the kinase phosporylase. New approaches to an old legend. Stravodimos, G.A., Solovou, T.G., Kyriakis, E., Chatzileontiadou, D.S.M., Gkouskou, A. D., Papadopoulos, G., Skamnaki, V.T., Leonidas, D.D. (oral)
18. 2016: 8th Conference of Hellenic Crystallographic Association, Athens X-ray crystallography screening of plant extracts for the identification of new bioactive agents, Leonidas, D., Stravodimos, G.A., Kyriakis, E., Kantsadi, A.L., Chatzileontiadou, D.S.M., Solovou, T.G., Skamnaki, V.T. (oral)
19. 2016: 8th Conference of Hellenic Crystallographic Association, Athens. Characterization of the active site of AtHESPERIN. Beta, R.A.A., Kyritsis, A., Stravodimos, G.A., Tsikou, D., Papadopoulou, K.K., Skamnaki, V.T., Leonidas, D.D., Balatsos, N.A.A. (oral)
20. 2015: 66th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Athens. Chaperone assisted heterologous expression of regulatory domain (PHKA1) of human muscle glycogen phosphorylase kinase. Stravodimos, G.A., Chatzileontiadou, D.S.M., Papadopoulos, G., Venien-Bryan, C., Kontopidis, G., Leonidas, D.D., Skamnaki, V.T. (poster)
21. 2015: 21th Hellenic Congress in Chemistry, Thessaloniki. Assessment of Rosaceae Family Polyphenolic Plant Extracts Potential Antihyperglycaemic Effects against Glycogen Phosphorylase. Apostolou, A., Stravodimos, G.A., Kapsaski-Kanelli, V.N., Leonidas, D.D., Haroutounian, S. (poster)
22. 2014: 65th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Thessaloniki. Expression and Purification of C-terminal regions of regulatory α and β subunits of glycogen phosphorylase kinase for structural and functional studies. Stravodimos G.A., Kantsadi, A.L., Cheruel-Quevillon, S., Vénien-Bryan, C., Herman Van Tilberg., Leonidas, D.D., Skamnaki, V.T. (poster)
23. 2014: 65th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Thessaloniki. Biochemical characterization of AtHESP, a novel circadian-regulated deadenylase. Beta, R., Delis, C., Stravodimos, G.A., Chatzileontiadou, D.S.M., Tomatsidou, A., Krokida, A., Papanastasi, E., Skamnaki, V.T., Papadopoulou, K.K., Leonidas, D.D., Balatsos, N.A.A. (poster)

24. 2014: 65th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Thessaloniki. Assessment of various Greek polyphenolic plant extracts for potential antihyperglycaemic effect against glycogen phosphorylase. Kyriakis, E., Stravodimos, G.A., Kantsadi, A.L., Liggri, P., Apostolou, A., Gorgogietas, V.A., Chatzileontiadou, D. S.M, Skamnaki, V.T., Psarra, A. M. Haroutounian, S.A., Leonidas, D.D. (poster)
25. 2014: 7th Conference of Hellenic Crystallographic Association, Heraklion Crete. A novel deadenylase with oligomeric structure in Arabidopsis thaliana. Beta R., Stravodimos, G.A., Tsikou, D., Papadopoulou, K.K., Skamnaki, V.T., Leonidas, D.D., Balatsos, N.A.A. (poster)
26. 2014: 7th Conference of Hellenic Crystallographic Association, Heraklion Crete. Assessment of polyphenolic extracts of Greek varieties of Vitis vinifera and Punica granatum for inhibitory potency against Glycogen Phosphorylase. Stravodimos, G.A., Kantsadi, A.L., Kyriakis, E., Liggri, P. G.V., Apostolou, A., Gorgogietas, V.A., Chatzileontiadou D.S.M, Kolokotroni V., Skamnaki, V.T., Psarra, A. M., Haroutounian, S.A., Leonidas, D.D. (poster)
27. 2014: 50th Congress of the European societies of Toxicology, Edinburg. The anti-hyperglycaemic potential of plant antioxidant molecules. Kantsadi, A.L., Stravodimos, G.A., Kyriakis, E., Theofanous, S., Apostolou, A., Gorgogietas, V., Chatzileontiadou, D.S.M., Kolokotroni, V., Stagos, D., Kouretas, D., Skamnaki, V.T., Psarra, A. M., Haroutanian, S.A., Leonidas, D.D. (poster)
28. 2014: 65th Congress of The Hellenic Society of Biochemistry and Molecular Biology, Thessaloniki. Structure based inibitor design targeting glycogen phosphorylase b. Kantsadi, A.L., Chatzileontiadou, D.S.M., Stravodimos, G.A., Leonidas, D.D. (oral)
29. 2012: 6th Conference of Hellenic Crystallographic Association, Athens. Natural extracts from Greek grape varieties as potential inhibitors of Glycogen Phosphorylase b. Biochemical and biological assessment. Stravodimos, G.A., Kantsadi, A.L., Theofanous, S., Psarra, A.-M.G., Adamou, E., Kotsona, K., Leonidas, D.D. (poster)
30. 2012: 34 th Hellenic Society for Biological Sciences, Trikala. Proteomics analysis of Bactrocera oleae with emphasis in sex separation and insecticide resistance systems. Sagri, E., Stravodimos, G.A., Samiotaki, M., Panagiotou, G., Mathiopoulos, K.D., Kontou, M. (poster)
31. 2011: 6th Conference in Molecular societies of Entomology, Amsterdam. Proteomics analysis of Bactrocera oleae with emphasis in sex separation and insecticide resistance systems. Sagri, E., Stravodimos, G.A., Samiotaki, M., Panagiotou, G., Mathiopoulos, K.D., Kontou, M. (poster)

SCIENTIFIC ACTIVITIES

- Member of the Hellenic Crystallographic Association
- Member of the Hellenic Society of Biochemistry and Molecular Biology
- Registered user of the synchrotron radiation sources:
  - ✓ MAX IV Laboratory, Lund, Sweden,
  - ✓ ALBA, Barcelona, Spain
  - ✓ Spectra III, EMBL, Hamburg Outstation
  - ✓ Diamond Light Source, Oxford, UK