Προσωπικά στοιχεία

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Εκπαίδευση

1990	Πτυχίο Βιολογίας, Πανεπιστήμιο Αθηνών
1997	Διδακτορική διατριβή, Πανεπιστήμιο Αθηνών , Τμήμα Βιολογίας «Μοριακή ανάλυση του μιτοχονδριακού DNA του γένους *Albinaria* (Mollusca). Συμβολή στη μελέτη της μοριακής εξέλιξης και της φυλογεωγραφίας του γένους στον ελληνικό χώρο», Αθήνα 1997. (Το κείμενο της διατριβής είναι διαθέσιμο στο http://thesis.ekt.gr/8711)

Επαγγελματική Σταδιοδρομία

1991 - 1996	**Υποψήφιος Διδάκτορας** (από το 1992 Ειδικός Μεταπτυχιακός Υπότροφος) στο Τμήμα Βιολογίας του Πανεπιστημίου Αθηνών, (Επιβλέποντες: Ρένα Λεκανίδου, Γιώργης Κ. Ροδάκης)
3/1997 - 9/1998	Στρατιωτική Θητεία
11/1998 - 11/2000	**Μεταδιδάκτορας,** Τμήμα Βιολογίας, Πανεπιστήμιο Αθηνών (Εργαστήριο Ρ. Λεκανίδου)
9/1999 - 6/2000	Εκπαιδευτής ενηλίκων σε δημόσια ΙΕΚ
11/2000 - 10/2002	**Μεταδιδάκτορας,** Ινστιτούτο Βιολογίας ΕΚΕΦΕ «Δημόκριτος», (Εργαστήριο Μοριακής Γενετικής και Βιοτεχνολογίας Εντόμων, Διευθυντής Κ. Ιατρού)
11/2002 – 12/2006	**Συνεργαζόμενος Ερευνητής** με προσόντα Δ' βαθμίδας, ΕΚΕΦΕ «Δημόκριτος», Εργαστήριο Ιατρού
1/2007 – 4/2010	**Συνεργάτης Ερευνητής,** Ινστιτούτο Μοριακής Βιολογίας και Βιοτεχνολογίας/Ίδρυμα Τεχνολογίας και Έρευνας (Εργαστήρια Μαρίας Μοναστηριώτη, Μιχάλη Αβέρωφ και Θανάση Λουκέρη)
5/2010 – 12/2012	**Συνεργάτης Ερευνητής**, Institute Biology Leiden, Ολλανδία, (Εργαστήριο Εξελικτικής Βιολογίας, Διευθυντής P. Brakefield, Ομάδα Patrícia Beldade)
12/2011 – 1/2013	**Επισκέπτης Ερευνητής**, IGC (Gulbenkian Institute of Sciences), Oeiras, Πορτογαλία (Variation, Development and Selection Group, Επικεφαλής: Patrícia Beldade)
6/2013 -10/2019	**Επιστημονικός Συνεργάτης**, Τμήμα Βιολογίας, Πανεπιστήμιο Κρήτης και IMBB/ITE (Εργαστήριο Μοριακής Εντομολογίας, Διευθυντής: Ι. Βόντας)

10/2019 –	**Επίκουρος Καθηγητής**, Τμήμα Βιολογικών Εφαρμογών και Τεχνολογιών, Πανεπιστήμιο Ιωαννίνων
1/2022 –	**Συνεργαζόμενο μέλος ΔΕΠ,** IBE/ITE

Ερευνητικά ενδιαφέροντα

- **Μοριακή Γενετική**: Γενετικοί μηχανισμοί ρύθμισης, διερεύνηση μοριακών μηχανισμών ανθεκτικότητας σε εντομοκτόνα, σε οργανισμούς μοντέλα και μη.
- **Εξελικτική Βιολογία**: Φυλογενετική ανάλυση, φυλογεωγραφία, evo-devo, διερεύνηση συσχέτισης φαινοτύπων με αναπτυξιακές διαδικασίες.
- **Βιοτεχνολογικές εφαρμογές** με έμφαση στα αρθρόποδα, φορείς και συστήματα πρωτεϊνικής έκφρασης σε κύτταρα εντόμων, μπακουλοϊοί και διαγονιδιακά έντομα, γονιδιωματική τροποποίηση με CRISPR/Cas9.

Δημοσιεύσεις (peer-reviewed)

2021-22

37. Ioannidis P, Buer B, Ilias A, Kaforou S, Aivaliotis M, Orfanoudaki G, **Douris V**, Geibel S, Vontas J, Denecke S. (2022) A spatiotemporal atlas of the lepidopteran pest *Helicoverpa armigera* midgut provides insights into nutrient processing and pH regulation. *BMC Genomics* **23**: 75

36. Xue W, Mermans C, Papapostolou KM, Lamprousi M, Christou IK, Inak E, **Douris V**, Vontas J, Dermauw W, Van Leeuwen T. (2021) Untangling a Gordian knot: the role of a GluCl3 I321T mutation in abamectin resistance in *Tetranychus urticae. Pest Management Science* **77**: 1581-1593

35. Vorgia E, Lamprousi M, Denecke S, Vogelsang K, Geibel S, Vontas J, **Douris V***. (2021) Functional characterization and transcriptomic profiling of a spheroid-forming midgut cell line from *Helicoverpa zea* (Lepidoptera: Noctuidae) *Insect Biochemistry and Molecular Biology* **128**: 103510

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2020

34. Riga M, Ilias A, Vontas J*, **Douris V***. (2020) Co-expression of a homologous cytochrome P450 reductase is required for in vivo validation of the *Tetranychus urticae* CYP392A16 based abamectin resistance in *Drosophila*. *Insects* **11**: 829

[*co-corresponding authors]

33. McLeman A, Troczka BJ, Homem RA, Duarte A, Zimmer C, Garrood WT, Pym A, Beadle K, Reid RJ, **Douris V**, Vontas J, Emyr Davies TG, ffrench-Constant R, Nauen R, Bass C. (2020) Fly-Tox: a panel of transgenic flies expressing pest and pollinator cytochrome P450s. *Pesticide Biochemistry and Physiology* **169**: 104674

32. **Douris V***, Denecke S, Van Leeuwen T, Nauen R, Bass C, Vontas J* (2020) Using CRISPR/Cas9 genome modification to understand the genetic basis of insecticide resistance: *Drosophila* and beyond. *Pesticide Biochemistry and Physiology* **167**: 104595

[*co-corresponding authors]

31. Samantsidis GR, Panteleri R, Denecke S, Kounadi S, Christou IK, Nauen R, **Douris V***, Vontas J (2020) "What I cannot create, I do not understand": functionally validated synergism of metabolic and target site insecticide resistance. *Proceedings of the Royal Society B – Biological Sciences* **287**(1927): 20200838

[*corresponding author]

30. Lueke B[#], **Douris V**[#], Hopkinson JE[#], Maiwald F, Hertlein G, Papapostolou KM, Bielza P, Tsagkarakou A, Van Leeuwen T, Bass C, Vontas J, Nauen R (2020) Identification and functional characterization of a novel acetyl-CoA carboxylase mutation associated with ketoenol resistance in *Bemisia tabaci. Pesticide Biochemistry and Physiology* **166:** 104583

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29. Alavijeh ES, Khajehali J, Snoeck S, Panteleri R, Ghadamyari M, Jonckheere W, Bajda S, Saalwaechter C, Geibel S, **Douris V**, Vontas J, Van Leeuwen T, Dermauw W (2020). Molecular and genetic analysis of resistance to METI-I acaricides in Iranian populations of the citrus red mite *Panonychus citri*. *Pesticide Biochemistry and Physiology* **164**: 73-84

28. Denecke S, Ioannidis P, Buer B, Ilias A, **Douris V**, Topalis P, Nauen R, Geibel S, Vontas J. (2020) A transcriptomic and proteomic atlas of expression in the *Nezara viridula* (Heteroptera: Pentatomidae) midgut suggests the compartmentalization of xenobiotic metabolism and nutrient digestion. *BMC Genomics* **21**:129.

27. Ingham VA, Anthousi A, **Douris V**, Harding NJ, Lycett G, Morris M, Vontas J, Ranson H. (2020) A sensory appendage protein protects malaria vectors from pyrethroids. *Nature* **577**, 376–380

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26. Kefi M, Balabanidou V, **Douris V**, Lycett G, Feyereisen R, Vontas J. (2019) Two functionally distinct CYP4G genes of *Anopheles gambiae* contribute to cuticular hydrocarbon biosynthesis. *Insect Biochemistry and Molecular Biology* **110**: 52-59

25. Tsakireli D, Riga M, Kounadi S, **Douris V*** and Vontas J*. (2019) Functional characterization of CYP6A51, a cytochrome P450 associated with pyrethroid resistance in the Mediterranean fruit fly *Ceratitis capitata*. *Pesticide Biochemistry and Physiology* **157**: 196-203

[*co-corresponding authors]

24. Samantsidis GR, O'Reilly AO, **Douris V*,** Vontas J*. (2019) Functional validation of target-site resistance mutations against sodium channel blocker insecticides (SCBIs) via molecular modeling and genome engineering in *Drosophila. Insect Biochemistry and Molecular Biology* **104**: 73-81

[*co-corresponding authors]

23. Denecke S, Swevers L, **Douris V**, Vontas J. (2018) How do oral insecticidal compounds cross the insect midgut epithelium? *Insect Biochemisrty and Molecular Biology* **103**: 22-35

2017

22. Grigoraki L, Puggioli A, Mavridis K, **Douris V**, Montanari M, Bellini R, Vontas J. (2017) Striking diflubenzuron resistance in *Culex pipiens*, the prime vector of West Nile Virus. *Scientific Reports* **7**: 11699.

21. **Douris V***, Papapostolou KM, Ilias A, Roditakis E, Kounadi S, Riga M, Nauen R, Vontas J*. (2017) Investigation of the contribution of RyR target-site mutations in diamide resistance by CRISPR/Cas9 genome modification in *Drosophila*. *Insect Biochemistry and Molecular Biology* **87**: 127-135.
[*co-corresponding authors]

20. Bajda S, Dermauw W, Panteleri R, Sugimoto N, **Douris V**, Vontas J, Osakabe M, Van Leeuwen T. (2017) A mutation in the PSST homologue of complex I (NADH:ubiquinone oxidoreductase) from *Tetranychus urticae* is associated with resistance to METI acaricides. *Insect Biochemistry and Molecular Biology*, **80**: 79–90.

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19. **Douris V**[#], Steinbach D[#], Panteleri R, Livadaras I, Pickett JA, Van Leeuwen T, Nauen R, Vontas J (2016) Resistance mutation conserved between insects and mites unravels the benzoylurea insecticide mode of action on chitin biosynthesis. *Proceedings of the National Academy of Sciences USA* **113**(51): 14692–14697.
[#equal contribution]

18. Riga M, Myridakis A, Tsakireli D, Morou E, Stephanou EG, Nauen R, Van Leeuwen T, **Douris V**, Vontas J. (2015) Functional characterization of the *Tetranychus urticae* CYP392A11, a cytochrome P450 that hydroxylates the METI acaricides cyenopyrafen and fenpyroximate. *Insect Biochemistry and Molecular Biology* **65**: 91-99.

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17. Niarchos A, Zouridakis M, **Douris V**, Georgostathi A, Kalamida D, Sotiriadis A, Poulas K, Iatrou K, Tzartos S. (2013) Expression of a highly antigenic and native-like folded extracellular domain of the human α1 subunit of muscle nicotinic acetylcholine receptor, suitable for use in antigen specific therapies for Myasthenia Gravis. *PLoS One* **8(12)**: e84791.

16. Kontarakis Z, Pavlopoulos A, Kiupakis A, Konstantinidis N, **Douris V** and Averof M. (2011) A versatile strategy for gene trapping and trap conversion in emerging model organisms. *Development* **138**: 2625-2630

2010

15. Lavdas A, Efrose RC, **Douris V**, Gaitanou M, Papastefanaki F, Swevers L, Thomaidou D, Iatrou K and Matsas R. (2010) Soluble forms of the cell adhesion molecule L1 produced by insect and baculovirus-transduced mammalian cells enhance Schwann cell motility. *Journal of Neurochemistry* **115(5)**:1137-1149

14. Biessmann H, Andronopoulou E, Biessmann MR, **Douris V**, Dimitratos SD, Eliopoulos E, Guerin PM, Iatrou K, Justice RW, Kröber T, Marinotti O, Tsitoura P, Woods DF, Walter MF (2010) The *Anopheles gambiae* Odorant Binding Protein 1 (AgamOBP1) mediates indole recognition in the antennae of female mosquitoes. *PLoS One* **5(3)**: e9471

13. **Douris V**[#], Telford M[#] and Averof M (2010) Evidence for multiple independent origins of *trans*-splicing in Metazoa. *Molecular Biology and Evolution* **27(3)**: 684-693.
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12. Giokas S, Thomaz D, **Douris V**, Lecanidou R and Rodakis GC. (2010) 5000 years of molecular evolution in a population of the land snail *Albinaria caerulea* transported by humans. *Journal of Molluscan Studies* **76(1)**: 49-56.

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11. Labropoulou V, **Douris V**, Stefanou D, Magrioti C, Swevers L and Iatrou K (2008) Endoparasitoid wasp bracovirus-mediated inhibition of hemolin function and lepidopteran host immunosuppression *Cellular Microbiology* **10(10)**: 2118–2128.

10. **Douris V**, Giokas S, Thomaz D, Lecanidou R and Rodakis GC (2007) Inference of the evolutionary patterns of the land snail *Albinaria* in the Aegean archipelago: is vicariance enough? *Molecular Phylogenetics and Evolution* **44(3)**: 1224-1236.

9. Andronopoulou E, Labropoulou V, **Douris V**, Woods DF, Biessmann H and Iatrou K (2006) Specific interactions amongst odorant binding proteins of the African malaria vector *Anopheles gambiae. Insect Molecular Biology* **15(6)**: 797-811.

8. **Douris V**, Swevers L, Labropoulou V, Andronopoulou E, Georgoussi Z and Iatrou K (2006) Stably transformed insect cell lines: tools for expression of secreted and membrane-anchored proteins and high throughput screening platforms for drug and insecticide discovery. *Advances in Virus Research* **68**: 113-156.

7. Espagne E[#], **Douris V**[#], Lalmanach G, Provost B, Cattolico L, Lesobre J, Kurata S, Iatrou K, Drezen JM and Huguet E (2005) A virus essential for insect host-parasite interactions encodes cystatins. *Journal of Virology* **79(15)**: 9765-9776.
[[#]equal contribution]

6. Lapointe R, Wilson R, Vilaplana L, O'Reilly DR, Falabella P, **Douris V**, Bernier-Cardou M, Pennacchio F, Iatrou K, Malva C and Olszewski JA (2005) Expression of a *Toxoneuron nigriceps* polydnavirus encoded protein causes apoptosis-like programmed cell death in lepidopteran insect cells. *Journal of General Virology* **86**: 963-971.

5. Swevers L, Farrell PJ, Kravariti L, Xenou-Kokoletsi M, Sdralia N, Lioupis A, Morou E, Balatsos NAA, **Douris V**, Georgoussi Z, Mazomenos B and Iatrou K (2003) Transformed insect cells as high throughput screening tools for the discovery of new bioactive compounds. *Communications in Agricultural and Applied Biological Sciences* **68** (2): 333-341.

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4. **Douris V**, Cameron RAD, Rodakis GC and Lecanidou R (1998) Mitochondrial phylogeography of land snail *Albinaria* in Crete: long-term geologic and short-term vicariance effects. *Evolution* **52(1)**:116-125.

3. **Douris V**, Giokas S, Lecanidou R, Mylonas M and Rodakis GC (1998) Phylogenetic analysis of mitochondrial DNA and morphological characters suggest a need for taxonomic re-evaluation within the Alopiinae (Gastropoda: Clausiliidae). *Journal of Molluscan Studies* **64**: 81-72.

2. **Douris V**, Rodakis GC, Giokas S, Mylonas M and Lecanidou R (1995) Mitochondrial DNA and morphological differentiation of *Albinaria* populations (Gastropoda: Clausiliidae). *Journal of Molluscan Studies* **61**: 65-78.

1. Lecanidou R, **Douris V** and Rodakis GC (1994) Novel features of metazoan mtDNA revealed from sequence analysis of three mitochondrial DNA segments of the land snail *Albinaria turrita* (Gastropoda: Clausiliidae). *Journal of Molecular Evolution* **38**: 369-382.