

Curriculum Vitae **Kriton Kalantidis**

Address: Plant Molecular Biology
Institute of Molecular Biology and Biotechnology
Vassilika Vouton, 71110
Heraklion
Crete, Greece
30 2810 394435
kriton@imbb.forth.gr

Born in: Athens, Greece

Education:

1991-1995: Post-graduate studies culminating in a Ph.D. at the University of Nottingham UK. 'Studies of mitochondrial gene expression in fertile and male sterile *Arabidopsis thaliana*' at the laboratory of Plant Molecular Biology of the department of Life Sciences under the supervision of BJ Mulligan and ZA Wilson.

1986-1991: Ten semesters of undergraduate studies in 'Plant Biotechnology' at the Agricultural University of Prague, Czechoslovakia 1991: Graduation with a general grade (A) with distinction' (Top 5%)

Post-doctoral service and experience

2002-2005 Post-doctoral fellow at IMBB, Heraklion, laboratory of M. Tabler.

1999-2002 Post-doctoral fellow at IMBB, Heraklion, laboratory of M. Tsagris

1997-1999 Post doctoral fellow at the Agricultural School, University of Thessaloniki, laboratory of A. Tsaftaris.

1995-1997 Mandatory service with the greek army

Honors and Fellowships:

1992-1995, Fellowship of the 'Greek Fellowship Foundation' (IKY) for PhD studies in Plant Molecular Biology

1991. Highest student award of the Agricultural University of Prague (Rektorska Cena) for 'Excellent grades and active scientific and special activity during studies at the University'.

Research Focus:

RNA-mediated phenomena
Plant Development
Viroid biology

Academic Appointments:

Instructor, 2005, Dept. of Biology, University of Crete, Heraklion, Greece

Principal Investigator, PMB, 2005, IMBB, FORTH, Heraklion, Greece

Assistant Professor: 2007, Dept. of Biology, Un. of Crete, Heraklion, Greece

PUBLICATIONS:

From Undergraduate studies

Kalantidis K, Griga M, 1993. Micropropagation of common bean (*Phaseolus vulgaris L.*) by multiple shoot induction. *Plant Soil and Environ.*(Rostl. Vyr.) 38: 115-128.

From Graduate Studies

Mulligan BJ, Wilson Z, Dawson J, Kalantidis K, Vizir I, Briarty G, and Shlumkov L, 1994. The Use of male sterile mutants of *Arabidopsis* to identify genes essential for male gametophyte development. *FNL* 17(5): 12-20. **Invited Review.**

Aarts MGM, Hodge R, Kalantidis K, Florack D, Wilson ZA, Mulligan BJ, Stiekema WJ, Scott R, Pereira A; 1997. The *Arabidopsis* MALE STERILITY 2 protein shares similarity with reductases in elongation/condensation complexes. **The Plant Journal** 12 (3), 615-623.

Kalantidis K, Briarty LG, Wilson Z., 2000. Methods for mutant characterisation; nucleic acid hybridisation procedures, microscopy and *in situ* hybridisation. In: «*Arabidopsis: A Practical Approach*» Wilson AW EDS. **OUP, Oxford.**

Kalantidis K, Wilson Z, Mulligan BJ. 2002. Mitochondrial gene expression in stamens is differentially regulated during male gametogenesis in *Arabidopsis*. **Sex. Pl. Rep. 14: 299-304.**

From Postdoctoral Studies with A. Tsaftaris

Madesis P., Kalantidis K., Nianiou-Obeidat I., Chatzidimitriou K., Panopoulos N., Tsaftaris A. 2007. Expression of the yeast cpd1 gene in tobacco confers resistance to the fungal toxin cercosporin. *Biomol. Engineering*, 24:245-251.

Nianiou I, Kalantidis K, Madesis P, Georgopoulou U, Mavromara P, Tsaftaris A. 2008. Expression of an HCV core antigen coding gene in tobacco (*N. tabacum* L.). **Prep Biochem Biotechnol;38(4):411-21.**

From Postdoctoral Studies with Dr. M. Tsagris

Kalantidis K, Tsaftaris A, Manousopoulos J, Tzortzakaki S, Tsagris M, 2000; Generation of 13K-gene sugar beet transformants and evaluation of their resistance to BNYVV infection. *Phytosphere '99. Highlights in European Plant Biotechnology Research and Technology Transfer*. Eds. Gert E. de Vries and Karin Metzloff. *Developments in Plant Genetics and Breeding*, 6. **Elsevier Science.**

Kalantidis K, Psaradakis S, Tabler M, Tsagris M. 2002. The occurrence of CMV-specific short RNAs in transgenic tobacco expressing virus-derived double-stranded RNA is indicative of resistance to the virus. **MPMI. 15 (8): 826-833.**

Missiou* A, Kalantidis K, Boutla A, Tabler M, Tsagris M. 2004.** Expression of double-stranded RNA in potato confers complete and broad viral resistance to potato virus Y (PVY) that is unaffected by infections with potato virus X (PVX). **Molecular Breeding . 14: 185-197.**

Kalantidis K#, Denti M., Tzortzakaki S., Marinou E., Tabler M., and Tsagris M#. 2007. *Viroid binding protein 1* is necessary for the infection of potato spindle tuber viroid (PSTVd). **JVI, 81:12872-12880.**

Tsagris EM, Martínez de Alba AE, Gozmanova M, Kalantidis K. 2008 Viroids. *Cell Microbiol.* 2008 Nov;10(11):2168-79. Epub 2008 Sep 1. Review.

* Equally contributing authors

Corresponding author

From Postdoctoral studies with Dr. M. Tabler

Boutla A, Kalantidis K, Tavernarakis N, Tsagris M, Tabler M. 2002. Induction of RNA interference in *Caenorhabditis elegans* by RNAs derived from plants exhibiting posttranscriptional gene silencing. *N.A.R.* 30 (7): 1688-1694

Tabler, M, Boutla A, Kalantidis K, and Tsagris M, 2003. Short interfering and micro RNAs: tiny but mighty; in: 'Non-coding RNAs' (eds. Barciszewski, J. and Erdmann V.) pp.117-128; Landes Bioscience, Georgetown, Texas USA. **Invited Review Chapter.**

Kosciolek BA, Kalantidis K, Tabler M, Rowley PT. 2003. Inhibition of telomerase activity in human cancer cells by RNA interference. *Mol Cancer Ther.* 2(3):209-16.

Kalantidis K. 2004. Grafting the way to systemic silencing. Journal Club. *PLOS Biol.* 2 (8): 1059-1061. **Invited Minireview.**

Kalantidis K. #, Tsagris M, Tabler M. 2005. Spontaneous short range silencing of a GFP transgene in *Nicotiana benthamiana* is possibly mediated by small quantities of siRNA that do not trigger systemic silencing. *Plant J.* 45(6):1006-1016.

Corresponding author

As a PI at IMBB, FORTH

Kościańska E, Kalantidis K[#], Sadowski J. and Tabler M. 2005. Analysis of RNA silencing in agro-infiltrated leaves of *Nicotiana benthamiana* and *Nicotiana tabacum*. *PMB*. 59:647-661.

Tournier B[#], and Tabler M., Kalantidis K[#], 2006. Phloem flow strongly influences systemic spread of silencing in GFP *Nicotinana benthamiana* plants. *Plant J*. 47:383-394.

Megraw M, , Baev V., Rusinov V, Jensen S., Kalantidis K[#], Hatzigeorgiou AG[#]. 2006 MicroRNA Promoter Element Discovery in Arabidopsis. *RNA*, 12(9): 1612-19.

Koscianska E., Baev V., Skreka K., Oikonomaki K., Rusinov V., Tabler M., and Kalantidis K[#]. 2007. Prediction and preliminary validation of oncogene regulation by miRNAs. *BMC Molecular Biology*, 18 (1):79.

Kalantidis K[#], Schumacher TH, Alexiadis T, Helm MJ. 2008. RNA silencing movement in plants. *Biology of the Cell*: 100 (1): 13-26. (Invited Review).

Oulas A, Boutla A., Gkirtzou K Reczko M., Kalantidis K., and Poirazi P. 2009. Prediction of novel microRNA genes in cancer associated genomic regions – a combined computational and experimental approach. *NAR* , 37(10):3276-87.

Kataya A RA., Suliman MNS, Kalantidis K, Livieratos I C. 2009. *Cucurbit yellow stunting disorder virus* p25 is a suppressor of post-transcriptional gene silencing. *Virus Research* 145 (1), pp. 48-53.

Kotakis C, Vrettos N, Kotsis D, Tsagris M, Kotsabasis K, Kalantidis K[#]. 2010. Light intensity affects RNA silencing in transgenic *Nicotiana benthamiana* plants. *BMC Plant Biology* 10:220. **Highly accessed.**

- Addendum: Kotakis C, Vrettos N, Daskalaki M., Kotzabasis K. and Kalantidis K[#]. 2011. DCL3 and DCL4 are likely involved in the light intensity - RNA silencing cross talk in *Nicotiana benthamiana*. *Plant Signal. Behav.* 6(8): 1180-1182.

Dalakouras A., Tzanopoulou M., Tsagris M. and Wassenegger M. Kalantidis K[#]., 2011. Hairpin transcription does not necessarily lead to efficient triggering of the RNAi pathway. *Transgenic Research* 20:293–304.

Helm JM, Dadami E, Kalantidis K[#]., 2011. Local RNA Silencing Mediated by Agroinfiltration. In :“RNAi and Plant Gene Function Analysis”. In Series: Methods in

Molecular Biology, Vol. 744. Kodama, Hiroaki; Komamine, Atsushi (Eds.). ISBN: 978-1-61779-122-2. Humana Press.

Oulas A, Karathanasis N., Louloupis A, Iliopoulos I, Kalantidis K[#] and Poirazi P. 2012
A new microRNA target prediction tool identifies a novel interaction of a putative miRNA with CCND2. *RNA Biol. (In Press)*.

Dadami E., Boutla A., Vrettos N., Tzortzakaki S., Karakasilioti I., Kalantidis K[#].
DICER_LIKE 4 but not DICER_LIKE 2 may affect positively Potato Spindle Tuber viroid accumulation in *N. benthamiana*. *Mol. Plant* 6:232-234

Chaturvedi S., Kalantidis K., Rao ALN 2013. A Bromodomain Containing Host Protein Mediates the Nuclear Import of a Satellite RNA of Cucumber Mosaic Virus. *JVI*, In Press. *Featured article*

- **Helm JM, Mermiga R., Schumacher TH, Vamvaka E., Vlatakis I., Kalantidis K[#].**
The Plant Homologue of Enhanced RNAi 1 (ERI-1) is Involved in Chloroplast Development. (In Preparation).

[#] Corresponding author

Total citations (without self citations) > 700 (Scopus Nov. 2013)

RESEARCH SUPPORT

Current Support

2005-2007. Partner in FOSRAK consortium, FP6 (STREP).

2005-2008. Partner in FAMED, FP6 (EST network).

2006-2008. National PENED fund, Coordinator.

2008-2009. IKYDA Greek-German research cooperation program.

2010-2011. Greek-French bilateral research program.

2010-2014. Two National research grants in the "Cooperations" call. In one as a coordinator in the second as a partner. Two National "Heraklitos" grants, in both as a Coordinator. One "Excellence" (Aristeia II) grant

Over 700.000 euro in research funding (2006-2013)

ACTIVITIES AND SERVICE:

Professional Societies

European Plant Science Organisation (EPSO)
Federation of European Societies of Plant Biology (FESPB)
Greek Phytopathological society

Journal Reviewer

- PNAS
- Trends in Pl. Sc.
- JBC
- Molecular Plant Pathology
- NAR
- New Phytologist
- Planta
- Plant Journal
- Plant Science
- Plant Cell Reports
- FEBS letters
- Transgenic Research
- Biotechniques
- BMC Molecular Biolog

Journal Editor

Frontiers in Plant Science
Frontiers in Virology

TEACHING / TRAINING / MENTORING

Teaching

Undergraduate Courses

Dept. of Biology, Univ. of Crete (UOC): Undergraduate courses,
“Plant Developmental Biology”, tutor and lecturer (39h/Y)

“Advanced technologies in Molecular Biology” tutor and lecturer (18h/Y)

“Biotechnology II” lecturer (8h/Y)

Post-Graduate Courses.

2007-Present

Dept. of Biology, UOC:

MsC Program “Molecular Biology and Biomedicine”, “Plant Development” and “RNA silencing lectures” (12h/Y)

MsC Program, “Plant Mol. Biol. and Biotech.”, “Transgenic plants and GMO Risk assessment” and “RNA silencing Lectures”. (20h/Y)

2002-2009

Medit. Agron. Inst. at Chania (MAICH):

MsC program “Horticulture”, course “Introduction to Arabidopsis Genetics” (20h/Y).

MsC program “Natural Products and Biotechnolog”y, course “RNA interference: Concepts and technologies” (12h/Y).

Students Trained

Supervised five completed Masters projects.

Supervised two completed PhD projects (Vrettos N. 2004-2009, Dadami 2007-2012)

Co-Supervised four completed PhD projects (Schumacher H. 2005-2009, Helm J. 2006-2010, Kotakis Ch. 2006-2011, Karathanasis N. 2009-2013, in collaboration with Drs. W. Nellen, M.T. Hauser, K. Kotzabasis and Y. Poirazi respectively)

Current PhD Students

2010 - Vlatakis E.

2010 - Mermiga R.

2011-Kryovrysanaki N

Other academic services

2010-present. Vice-chair of the “Plant Molecular Biology and Biotechnology” post-graduate program.

2010-present. Member of the University committee for technical works.

2008-Present. Member of the departmental committee for postgraduate studies

2006-present. Member of seven PhD qualifying committees at the University of Crete
2010. Evaluator of national research grant applications (“Heraklitos” grants and IKY postdoctoral fellowships).
2010. Evaluator for an NSF grant application
2007. External examiner (opponent) for the PhD thesis defense of A. Hinas, SLU University, Uppsala, Sweden
2005-2006. External evaluator for grants of scientific collaboration between Israel and USA (BARD).
2003. Evaluator of project application for bilateral scientific Greek-British collaboration

Postdoctoral Fellows (Years, Current Position)

2005-2006 Koscianska E., at present research fellow at University of Poznan, Poland
2007-2009 Boutla A., At present Research fellow at “Benakio phytopath. Inst. Athens
2011-2012 Oulas A., At present, Researcher at the Hellenic Marine Institute
2012- Katsarou N., Verret F.

Graduate Program Memberships

2005- Present. Molecular Biology and Biomedicine, Dept. of Biology, University of Crete
2005- Present. Plant Molecular Biology and Biotechnology, University of Crete
2002-2009. Horticulture and Biotechnology, MAICH, Chania, Crete

Selected Research Presentations:

Kalantidis K, Vizir I, Wilson Z, Mulligan BJ; 1993. Gamma irradiation mutagenesis of seeds and pollen in *Arabidopsis*. *J Ex. Bot.* 44 Supplement.

Kalantidis K, Wilson Z, Mulligan BJ; 1994. Mitochondrial gene expression in male sterile mutants of *Arabidopsis thaliana*. *J Ex. Bot.* 45 Supplement.

Kalantidis K, Dawson J, Vizir I, Thorlby G, Wilson Z, Briarty LG, Mulligan BJ; 1994. Mapping and characterisation of male sterile mutations in *Arabidopsis*. Abstracts, 4th Int. Cong. of P. M. B. ISPMB, 19-24 June, Amsterdam, The Netherlands.

Kalantidis K, Tsaftaris A., Manousopoulos J., Tzortzakaki S, Tsagris M. 1999; Generation of 13K-gene sugar beet transformants and evaluation of their resistance to BNYVV infection. Second European Conference on Plant Biotechnology, 7-9 June, Rome, Italy.

Kalantidis K., Providaki M., Tabler M, Tsagris M., Tsaftaris A. 2000. Generation of Sugar Beet Transformants with Gene constructs that may affect their Resistance to BNYVV Infection. Plant Virus Invasion and Host Defense. EMBO Workshop, 28 May-1 June, Kolymbari, Crete, Greece.

Kalantidis K., Kotsis D., Tabler M., Tsagris M. 2000. The use of dsRNA technology in the production of virus resistant plants.. "The World Conference of Biotechnology". 3-8 September, Berlin, Germany.

Kalantidis K, Tabler M, Tsagris M. 2002. The occurrence of CMV-specific short RNAs in transgenic tobacco expressing virus-derived double stranded RNA is indicative of resistance to the virus. 10th. IAPTC&B Congress, 'Plant Biotechn 2002 and Beyond'. June 23-28, Orlando, FL, USA.

Kalantidis K, Psaradakis S, Kyriakopoulou K, Tabler M, Tsagris M. 2002. Analysis of CMV-resistant transgenic tobacco plants. 10 th. FESPP Conference, 1-7 September, Heraklio, Greece.

Kalantidis K., Denti M., Providaki M., Marinou E., Gozmanova M., Tabler M. Tsagris M. 2003. Towards functional analysis of Virp1, a gene encoding for a viroid binding protein. ISPMB. 13-28 June. Barcelona.

Kalantidis K., Tsagris M and Tabler M. 2004. Spontaneous short range silencing of a GFP transgene in *Nicotiana benthamiana* is mediated by small quantities of siRNA that do not trigger systemic silencing. Plant Molecular Biology, Gordon Conference, 18-23 July, Holderness School, NH, USA.

Kalantidis K., Denti MA, Marinou E, Tzortzakaki S, Tabler M and Tsagris M. 2006. Virp1 is a necessary host factor for the infectivity of a viroid, in *N. benthamiana* and *N. tabacum* plants. Plant Molecular Biology, Gordon Conference, 16-21 July, Holderness School, NH, USA.

Schumacher H., Dumitru A., Eckhardt S., Kalantidis K. 2007. Towards a functional analysis of a negative regulator of RNAi. 24th Symposium in Plant Biology, Gene Silencing: The biology of small RNAs and the epigenome., 17-20, January, Riverside, CA, USA.

Vrettos N, Tabler M, Delidakis C and Kalantidis K. MicroRNA expression profiles at the Drosophilagerm line. 2008. FEBS JOURNAL Volume: 275 Pages: 155-155 Supplement: Suppl. 1 JUN 2008.

Kalantidis K, Helm J, Vrettos N, Kotakis C, Schumacher H and 2009 Looking for endogenous and exogenous factors affecting stability of transgene expression in plants: Genes and Environment . "RNA at the centre of regulation" 5-8 April. Roscoff, France.