Munir Mawassi **October/2010**

PART I: CURRICULUM VITAE

Personal

July/12/1965	Born in Baqa El-Gharbiya, Israel
Citizenship	Israeli
1990-1983	High-School education in The Agricultural High School Yamma.
Marital Status:	Married + 2

University Education and Additional Training

1984-1987	B. Sc. in agriculture at the Hebrew University of Jerusalem, Faculty of Agriculture, Rehovot, Israel. In plant protection, specialization in plant diseases.
1988-1990	M. Sc. in agriculture at the department of horticulture at the Hebrew University of Jerusalem, Faculty of Agriculture, Rehovot, Israel. In plant protection, Virology. Title of thesis: "Characterization of Citrus Tristeza Virus Coat Protein and Analysis of its Genome by *In Vitro* Translation system". Supervision by Professor Moshe Bar-Joseph and Professor Yossi Raiov, at the S. Tolkowsky Laboratory, Department of Virology, The Volcani Center, Bet-Dagan, Israel.
1991-1996	Ph. D. at the department of plant protection, The Hebrew University of Jerusalem, Faculty of Agriculture, Rehovot, Israel. In Plant protection, Virology Title of thesis: "Molecular Characterization of the VT Strain of Citrus Tristeza Virus". Supervision by Professor Moshe Bar-Joseph, at the S. Tolkowsky Laboratory, Department of Virology, The Volcani Center, Bet-Dagan, Israel.

1996-2000 Postdoctoral position at the University of Florida, Citrus Research and Education Center, Plant Pathology, Lake Alfred, Florida, USA with Prof. William O. Dawson.
Research subject: "Genetic studies of defective RNA molecules associated with citrus tristeza virus".

Position Held and Academic Status

Sept/2000-Dec/2006 Research Scientist (Grade B) at the ARO, The Volcani Center, Institute of plant protection.

Jan/2007-present Research Scientist (Grade A) at the ARO, The Volcani Center, Institute of plant protection.

Research Grants

(A) International Competitive Grants

2001 BARD grant. Title: "The rugose wood disease of grapevine, etiology and virus resistance in transgenic vines". Principal Investigator, for 3 years. Budget: Total $100,000/year; Researcher's part $50,000/year.

2005 BARD grant. Title: "Role of RNA silencing suppression in the pathogenicity and host specificity of the *Grapevine Virus A*". Principal investigator, for 3 years. Budget: Total $100,000/year; Researcher's part $50,000/year.

2005 Cornell-BARD grant. Title: "Etiology of the rugose wood disease of grapevine and genetic manipulation of the associated vitiviruses". Principal investigator, for 3 years. Budget: Total $50,000/year; Researcher's part $50,000/year.

2009 Canada-BARD grant. Title: "Development of Virus Induced Gene Silencing Tools for Functional Genomics in Grapevine ". Principal investigator, for 3 years. Budget: Total CAN$300,000/3 years; Researcher's part CAN$150,000/3 years.

2010 BARD grant. Title: "Role of the viral AlkB homologs in RNA repair".

Principal investigator, for 3 years. Budget: Total $270,000/3 years; Researcher's part $135,000/3 years.

(B) National Competitive Grants

2000 Chief scientist of the Ministry of Agriculture grant. Title: "Construction of grapevines resistant to grapevine virus A". Principal investigator (continued Dr. Ron Gafny), for 3 years. Budget: Total $20,000/year; Researcher's part $20,000/year.

2005 Chief scientist of the Ministry of Agriculture grant. Title: "A new approach for controlling of phytoplasmal diseases in grapevine using viral vectors expressing specific antibodies". Principal investigator, for 3 years. Budget: Total $18,600/year; Researcher's part $18,600/year.

2005 The Israel Science Foundation grant. Title: "Involvement of p10 of *Grapevine Virus A* (GVA) in suppression of RNA silencing in the pathogenesis". Principal investigator, for 4 years. Budget: Total $46,000/year; Researcher's part $46,000/year.

2008 Chief scientist of the Ministry of Agriculture grant. Title: "Production of specific antibodies and development of sensitive strategies for diagnosis of phytoplasmal infection in grapevine plants". Principal investigator, for 3 years. Budget: Total $53,000/3 years; Researcher's part $53,000/3 years.

2009 Chief scientist of the Ministry of Agriculture grant. Title: "Reducing viral damages in wine grapes". Principal investigator, for 3 years. Budget: Total $690,000/3 years; Researcher's part $223,000/3 years.

2010 Chief scientist of the Ministry of Agriculture grant. Title: "Development of RNA silencing-mediated resistance for grapevine viruses". Principal investigator, for 3 years. Budget: Total $97,500/3 years; Researcher's part $97,500/3 years.

(C) Other Research Grants

2004 A.R.O. Fund. Title: "Development of a virus-based system for functional

analysis of plant endogenous genes". Principal investigator, for 1 year. Budget: Total $35,000/year; Researcher's part $35,000/year.

2004 The Israeli Wine Industry. Title: "Elimination of Grapevine Viruses from Grapes by Cryopreservation of Shoot Tips and Development of Sensitive and Efficient Methods for Virus Detection". Principal investigator, for 3 year. Budget: Total $5,900/year; Researcher's part $5,900/year.

2004-2007 Fruit Organization. Title: "Development of Sensitive and Efficient Methods for Virus Detection of Grapevine". Principal investigator, for 1 year. Renewed for every year. Budget: Total $5,900/year; Researcher's part $5,900/year.

2008 The Israeli Wine Industry. Title: "Development of grapevine resistant plants based on siRNA". Principal investigator, for 3 year. Budget: Total $10,800/year; Researcher's part $10,800/year.

Munir Mawassi **October/2010**

PART II: LIST OF PUBLICATIONS

Articles in Reviewed Journals

All publications have been classified into four major categories. The letter following each number indicates the appropriate category.

a Publications exclusively within the candidate's research group (including graduate and post-graduate students, technicians, associated scientists, etc.).

b joint publications with other research group(s) in which the candidate plays the major role.

c joint publications with other research groups in which the candidate's contribution is of comparable weight to that (those) of the other research groups.

d Joint publications with other research groups in which the candidate's group plays a secondary role.

1.c Wexler, A., **Mawassi, M.**, Lachman, O., Amit, A., Wortzel, A., and Bar-Joseph, M. (1991).
A procedure to amplify cDNA from dsRNA templates using the polymerase chain reaction.
Methods in Molecular and Cellular Biology 2, 273-279.

2.a **Mawassi, M.**, Gafny, R., and Bar-Joseph, M. (1992).
The nucleotide sequence of the coat protein gene of citrus tristeza virus: comparison of biologically diverse isolates collected in Israel.
Virus Genes 7:3, 265-275.

3.c Ashulin, L., **Mawassi, M.**, and Bar-Joseph, M. (1992).
Procedure to amplify cDNA from viroid RNA templates using the polymerase chain reaction.
Methods in Molecular and Cellular Biology 3, 83-89.

4.c Shalitin, D., **Mawassi, M.**, Gafny, R., Leitner, O., Cabilli, S., and Bar-Joseph, M. (1994).
Serological characterization of citrus tristeza virus isolates from Israel.
Annals of Applied Biology 125, 105-113.

5.a **Mawassi, M.**, Gafny, R., Gagliardi, D., and Bar-Joseph, M. (1995).
Population of citrus tristeza virus contain smaller-than-full-length particles which encapsidate sub-genomic RNA molecules.
Journal of General Virology 76, 651-659.

6.a **Mawassi, M.**, Karasev, A.V., Mietkiewska, E., Gafny, R., Lee, R. E., Dawson, W.O., and Bar-Joseph, M. (1995).
Defective RNA molecules associated with citrus tristeza virus.
Virology 208, 383-387.

7.a **Mawassi, M.**, Mietkiewska, E., Hilf, M.E., Ashoulin, L., Karasev, A.V., Gafny, R., Lee, R. E., Garnsey, S.M., Dawson, W.O., and Bar-Joseph, M. (1995).
Multiple species of defective RNAs in plants infected with citrus tristeza virus.
Virology 214, 264-268.

8.a **Mawassi, M.**, Mietkiewska, E., Hilf, M.E., Ashoulin, L., Gafny, R., Karasev, A.V., Garnsey, S.M., Dawson, W.O., Bar-Joseph, M., and Lee, R. E. (1995).
Multiple species of defective RNAs in plants infected with Florida strains of citrus tristeza virus.
Proc. Fla. State Hort. Soc. 108, 109-112.

9.c Ben-Shaul, A., Guang, Y., Mogilner, N., Hadas, R., **Mawassi, M.**, Gafny, R., and Bar-Joseph, M. (1995).
Genomic diversity among populations of two citrus viroids from different graft transmissible dwarfing agents in Israel.
Phytopathology 85, 359-364.

10.a **Mawassi, M.**, Mietkiewska, E., Gofman, R., Yang, G., and Bar-Joseph, M. (1996).
Unusual sequence relationships between two isolates of citrus tristeza virus.
Journal of General Virology 77, 2359-2364.

11.c Febres, V.J., Ashoulin, L., **Mawassi, M.**, Frank, A., Bar-Joseph, M., Manjunath, K.L., Lee, R.F., and Niblett, C.L.(1996).
The p27 protein is present at one end of the citrus tristeza virus particles.
Phytopathology 86,1331-1335.

12.c Gafny, R., Wexler, A., **Mawassi, M.**, Israeli, Y., and Bar-Joseph, M. (1996).
Natural infection of banana by a satellite-containing strain of cucumber mosaic virus: nucleotide sequence of the coat protein gene and satellite RNA.
Phytoparasitica 24, 49-56.

13.c Yang, G., **Mawassi, M.**, Gofman, R., Gafny, R., and Bar-Joseph, M. (1997).
Involvement of a subgenomic mRNA in the generation of a variable population of defective citrus tristeza virus molecules.
Journal of Virology 71, 9800-9802.

14.c Yang, G., **Mawassi, M.**, Ashoulin, L., Gafny, R., Gaba, V., Gal-On, A., and Bar-Joseph, M. (1997).
A cDNA clone from a defective RNA of citrus tristeza virus is infective in the presence of the helper virus.
Journal of General Virology 78, 176-1769.

15.c Bar-Joseph, M., Filatov, V., Gofman, R., Yang, G., Hadjinicolis, A., **Mawassi, M.**, Gootwine, E., Weisman, Y., and Malkinson,M. (1997).
Booster immunization with a partially purified citrus tristeza virus (CTV) preparation after priming with recombinant CTV coat protein enhances the binding capacity of capture antibodies by ELISA.
Journal of Virological Methods 67, 19-22.

16.c Satyanarayana, T., Gowda, S., Boyko, V.P., Albiach-Marti, M.R., **Mawassi, M.**, Navas-Castillo, J., Karasev, A.V., Dolja, V., Hilf, M.E., Lewandowski, D.J., Moreno, P., Bar-Joseph, M., Garnsey, S.M., and Dawson, W.O. (1999).
An engineered closterovirus RNA replicon and analysis of heterologous terminal sequences for replication.
Proceedings of National Academic for Science USA. 96, 7433-7438.

17.d Ayllon, M.A., Lopez, C., Navas-Castillo, J., **Mawassi, M.**, Dawson, W.O., Guerri, J., Flores, R., and Moreno, P. (1999).
New defective RNAs from citrus tristeza virus: evidence for a replicase-driven template switching mechanism in their generation.
Journal of General Virology 80, 817-821.

18.c Yang, G., Che, X., Gofman, R., Ben-Shalom, Y., Piestun, D., Gafny, R., **Mawassi, M.**, and Bar-Joseph, M. (1999).
D-RNA molecules associated with subisolates of the VT strain of citrus tristeza virus which induce different seedling-yellows reactions.
Virus Genes 19, 5-13.

19.c Gowda, S., Satyanarayana, T., Davis, C.L., Navas-Castillo, J., Albiach-Marti, M.R., **Mawassi, M.**, Valkov, N., Bar-Joseph, M., Moreno, P., and Dawson, W.O. (2000).
The p20 gene product of citrus tristeza virus accumulates in the amorphous inclusion bodies.
Virology, 269, 462-470.

20.c Albiach-Marti, M.R., **Mawassi, M.**, Gowda, S., Satyanarayana, T., Hilf, M.E., Shanker, S., Almira, E.C., Vives, M.C., Lopez, C., Guerri, J., Flores, R., Moreno, P., Garnsey, S., and Dawson, W.O. (2000).
Sequences of citrus tristeza virus separated in time and space are essentially identical.
Journal of Virology 74, 6856-6865.

21.a **Mawassi, M.**, Satyanarayana, T., Gowda, S., Albiach-Marti, M.R., Robertson, C., and Dawson, W.O. (2000).
Replication of heterologous combinations of helper and defective RNA of citrus tristeza virus.
Virology 267, 360-369.

22.a **Mawassi, M.**, Satyanarayana, T., Albiach-Marti, M.R., Gowda, S., Ayllon, M.A., Robertson, C., and Dawson, W.O. (2000).
The Fitness of *Citrus Tristeza Virus* Defective RNAs is Affected by the Lengths of their 5'- and 3'-Termini and by the Coding Capacity.
Virology 275, 42-56.

23.c Satyanarayana, T., Gowda, S., **Mawassi, M.**, Albiach-Marti, M.R., Ayllon, M.A., Robertson, C., Garnsey, S.M., and Dawson, W.O. (2000).
Closterovirus encoded HSP70 homolog and p61 in addition to both coat proteins function in virion assembly.
Virology 278, 253-265.

24.c Satyanarayana, T., Bar-Joseph, M., **Mawassi, M.**, Albiach-Marti, M.R., Ayllon, M.A., Gowda, S., Hilf, M.E., Moreno, P., Garnsey, S.M., and Dawson, W.O. (2001). Amplification of citrus tristeza virus from a cDNA clone and infection of citrus trees. *Virology* 280, 87-96.

25.c Gowda, S., Satyanarayana, T., Ayllon, M.A., Albiach-Marti, M.R., **Mawassi, M.**, Rabindran, S., Garnsey, S.M., and Dawson, W.O. (2001).
Characterization of the cis- acting elements controlling subgenomic mRNAs of Citrus tristeza virus: production of positive- and negative-stranded 3'-terminal and positive-stranded 5'-terminal RNAs.
Virology, 286, 134-151.

26.c Che, X., Piestun, D., **Mawassi, M.**, Yang, G., Satyanarayana, T., Gowda, S., Dawson, W.O., and Bar-Joseph, M. (2001).
5'-Coterminal subgenomic RNAs in citrus tristeza virus-infected cells.
Virology 283, 374-381.

27.a Galiakparov, N.**, Goszczynski, D. E., Che, X., Batuman, O., Bar-Joseph, M., and **Mawassi , M.** (2003).
Two classes of subgenomic RNA of *Grapevine virus A* produced by internal controller elements.
Virology **312**, 434-448.

28.a Wang, Q.**, **Mawassi, M.,** Li, P., Gafny, R., Sela, I., and Tanne, E. (2003)
Elimination of *Grapevine virus A* (GVA) by cryopreservation of *in vitro*-grown shoot tips from *Vitis vinifera* L.
Plant Science **165**, 321-327.

29.d Ayllon, M.A., Gowda, S., Satyanarayana, T., Karasev, V.A., Adkins, S., **Mawassi, M.**, Guerri, J., Moreno, P., and Dawson, W.O. (2003).
Effect of modification of the transcription initiation site context on citrus tristeza virus subgenomic RNA synthesis.
Journal of Virology **77**, 9232-9243.

30.a Galiakparov, N.**, Tanne, E., **Mawassi , M.,** Gafny, R., and Sela, I. (2003).
ORF 5 of *Grapevine virus A* encodes a nucleic acid-binding protein and affects pathogenesis.
Virus Genes **27**, 257-262.

31.a Wang, Q.**, Li, P., Batuman, O., Gafny, R., and **Mawassi , M.** (2003).
Effect of benzyladenine on recovery of cryopreserved shoot tips of grapevine and citrus cultured *in vitro.*
Cryo-Letters **24**, 293-302.

32.a Wang, Q.**, **Mawassi, M.**, Sahar, N., Li, P., Violeta, C., Gafny, R., Sela, I., Tanne, E., Perl, A. (2003).
Cryopreservation of grapevine (*Vitis* spp.) embrygenic cell suspensions by encapsulation-vitrification.
Plant Cell. Tissue and Organ Culture 4550, 1-9.

33.c Albiach, M.R., Grosser, J.W., Siddarame, G., **Mawassi, M.**, Satyanarayana, T.,

Garnsey, S.M., and Dawson, W.O. (2004).
Citrus tristeza virus replicates and forms infectious virions in protoplasts of resistant citrus relatives.
Molecular Breeding **14**, 117-128.

34.c Cohen, O., Batuman O., Moskowits, Y., Rozov, A., Gootwine, E., **Mawassi, M.**, and Bar-Joseph, M. (2005).
Goat Horns: platforms for viroids transmission to fruit trees?
Phytoparasitica **33**, 141-148.

35.b Wang, Q.**, Li, P., Hanania, U., Sahar, N., **Mawassi, M.**, Gafny, R., Sela, I., Tanne, E., Perl, A. (2005).
Improvement of *Agrobacterium*-mediated transformation efficiency and transgenic plant regeneration of *Vitis vinifera* L. by optimizing selection regimes and utilizing cryopreserved cell suspensions.
Plant Science **168**, 565-571.

36.d Gera, A., **Mawassi, M**., Zeidan, M., Spiegel, S., Bar-Joseph, M. (2005).
An isolate of 'Candidatus Phytoplasma australiense' group associated with Nivun-Haamir-Die Back disease of papaya in Israel.
New Disease Reports, 11.

37.a Haviv, S.**, Galiakparov, N., Goszczynski, D., Batuman, O., M., Czosnek, H., **Mawassi, M**. (2006).
Engineering the genome of *Grapevine Virus A* into a vector for expression of Proteins in herbaceous plants.
Journal of Virological Methods. **132**, 227-231.

38.d Chiba, M., Reed, J.C., Prokhnevsky, A.I., Chapman, E.J., **Mawassi, M**., Koonin, E.V., Carrington, J.C., Dolja, V.V. (2006).
Diverse suppressors of RNA silencing enhance agroinfection by a viral replicon.
Virology **346**, 7-14.

39.c Cohen, O., Batuman O., Stanbekova, G., Sano, T., **Mawassi, M.**, and Bar-Joseph, M. (2006).
Construction of a multiprobe for the simultaneous detection of viroids infecting citrus trees.
Virus Genes 33, 287-292.

40.c Batuman O., **Mawassi, M.**, and Bar-Joseph, M. (2006).
Trensgenes consisting of a dsRNA of an RNAi suppressor plus the 3' UTR provide resistance to *Citrus tristeza virus* sequences in *Nicotiana benthamiana* but not in citrus.
Virus Genes 33, 319-327

41.a Moskovitz, Y.**, Goszczynski, D.E., Bir, L., Fingstein, A., Czosnek, H., **Mawassi, M**. (2008).
Sequencing and assembly of a full-length infectious clone of Grapevine virus B and its infectivity on herbaceous plants.
Archives of Virology 153, 323-328.

42.a Brumin, M., Stukalov, S, Haviv, S., Muruganantham, M., Moskovitz, Y., Batuman, O., Fingstein, A., and **Mawassi, M.** (2009).
Post-transcriptional gene silencing and virus resistance in Nicotiana benthamiana expressing a Grapevine virus A minireplicon.

Transgenic Research **18**, 331-345.

43.a Muruganantham, M., Moskovitz, Y., Haviv, S., Horesh, T., Fenigstein, A., du Preez, J., Stephan, D., Burger, J.T., and **Mawassi, M.** (2009).
Grapevine virus A-mediated gene silencing in Nicotiana benthamiana and Vitis vinifera.
Journal of Virological Methods. **155**, 167-174.

Reviewed Reviews:

1.a Bar-Joseph, M., Yang, G., Gafny, R., and **Mawassi, M.** (1997).
Subgenomic RNAs: the possible building blocks for modular recombination of Closteroviridae.
Seminars in Virology 8, 113-119.

2.a **Mawassi, M.** (2007).
The Vitivirus Grapevine Virus A: A "Small" but Surprising Virus. Guest Editorial Review.
Phytoparasitica 35, 425-428.