

**Name: Vered Naor**

**Date: 22.11.17**

## **CURRICULUM VITAE**

### **1. Personal Details.**

Permanent Home Address: 25 Hofit 27 Katsrin 12900

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### **2. Higher Education**

#### **a. Undergraduate and Graduate Studies**

| <b>Period of Study</b> | <b>Name of Institution and Department</b>  | <b>Degree</b> |
|------------------------|--|---------------|
| 1976-8                 | Hebrew University, Jerusalem<br>Dept. of Horticulture, Faculty of Agriculture, Rehovot           | BSc           |
| 1979-82                | Hebrew University, Jerusalem<br>Dept. of Genetics, Horticulture, Faculty of Agriculture, Rehovot | MSc           |
| 1998-2005              | Hebrew University, Jerusalem<br>Dept. of Botany, Faculty of Agriculture, Rehovot.                | PhD           |

### **3. Academic Ranks and Tenure in Institutes of Higher Education**

| <b>Years</b> | <b>Name of Institution and Department</b> | <b>Rank/Position</b>     |
|--------------|---|--------------------------|
| 1994         | Ohalo college                             | Lecturer (tenure)        |
| 2006-2008    | Hebrew University, Jerusalem              | Adjunct researcher       |
| 2012         | Ohalo college                             | Senior lecturer (tenure) |

#### 4. Offices in Academic Administration

| Years     | Name of Institution and Department | Role   |
|-----------|------------------------------------|--|
| 1999-2010 | Ohalo college                      | Statistics advisory to students seminar  |
| 2005-2010 | Ohalo college                      | Coordinator of course "Basic Statistics and Research Methods"                    |
| 2011-2013 | Ohalo college                      | Head of research committee   |
| 2012-2015 | Ohalo college                      | Coordinator of student research projects- School of Wine Studies – Ohalo College |

#### 5. Scholarly Positions and Activities outside the University

##### Article Reviewing for Refereed Journals

| Years          | Journal/s                             |
|----------------|---------------------------------------|
| <b>Unknown</b> | 1. Plant tissue and organ culture     |
| <b>Unknown</b> | 2. Canadian journal of plant science  |
| <b>Unknown</b> | 3. Journal of plant growth regulation |

##### Educational activit

| Years              | Journal/s   |
|--------------------|---|
| <b>2014-todate</b> | establishing youth research center in Shamir institution as a part of the regional education initiative to enhance science studied of pupils in the periphery: The major theme of our center is agriculture and ecology. The activities include: a. establishing a 500 sqm <sup>2</sup> controlled greenhouse (1.7 m NIS), b. managing the center (annual budget ca. 100,000 NIS) and activities with schools (teachers and pupils) in the area, c. establishing a refugee plot for endangered plant species of the Golan –Heights and ecological gradening with local wild species, in collaboration with Dr. O. Cohen from Shamir Inst.. The projects involve pupils and teachers from high schools and elementary schools in the Golan, d. coordinating the tutoring of high school students in conducting their research projects under the supervision of researches of the Shamir inst, e. judging the research projects of in high school students from the region in the annual competition |

#### 6. Active Participation in Scholarly Conferences

##### a1. International Conferences - Held Abroad

| Date  | Name of Conference   | Place of Conference   | Subject of Lecture/Discussion   | Role              |
|-------|--|-----------------------|---|-------------------|
| 4/04  | 9 <sup>th</sup> international symposium on flower bulbs                                      | Nigata Japan          | The effect of gibberellin and cytokinin on floral development in <i>Zantedeschia</i> spp. <i>in vivo</i> and <i>in vitro</i>  | Invited lecture   |
| 10/11 | 2 <sup>nd</sup> international phytoplasma working group meetnig                              | Neustadt, Germany     | The use of <i>Spiroplasma melliferum</i> as a model organism to study the antagonistic activity of grapevine endophytes against phytoplasma                             | Oral presentation |
| 11/12 | Cost action FA08087 meeting  | San-Michele, Italy    | The influence of bacteria isolated from an insect vector on plants infected with phytoplasma  | Oral presentation |
| 5/13  | Plant Protection and Plant Health in Europe  | Berlin, Germany       | The influence of bacteria isolated from an insect vector on plants infected with phytoplasma  | poster            |
| 5/14  | XIII Meeting of the Working Group Biological control of fungal and bacterial plant pathogens | Upsala, Sweden        | Endophytes from grapevine inhibit pathogenic fungi <i>in vitro</i>  | poster            |
| 1/15  | 3 <sup>rd</sup> international phytoplasma working group meetnig                              | Mauritius             | Introduction of beneficial bacteria to grapevines as a possible control of phytoplasma associated diseases  | Oral presentation |
| 10/15 | IOBC-WPRS-integrated protection and production in viticulture                                | Veinna, Austria       | The control of Esca associated fungi by endophytes from grapevine compared to chemical control <i>in vitro</i>  | Oral presentation |
| 10/17 | IOBC-WPRS Working Group "Integrated protection in viticulture"                               | Riva Del Garda, Italy | The potential use of endosymbiont/endophytic bacteria to reduce yellows disease symptoms in wine grapes. IOBC-WPRS Working Group "Integrated protection in viticulture" | Oral presentation |

**a2. International Conferences - Held in Israel**

| <b>Date</b> | <b>Name of Conference</b>              | <b>Place of Conference</b> | <b>Subject of Lecture/Discussion</b>   | <b>Role</b> |
|-------------|--|----------------------------|--|-------------|
| 10/15       | First Israel-Italy Grapevine Symposium | Sde Boker                  | Bacterial endophytes isolated from grapevines as a potential tool to reduce yellows disease symptoms | Poster      |

**a3. Local Conferences**

| <b>Date</b> | <b>Name of Conference</b>                        | <b>Place of Conference</b> | <b>Subject of Lecture/Discussion</b>   | <b>Role</b>       |
|-------------|--|----------------------------|--|-------------------|
| 10/10       | Open day Northern R&D                            | Kiriat Shemona             | <i>Spiroplasma melliferum</i> as a model organism  | Poster            |
| 10/10       | Open day Northern R&D                            | Kiriat Shemona             | From the field into the laboratory. <i>In vitro</i> approach to study yellows disease in grapevines                        | Invited lecture   |
| 1/11        | ISPS Annual Meeting                              | Sde Boker                  | Callus nurse culture for phytoplasma: A system for the study of inhibitory factors on phytoplasma development              | poster            |
| 2/12        | Israeli plant disease association annual meeting | Volacani center            | Long maintenance of phytoplasma in nurse culture <i>in vitro</i>   | Oral presentation |
| 6/13        | Galil research annual symposium                  | Tel Hai                    | From the field to the laboratory and back: new approaches to control Yellows   | Oral presentation |
| 2/13        | Israeli plant disease association annual meeting | Volacani center            | Growth parameters in plants propagated from grapevine recovered from yellows disease                                       | Poster (student)  |
| 2/13        | Israeli plant disease association annual meeting | Volacani center            | Model systems to study phytoplasma <i>in vitro</i>   | Oral presentation |
| 2/14        | Israeli plant disease association annual meeting | Volacani center            | The recovery phenomenon as a potential tool to decrease phytoplasma yellows disease in grapevine. Phytopathology symposium | Oral presentation |

|       |  |   |  |                   |
|-------|--|---|--|-------------------|
| 3/14  | Vineyard growers annual meeting                  | Katsrin                                 | Reduction of yellows disease in grapevine the potential use of the recovery spontaneous phenomenon                   | Oral presentation |
| 1/16  | Vine growers annual meeting                      | Ministry of agriculture, volceni center | Esca in table grapes- etiology and control   | Invited lecture   |
| 2/16  | Israeli plant disease association annual meeting | volceni center                          | Field trial to examine the use of endosymbiont/endophytic bacteria to reduce yellows disease symptoms in wine grapes | Oral presentation |
| 4/16  | Galil research annual symposium                  | Tel Hai                                 | Esca in the vineyard   | Oral presentation |
| 10/16 | Golan reseach symposium                          | Katsrin                                 | Field trial to examine the use of endosymbiont/endophytic bacteria to reduce yellows disease symptoms in wine grapes | Oral presentation |
| 2/17  | Vine growers annual meeting                      | Ministry of agriculture, volceni center | Esca in table grapes- etiology and control   | Oral presentation |
| 2/17  | Israeli plant disease association annual meeting | volceni center                          | A selective medium to isolate Esca related spores from spore traps in the vineyard                                   | Poster (student)  |

## 7. Invited Lectures (Others than in Scholarly Conferences)

### Abroad

| Year | Name of Forum                        | Place of Lecture  | Subject of Lecture   | Role  |
|------|--------------------------------------|-------------------|--|---|
| 6/12 | Department of phytopathology seminar | Milan Univ. Italy | Spiroplasma – A model system to study endophyte activity against phytoplasma, seminar in the department of plant pathology | Guest in Prof. Bianco lab. (Cost Action-STSM FA807) |

### In Israel

| Year | Name of Forum | Place of | Subject of Lecture | Role |
|------|---------------|----------|--------------------|------|
|------|---------------|----------|--------------------|------|

|       |  | Lecture                                |   |   |
|-------|--|--|---|---|
| 1/11  | Department seminar   | Newe Yaar                              | Yellows disease in grapevines: from the field to the laboratory   | guest   |
| 11/13 | Irrigation course for farmers                                    | Zemach R&D                             | The link between plant organ and function   | lecturer  |
| 2014  | Internal seminar   | Shamir inst                            | From the field to the laboratory and back: new approaches to control complicated diseases in the vineyard | Researcher  |
| 3/15  | Plant disease course for farmers                                 | Kibutz Hagoshrim                       | Yellos disease in the vineyards   | lecturer  |
| 4/15  | Plant disease course for farmers                                 | Kibutz Hagoshrim                       | Esca disease in the vineyards   | lecturer  |
| 2015  | Department of phytopathology seminar                             | Volcani center, inst. plant protection | Esca in wine and table grapes- the problem  | guest   |
| 11/16 | Institute seminar  | Shamir inst.                           | Reduction of yellows disease in the vineyard  | researcher  |
| 1/16  | Visit of "Galilium" - the regional science education partnership | Shamir inst.                           | Introducing the activity with young student in Shamir insitute.: mode of action                           | Manager of youth science activity in Shamir inst. |
| 1/16  | Annual meeting vine growers                                      | Golan winery                           | What is esca?   | guest   |
| 1/16  | Irrigation course for farmenrs                                   | Zemach R&D                             | The link between plant organ and function   | lecturer  |
| 12/16 | Visit of Mendel inst.  | Pisga center, Katsrin                  | Introducing the activity with young student in Shamir inst.: mode of action                               | Manager of youth science activity in Shamir inst. |
| 6/17  | College student  | Ohalo                                  | Yellows disease- what is it and what can we do to control it?   | Reviewing research projects                       |
| 6/17  | Annual meeting of local high school teachers                     | Hispin                                 | Collaboration between Shamir inst and teachers in science education                                       | Manager of youth science activity in Shamir inst. |

## 8. Research Grants

### a. Grants Awarded

| Role in Research | Other Researchers (Name & Role)                                | Title   | Funded by (C= Competitive Fund) | Amount          | Years   |
|------------------|--|---|---------------------------------|-----------------|---------|
| Co-PI            | T. Zahavi, Mawasi M., Ziv M.                                   | Development of an <i>in vitro</i> nurse culture for phytoplasma genotype sources of grapevine phytoplasma and as a tool to understand plant – pathogen relation | C-Ministry of science           | 230000 (230000) | 2006-9  |
| Co-PI            | T. Zahavi, M. Reuveni, M. Mawasi, D. Ezra                      | Isolation and screening of endophytes as a potential biological control method against phytoplasma diseases in grapevine  | C-Ministry of science           | 350000 (350000) | 2009-12 |
| CI               | R. Sharon, N. Rothschild, O. Bar-Shalom                        | Evaluation of wetland system to clean sewage water  | Ohalo college                   | 150000 (0)      | 2010    |
| Co-PI            | M. Dafni-Yelin, T. Zahavi, M. Mawasi                           | The recovery phenomenon as a potential tool to decrease phytoplasma yellow disease in grapevine   | C-Ministry of science           | 360000 (360000) | 2010-13 |
| Co-PI            | M. Dafni-Yelin, T. Zahavi, M. Mawasi, P. Weintraube, R. Sharon | Characterization of Phytoplasma sp. populations in wild and cultivated plant species around vineyards with Yellows diseases                                     | C-Ministry of science           | 250000 (0)      | 2011-12 |
| PI               | T. Zahavi, D. Ezra, E. Zhori-Fein                              | Isolates of <i>Bacillus</i> spp with inhibitory activity: Their potential use as bio-control agents against phytoplasma   | C-Ministry of science           | 250000 (250000) | 2013-14 |

|       |   |   |                              |                    |           |
|-------|---|---|------------------------------|--------------------|-----------|
|       |   | disease in grapevines   |                              |                    |           |
| PI    | T. Zahavi   | Esca screening in the Golan   | Northern R&D                 | 30000 (30000)      | 2013      |
| PI    | L. Grunside                                       | Teaching by the scientific methods  | Golan regional counsel       | 21200 (0)          | 2014      |
| PI    | T. Zahavi, M. Reuveni                             | Esca etiology and control   | Table grape board            | 120000 (120000)    | 2014-16   |
| PI    | T. Zahavi   | Inhibition of esca fungi by Double Nickel in comparison to Serenade and to a local endophyte isolate          | Gadot Ltd                    | 15000 (15000)      | 2016      |
| Co-PI | Zhori-Fein E., Kapulnik Y., Iasur-Kruh L.         | Biological control agent to reduce yellows disease in the wine grapes   | Kamin, ministry of Economics | 680000 (335420)    | 2014-15   |
| PI    | Bahar O., Zahavi T.                               | Can phloem sap components from plants infected with yellows disease be used to induce recovery in grapevines? | C-Ministry of science        | 250000 (224000)    | 2015-2016 |
| Co-PI | Zhori-Fein E., Iasur-Kruh L. Zahavi T., Bahar O., | Reduction of yellows disease symptoms in the vineyard – a field Trial   | Kopia                        | 1,394,000 (494000) | 2016-17   |
| PI    | Zahavi T., Harcabi E., Meler-Harel Y.             | Chemical and biological control to prevent new infection of esca disease in Israeli vineyards                 | C-Ministry of agriculture    | 225000 (225000)    | 2017-19   |
| PI    | Zahavi T., Harcabi E., Meler-Harel Y.             | Chemical and biological control to prevent new infection of esca disease in Israeli vineyards                 | Grapevine board              | 120000 (120000)    | 2017-19   |
| PI    | Zahavi T.,  | Testing the efficiency of Double Nickel to prevent mycelium growth of esca associated                         | Gadot Ltd                    | 20000 (20000)      | 2017      |



|    |                       |   |                       |                 |           |
|----|-----------------------|---|-----------------------|-----------------|-----------|
|    |                       | fungi in a discs model system   |                       |                 |           |
| PI | Ezra D.,<br>Zahavi T. | Developing molecular tools for early detection of esca from grapevine wood tissue | C-Ministry of science | 250000 (200000) | 2017-2018 |

**c. Submission of Research Proposals – Not Funded**

| Role in Research | Other Researchers (Name & Role)                      | Title   | Funded by (C= Competitive Fund) | Years |
|------------------|--|---|---------------------------------|-------|
| PI               | T. Zahavi,<br>M. Mawasi,<br>S. Musaffi               | Potential control of yellow disease pathogen phytoplasma in grapevines by <i>Vitex agnus castus</i> L. ( <i>Verbenaceae</i> ) extracts  | C-Ministry of science           | 2010  |
| PI               | T. Zahavi,<br>M. Mawasi,<br>S. Musaffi,              | Potential control phytoplasma, the pathogen of yellow disease in grapevines by <i>Vitex agnus castus</i> L. ( <i>Verbenaceae</i> ) extracts                                     | C-Ministry of Science           | 2011  |
| PI               | Zahavi T.,<br>Sapir G.                               | A study on the relationship between the level and distribution of grapevine leafroll associated virus 3 and plant performance in grapevines using different growth temperatures | -Ministry of Science            | 2011  |
| PI               | Zahavi T.,<br>Ezra D., E.<br>Zhuri-Fein,<br>Yaron S. | The characterization and distribution of antagonistic endophytes and their potential use as bio-control agents against phytoplasma disease in grapevines                        | C-Ministry of Science           | 2012  |
| Co-PI            | T. Zahavi,<br>D. Ezra, E.<br>Zhuri-Fein              | The use of grapevine endophytes to suppress yellows diseases caused by phytoplasma  | C-Ministry of Agriculture       | 2012  |
| Co-PI            | R. Sharon,<br>T. Zahavi,<br>P.<br>Weintraube         | The conflicted relationship of a pathogen (SP), its vector (Ho) and their different host plants (VAC  | C-ISF                           | 2012  |

|       |  |  |                           |      |
|-------|--|--|---------------------------|------|
|       |  | and vine)  |                           |      |
| PI    | Zahavi T.                                      | Characterization of the fungi associated with Esca proper disease in the Golan and Israeli vineyards   | C-Ministry of science     | 2013 |
| Co-PI | R. Sharon,<br>P.<br>Weintraube                 | The enigma of the conflicting relationship in a system comprised of a pathogen (Stolbur phytoplasma), its vector ( <i>Hyalosthes obsoletus</i> ) and their different preferred host plants (grapevine and <i>Vitex aagnus-castus</i> ) | C-ISF                     | 2014 |
| PI    | Zahavi T.,<br>Harcabi E.,<br>Meler-Harel<br>Y. | Assessment of chemical and biological control to reduce new infection of Esca in Israeli vineyards   | C-Ministry of Agriculture | 2016 |
| PI    | Zahavi T.,<br>Ezra D.,<br>Hubner S.            | Developing a molecular tool for early detection of Esca from grapevine wood tissue   | C-Ministry of science     | 2016 |

## 9. Scholarships, Awards and Prizes

## 10. Teaching

### a. Courses Taught in Recent Years

| Years     | Name of Course                               | Type of Course<br>Lecture/Seminar/<br>Workshop/ Online Course/<br>Introduction Course<br>(Mandatory) | Level            | Number of Students |
|-----------|--|--|------------------|--------------------|
| 1998-2015 | Basic statistics and research methods        | Introduction Course (Mandatory) and exercise   | College students | 100-200            |
| 1998      | Scientific games                             | Lecture and lab  | College students | 30                 |
| 2000-2010 | Basic botany                                 | Introduction Course (Mandatory) and lab  | College students | 20-40              |
| 2007      | Research methods to BSc. Student (Economics) | Lecture and exercise   | College students | 40                 |

|               |   |                      |  |      |
|---------------|---|----------------------|--|------|
| 2009,<br>2011 | Introduction to agriculture                                   | Lecture and lab      | College students                                     | 20   |
| 2011          | biostatistics   | Lecture and exercise | College students                                     | 10   |
| 2012          | Scientific writing  | Workshop             | College teachers                                     | 30   |
| 2012-<br>2015 | Basic statistics and scientific writing for Research projects | Lecture and workshop | Wine school<br>Non-academic students (Ohalo college) | 5-20 |
| 2013          | Israel flora  | Lecture and lab      | College students                                     | 20   |

## 11. Miscellaneous

1. 1985-1997: propagation, flowering and dormancy in geophytes- applied research
2. 1985-1997: breeding for new cultivars of *Lilium longiflorum* in collaboration with H. Yahel ARO (4 registered cultivars and one non-registered)
3. 1992-3: teaching Hebrew to adults in USA
4. 1995-7: teaching Hebrew to Russian newcomers in Israel
5. 2006-7: studying for a certificate for teaching in a College - program for college teacher
6. 2006-7: workshops for high school teachers on research methods
7. 2007-8: workshops for kindergarten teachers in botany
8. 2008: coordinating photography competition for college student (nature in the Golan)
9. 2008-9: advising experimental kindergarten teacher in growing spice herbs
10. 2009-2017 supervising the research projects of BSc. Students in my lab.
11. 2010-2012: non-formal coordinating of MSc. Thesis on the subject "the potential inhibition effect of *Vitex agnus catus* on phytoplasma development in the vector *Hyalesthes obsoletus* and in host plant"
12. 2010-2013: establishing a protocol for tissue culture propagation of blueberry for a commercial lab.
13. 2012: COST action FA0807-STSM Participating in the lab of prof. Bianco, university of Milan, Italy.
14. 2012: participating in "studying research" committee of the Golan Regional Council
15. 2015: A partner in the Patent PCT/IL2016/050438. Version 3.51.073.249 mt/fop 20160401/0.20.5.24 anti-phytopathogenic compositions



# **PUBLICATIONS**

## **A. Ph.D. Dissertation**

**Title:** Physiological aspects of dormancy and flowering in calla lily (*Zantedeschia* spp.)

**Date of submission:** May 2005

**Number of Pages:** 121

**Language:** Hebrew and English

**Name of Supervisor:** Jaime Kigel, Meira Ziv and Yosef Bental

**University:** Hebrew university Jerusalem

**Publications:** D2-D8, F1.

## **D. Articles in Refereed Journals**

### **Published**

1. Halevy A. H., Levy M., Cohen M. and **Naor V.** 2002. Evaluation methods for flowering advancement of herbaceous peonies. HortScience 37: 885-889.
2. **Naor V.** and Kigel J. 2002, Temperature affects plant development, flowering and tuber dormancy in calla lily (*Zantedeschia*). Journal of Horticultural Science and Biotechnology 77:170-176.
3. **Naor V.**, Kigel J. and Ziv M. 2004. Hormonal control of inflorescence development in plantlets of calla lily (*Zantedeschia* spp.) grown *in vitro*. Plant growth Regulation 42:7-14.
4. **Naor V.**, Kigel J., Ziv M. and Flaishman M. 2005. A Developmental pattern of flowering in colored *Zantedeschia* spp: effects of bud position and gibberellin. Journal of Plant Growth Regulation 23:269-279.
5. **Naor V.**, Kigel J. and Ziv M. 2006. Control of bud sprouting and elongation in colored *Zantedeschia* tubers by low temperature storage. Hortscience 41:685-687.
6. Ziv M. and **Naor V.** 2006. Flowering of geophytes *in vitro* (invited review). Propagation of Ornamental Plants 6:3-16.
7. **Naor V.**, Kigel J., Ben-Tal Y., and Ziv M. 2008. Variation in endogenous gibberellins, abscisic acid and carbohydrate content during the growth-cycle of colored *Zantedeschia* spp, a tuberous geophyte. Journal of Plant Growth Regulation 27:211-220.
8. **Naor V.**, Kigel J., and Ziv M. 2009. The relationships between Giberellin and organ size in *Zantedeschia* cv. Calla Gold. Israel Journal of Plant Science 57:369-375.
9. **Naor V.**, Zahavi T. and Ziv M. 2011. The effect of the orientation of stem segments of grapevine (*Vitis vinifera*) cv. Chardonnay on callus development *in vitro*. Plant Cell, Tissue and Organ Culture 106:353-358.

10. **Naor V.** and Zahavi T. 2011. Long maintenance of phytoplasmas in grapevines Chardonnay and Cabernet-Sauvignon *in vitro*. *Phytopathogenic Mollicutes* 1:15-20.
11. Zahavi T., Sharon R., Sapir G, Mawasi M., Dafny-Yelin M. and **Naor V.** 2013. The long term effect of Stolbur phytoplasma on grapevines in the Golan Heights. *Aust. J. Grape and Wine Research* 19: 277–284.
12. Bianco, P. A., Marzachi, C., Musetti, R., and **Naor, V.** 2013. Perspectives of endophytes as biocontrol agents in the management of phytoplasma diseases. *Phytopathogenic Mollicutes*, 3: 56-59.
13. Sharon, R., Harari, A. R., Zahavi, T., Raz, R., Dafny-Yelin, M., Tomer, M. C. Sofer-Arad<sup>1</sup>, P.G. Weintraub<sup>5</sup> and **Naor, V.** 2015. A yellows disease system with differing principal host plants for the obligatory pathogen and its vector. In *Plant Pathology* 64:785-791.
14. Dafny Yelin M, Orbach D, Zahavi T, Sharon R, Brudoley R, Barkai RS, Tomer M, Sofer-Arad C, Weintraub P.G, Mawassi M, and **Naor V.** 2015. Searching host plants of phytoplasmas associated with yellows disease in Israeli vineyards. *Phytopathogenic Mollicutes* Vol. 5 (1-Supplement), S73-S74.
15. **Naor V.**, Iasur-Kruh L., Barkai R., Bordolei R., Rodoy S., #Harel M., Zahavi T. and Einat Zchori-Fein E. 2015. Introduction of beneficial bacteria to grapevines as a possible control of phytoplasma associated diseases. *Phytopathogenic Mollicutes* Vol. 5 (1-Supplement) S111-S112.
16. Iasur-Kruh, L., **Naor, V.**, Zahavi, T., Ballinger, M., Sharon, R., Robinson, W., Perlman, S. & Zchori-Fein E. 2016. Bacterial associates of *Hyalesthes obsoletus* (Hemiptera: Cixiidae), the insect vector of Bois noir disease, with a focus on cultivable bacteria. *Research in Microbiology* *Research in Microbiology*. <http://dx.doi.org/10.1016/j.resmic.2016.08.005>.
17. Lahav, T., Zchori-Fein, E., **Naor, V.**, Freilich, S., & Iasur-Kruh, L. 2016. Draft Genome Sequence of a Dyella-Like Bacterium from the Planthopper *Hyalesthes obsoletus*. *Genome Announcements*, 4: e00686-16.

### **Accepted for Publication**

1. Iasur-Kruh L., Zahavi T., Barkai R., Freilich S., Einat Zchori Fein E., and **Naor V.** 2017. *Dyella*-like bacterium isolated from an insect as a potential biocontrol agent against grapevine yellows. Accepted for publication in *Phytopathology* 2017.

2. Lidor, O., Dror, O., Hamershlak, D., Shoshana, N., Belausov, E., Zahavi, T., Mozes-Daube, N., **Naor, V.**, Zchori-Fein, E., Iasur-Kruh, L. and Bahar, O. , Introduction of a putative biocontrol agent into a range of Phytoplasma- and Liberibacter-susceptible crop plants. Pest. Manag. Sci. Accepted Author Manuscript. doi:10.1002/ps.4775, 2017.

### **Article in preparation**

1. Lidor O., Santos-Garcia D., Mozes-DaubeN., **Naor V.**, Cohen E., Iasur-Kruh L., Ofir Bahar O., and Zchori-Fein E. *Frateuria defendens* sp. nov. bacterium isolated from the insect *Hyalesthes obsoletus*. To be submitted to International Journal of Systematic and Evolutionary Microbiology

### **F. Articles in Conference Proceedings**

#### **Abstracts published in conference program book of abstracts**

1. **Naor V.**, Kigel J. and Ziv M. 2004. The effect of gibberellin and cytokinin on floral development in *Zantedeschia* spp. *in vivo* and *in vitro* Acta Horticulturae 673:255-263.
2. Zahavi T., Sharon R., Mawassi M. and **Naor V.** 2009. Long term effects of stolbur phytoplasma on grapevines in Israel. ICVG 16th Meeting of the International Council for the Study of Virus and Virus-like Diseases of the Grapevine. Dijon, France. pp. 147-148.
3. **Naor V.** and Zahavi T. 2010. Nurse culture approach as a tool to study biotic and abiotic factors to control phytoplasmas. Cost meeting, Ancona, Italy.
4. **Naor V.**, Zahavi T., Mawassi M., #Raz R, Sharon R., Bordolay R. and Ziv M. 2010. From the field into the laboratory. *In vitro* approach to study yellows disease in grapevines. Open day Northern R&D, Kiriath Shemona, Israel.
5. **Naor V.**, Zahavi T., Sharon R., Musafi S., Mawassi M., Ezra D., Reuveni M., #Raz R. and Rima Bordolay R., 2010. *Spiroplasma melliferum* as a model organism. Open day Northern R&D. Kiriath Shemona, Israel.
6. **Naor V.**, Zahavi T, and Ezra D. 2011. The use of *Spiroplasma melliferum* as a model organism to study the antagonistic activity of grapevine endophytes against phytoplasma. Bulletin of Insectology 64 (supplement):S265-S266.
7. **Naor V.**, Zahavi T., Mawassi m., Bordolay R. and Ziv M. 2011. Callus nurse culture for phytoplasma: A system for the study of inhibitory factors on phytoplasma development. ISPS Annual Meeting. Sde Boker, Israel.

8. Sharon R., #Raz R., Harari A, **Naor V.**, Musafy S., Dafni-Yalin M., Sapir G., and Zahavi T. 2011. Can *Hyalesthes obsoletus* acquire Phytoplasma from vines and become infectious? IOBC Integrated Protection and Production in Viticulture. Bordeaux, France.
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8. דפני-ילין מ., נאור ו., בורדוליי ר., שחר-ברקוביץ ר., זהבי ת., שרון ר., ארד-סופר כ., תומר מ., ויינטראוב פ., מוואסי מ., אורבך ד. 2014. חיפוש המקור לצהבון בכרמים בגולן. עלון הנוטע 22-18: 69.
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## **K. Summary of my Activities and Future Plans**

My major activity can be divided into two sections: scientific and educational. My scientific research is focused on two complicated diseases in grapevines: yellows disease caused by phytoplasma which reside either in the host plant phloem and esca phenomenon which involves three fungal species that are residing in the xylem of the host plant. Although both diseases are considered as very serious and cause heavy loss to the growers, currently there is no solution for controlling them. The complexed etiology of each of the disease poses many constrains for research: The pathogen of yellows disease is an obligatory parasitic bacterium which cannot be grown in axenic culture. Artificial infection can be done only by insect, grafting or using a plant dodder. Symptoms on the vines can be detected only in the summer but the vine remains infected for many years. However, spontaneous recovery is a known phenomenon suggesting a role for endophytes. Furthermore, the pathogen is distributed unevenly in the vines the phloem tissue, therefore, symptoms can be expressed only partially on the vine stems. The pathogens associated with esca establish in the vine very slowly (years) before symptoms are visible. Therefore, classical field trials are inefficient. Furthermore, environmental variables are linked to symptom appearance, therefore are inconsistent. Thus the real rate of infection is higher than the number of symptomatic vines in the plot.

The experimental systems that were developed and adopted in my lab were designed to overcome these constraints in combination with the approach of biological control. The early studies were aimed at the construction of nurse culture for phytoplasma in grapevine plantlets in contrast to the more common attitude of using periwinkle as a model plant. Looking for beneficial endophytes or endosymbionts was the next step that required the development of a new experimental system using *Spiroplasma melliferum* as a model bacterium for phytoplasma. In recent years together with collaborators from ARO, extension service and Broude College, we isolated several beneficial bacteria isolates that show potential inhibition ability of phytoplasma or esca associated fungi. One of the isolates was patented and was tested in field trials. Commercial companies are now interested in these isolates. The future plans involve expanding the study if these isolates using advanced methods and evaluating the potential of using them as biocontrol agents.

The educational aspect includes a substantial participation in the regional educational initiative to enhance the science studies of children in the periphery. For the past four years I am involved in the project. As a member of this project I established the youth research center in the Shamir inst. During this period we established in our institute a highly controlled greenhouse that is aimed for conducting scientific projects of researches and research projects of students and high school pupils. We are developing partnerships and collaborations with the teachers in our vicinity emphasizing on biological and ecological questions on plant interaction with biotic and abiotic factors. The future vision is to be the center for agriculture and biological studies and activities for high school students and teachers in our region.