

**Part I: CURRICULUM VITAE**

**I. Personal**

1974	Born in: Israel
1992 -	High-school education in: quzerin
1993 - 1996	Military service: 36 month in the infantry
Marital status:	Married + 3

**II. University Education and Additional Training**

1999 – 2002	B.Sc. in plant Sciences. At The faculty of agriculture, food and environment.
2002 – 2005	M.Sc. in plant Sciences. At The faculty of agriculture, food and environment.  Title of thesis: CONSTRUCTION OF MOLECULAR TOOLS FOR THE DETECTION OF FLOWER DIFFERENTIATION TIMING IN GRAPEVINE BUDS  Supervision by: Dr. Etti Or and Prof. Shimon Lavee
2005 – 2011	Ph.D. in plant Sciences. At The faculty of agriculture, food and environment.  Title of thesis: Characterization of Bud and Inflorescence Development in Table Grapes  Supervision by: Dr. Etti Or and Prof. Shimon Lavee

### **III. Positions Held and Academic Status**

2011 to date          Research Scientist at the Northern R and D.

### **IV. Training / Teaching Experience**

Students guidance: Guidance of M.Sc. student – Rotem Nalvizky. Title of thesis: Expression Level of the GLRaV-3 virus in symptomatic and non-symptomatic vines and influence on fruit load and wine quality. In progress. Guidance with Dr. Tirza Zehavi and Dr. Zohar Kerem.

### **V. Membership in Scientific and Agricultural Committees**

No

### **VI. Editorial Responsibilities**

No

### **VII. Participation in International Meetings**

2013    Cost action FA1003: Phenotyping for Vitis resistance to fungal diseases virus and phytoplasma diagnosis – Geilweilerhof Germany.

2013    Plant dormancy symposium-Auckland, New Zealand

### **VIII. Invitation only by Professional Societies in Israel**

No

### **IX. Membership in Professional Societies**

No

### **X. Contribution to the Scientific Community**

No

## **XI. Research Grants**

On every grant indicate, in the following order: the year, granting source, the research title, whether you are the Principal or Co-Principal (PI, or CoPI) or Cooperating Investigator (Co), the duration of the grant, and the approved budget **in US dollars**. Both the total budget and the researcher's part of the budget should be indicated when the budget is shared by several investigators and/or institutions. The researcher's part should include only the sum allocated to the researcher.

### **(A) International Competitive Grants**

No

### **(B) National Competitive Grants**

2013 Chief Scientist of the Ministry of Agriculture grant. Title: Development of a DSS system for apple trees thinning based on precision agriculture principles  
Cooperating Investigator, for 3 year. Budget: Total – \$376,650. Researcher's part - \$75,360.

### **(C) Other Research Grants**

20013 Wine Grape council. Title: Development of tools in order to minimize the expression of the GLRaV-3 virus as a means decrease fruit load and wine quality.  
Principal Investigator, for 1 year. Total - \$17100. Researcher's part – \$17100.

2013 Wine Grape council. Title: Examination of imported clones from leading wine grapes species in Israel. Principal Investigator, for 3 year. Total - \$51300.  
Researcher's part – \$34200.

## **XII. Awards and Scholarships**

No

## Part II: LIST OF PUBLICATIONS

רותם נלביצקי, גל ספיר, **עומר קראין** ותרצה זהבי (2014) וירוס קיפול העלים: הקשר בין תסמינים, נזק ונגיעות בגפן. עלון הנוטע 68: 46-49

**Omer Crane**, Tamar Halaly, Xuequn Pang, Shimon Lavee, Avi Perl, Radomira Vankova & Etti Or (2012) Cytokinin-induced VvTFL1A expression may be involved in the control of grapevine fruitfulness. Planta Volume 235, 181-192

Tamar Halaly, Xuequn Pang, Tamar Batikoff, **Omer Crane**, Alexandra Keren, Jaganatha Venkateswari, Aliza Ogradovitch, Avi Sadka, Shimon Lavee, Etti Or (2008) Similar mechanisms might be triggered by alternative external stimuli that induce dormancy release in grape buds. Planta Volume 228, pp 79-88

Tsvika Keilin, Xuequn Pang, Jaganatha Venkateswari, Tamar Halaly, **Omer Crane**, Alexandra Keren, Aliza Ogradovitch, Ron Ophir, Hanne Volpin, David Galbraith, Etti Or (2007) Digital expression profiling of a grape-bud EST collection leads to new insight into molecular events during grape-bud dormancy release. Plant Science, Volume 173, 446-457

Xuequn Pang Tamar Halaly, **Omer Crane** Tsvicka Keilin, Alexandra Keren-Keiserman, Aliza Ogradovitch, David Galbraith and Etti Or (2007) Involvement of calcium signalling in dormancy release of grape buds. Journal of Experimental Botany, Vol. 58, 3249–3262,

**Part III: LIST OF MAJOR ACHIEVEMENTS**

2011 Results from my PhD suggest a new model for grape flower development. After the differentiation of the UCM and initial division into two arms, a tendril formation is regulated by genes responsible for inducing flower meristem at the tip of the arms, and therefore further branching is prevented. This differentiation is the default phenomenon in buds and shoots tip. In fertile buds, inhibiting the regulation of these genes by *VvTFLIA*, allows the UCM to continue branching, resulting in the differentiation of inflorescence. This genetic control mechanism is apparently controlled by plant hormones GA and cytokinin, and their relative ratio, which also regulates *VvTFLIA* expression (Crane et al., 2012).

2005 Timing of completion of inflorescence development within the mature bud in the subsequent winter is not conclusive. To facilitate future study of the effect of environmental and horticultural factors on this process, which affects final cluster structure and size, we used three *Vitis* homologs of the floral-organ-identity genes *APETALA1*, *PISTILLATA* and *AGAMOUS*, as markers for the detection of flower-organ primordia development during stages of dormancy, bud swelling and bud burst in mature hydrogen cyanamide (HC)-treated and control buds. Our data suggest that development of flower primordia starts only at bud burst and show a positive correlation between bud break and development of these primordia, suggesting that bud break is a prerequisite for the initiation of flower differentiation. The data also indicate renewal of cluster-branching activity at the bud-swelling stage.