

CURRICULUM VITAE

• Personal Details

Name: Gideon Grafi

Address and telephone number at work: Institutes for Desert Research, Ben Gurion University of the Negev, Sede Boqer Campus, Midreshet Ben Gurion 84990. Phone: 972-8-656-3479; Fax: 972-8-659-6742; Email: ggrafi@bgu.ac.il / gggrafi@gmail.com
Address and telephone number at home: Hagefen 155 Mabuim 85360; Cellphone: 050-4770412.

• Education

B.Sc. **1979-1982** - The Hebrew University of Jerusalem, Faculty of Agriculture, Rehovot, Israel.

M.Sc. **1982-1985** - Tel-Aviv University, Department of Botany, Ramat Aviv, Israel

Advisers: Prof. Y. Waisel and Dr. A. Shomer-Ilan

Title of thesis: Effects of cow manure on rooting of mung bean cuttings

Ph.D. **1985-1990** - The Hebrew University of Jerusalem, Faculty of Agriculture, Rehovot, Israel.

Advisor: Prof. Ilan Sela

Title of thesis: Interaction between the 3' untranslated region of human beta interferon and long poly(A) tails: Possible mechanism for regulation of translation

• Employment History

Since 2013 – Full Professor

Research title: Epigenetics of plant response to stress and seed biology
French Associates Institute for Dryland Agriculture and Biotechnology, Institutes for Desert Research, Ben Gurion University of the Negev, Sede Boqer Campus, Midreshet Ben Gurion.

Since 2006 – Associate Professor

Research title: Epigenetics of plant response to stress
French Associates Institute for Dryland Agriculture and Biotechnology, Institutes for Desert Research, Ben Gurion University of the Negev, Sede Boqer Campus, Midreshet Ben Gurion.

2004-2005 Associate Professor

Research title: Epigenetic regulation of cellular dedifferentiation
Department of Plant Sciences, The Weizmann Institute of Science, Rehovot, Israel

1996-2004 - Senior Scientist

Research title: Epigenetic regulation of cellular dedifferentiation

Department of Plant Sciences, The Weizmann Institute of Science, Rehovot, Israel

1995 - Post-doctoral Research Associate at the laboratory of Dr. W. G. Kaelin

Research title: Characterization of the maize retinoblastoma

Neoplastic Disease Mechanisms, Dana Farber Cancer Institute and Harvard Medical School, Boston, MA, USA

1993-1996 - Post-doctoral Research Associate at the laboratory of Prof. B. A. Larkins

Research title: Regulation of endoreduplication in maize endosperm and the role played by the Retinoblastoma protein

Department of Plant Sciences, The University of Arizona, Tucson, Arizona, USA

1990-1992: Post-doctoral Research Associate at the laboratory of Prof. Gad Galili

Research title: Translational regulation of human beta-interferon.

Department of Plant Genetics, The Weizmann Institute of Science, Rehovot, Israel

• Professional Activities (in reverse chronological order)**(a) Positions in academic administration**

none

(b) Professional functions outside universities/institutions

-The Israel Science Foundation (ISF) Panel member: 2000, 2003, 2013

- Ministry of Agriculture & Rural Development, The Chief Scientist Office Panel member since 2011.

-Ministry of Agriculture & Rural Development, The Chief Scientist Office Head of Plant Hi-Tech committee (2013)

-Advisor, U.S. – Israel Binational Science Foundation (BSF) since 2013

(c) Significant professional consulting

-Advisory Board of the NSF's Plant Genome Research Program, since 2003

-Reviewer of manuscripts for Proc. Natl. Acad. Sci, The Plant Cell, Journal of Biological Chemistry, Plant Journal, Plant Physiology, Plant Molecular Biology, Oncogene, Planta and more

-Reviewer of Grant proposals for ISF, BARD, BSF, GIF, NSF and others.

(d) Editor or member of editorial board of scientific or professional journal

-Editorial Board of *Stem Cell Reviews Journal*, 2004-2008.

-Editorial Board of *BBA – Gene Regulatory Mechanisms*, Since Sept 2009

(f) Membership in professional/scientific societies

-The Israel Gerontological Society, since 2010

- The Israel Society of Plant Sciences, since 1996

• **Educational activities**

(a) Courses taught

***The Cell Cycle**, The Weizmann Institute of science, 1997-1998 (Jointly).

***Selected Topics in Biology**, The Weizmann Institute of Science, 1999-2000 (Jointly)

* **Molecular Biology and Epigenetics** (001-2-2036) - Institutes for Desert Research, Ben Gurion University of the Negev

Lab course in epigenetics (001-2-2040) - Institutes for Desert Research, Ben Gurion University of the Negev

(b) Research students

M. Sc. Students

1. 1999 - 2001 - Fass Ephraim - Elucidating the interaction domain of HP1 γ with pRb and utilizing GFP-HP1 γ for monitoring chromatin dynamics in plants (The Weizmann Institute of Science)
2. 2000 - 2002 - Morad Vered - Changes in DNA methylation pattern during cellular dedifferentiation in *Arabidopsis thaliana* (The Weizmann Institute of Science)
3. 2000 - 2002 - Shahar Shai – The molecular basis for the dynamic association of human HP1 γ with chromatin in cycling plant cells: implications for heterochromatin formation (The Weizmann Institute of Science)
4. 2001 - 2003 - Zemach Assaf (cum summa laude) - Characterization and functional analysis of *Arabidopsis thaliana* methyl-CpG-binding domain (MBD) proteins (The Weizmann Institute of Science)
5. 2006 - 2008 – Susheela Talwara - Seedlings Survival after Desiccation: *Arabidopsis thaliana* as a model system (BGU)
6. 2009 - 2011 – Snir Yehuda – Induction of dedifferentiation in plant cells in response to *Agrobacterium tumefaciens* infection (BGU)
7. 2012 –2014 - Anat Pesok - The role of H2B variant HTB5 in stress-induced dedifferentiation (BGU)
8. 2013 – 2015 - Yemima Givati-Rapp - The role of Jumonji histone demethylases in stress-induced dedifferentiation (BGU)
9. 2015 – 2017 Godwin James – Dead pericarps of dry fruits function as a long-term storage for active hydrolytic enzymes: roles in germination
10. Since 2018 – Jansirani Srinivasan

Ph.D. Students

1. 1997-2002 -Williams Leor - Chromatin reorganization accompanying cellular dedifferentiation is associated with modifications of histone H3, redistribution of HP1, and activation of E2F-target genes (The Weizmann Institute of Science)
2. 1998-2003 - Zhao Jing - Molecular Mechanisms of Plant Cell Dedifferentiation and the Role of Chromatin-associated Proteins in Transcriptional Regulation (The

Weizmann Institute of Science)

3. 1999-2004 - Libs Laurence - The retinoblastoma protein and the regulation of Knox1-target genes (The Weizmann Institute of Science)
4. 2003-2008 -Amihai Sargal - (jointly with Prof. Y. Riov and Dr. M. Flaishman) – Hormonal regulation of pear (*Pyrus communis* L.) fruit development (Hebrew Univ)
5. 2003-2008 - Assaf Zemach - Methylated-DNA/histone H3 binding proteins: epigenetic effectors in plants (The Weizmann Institute of Science)
6. 2007-2011 - Meytal Damri (Jointly with Vadim Fraifeld and Marina Wolfson) - Merging aging with rejuvenation: a lesson from dedifferentiation (BGU)
7. 2008 – 2013 - Yaki Morgenstein - Induced genetic variation during cellular dedifferentiation in plants (BGU)
8. 2008 - 2013 - Assa Florentin – Stress induces dedifferentiation and epigenetic-independent chromatin reorganization (BGU)
9. 2010 – 2013 Noa Shahak - The role played by histone demethylases JMJ21 and JMJ13 in chromatin organization, plant development and stress-induced dedifferentiation (BGU) [withdrew]
10. Since 2014 – Buzi Raviv - The seed coat in Brassicaceae as a reservoir of biologically active substances (BGU).
11. Since 2015 - Janardan Khadka (Ph.D) jointly with Avi Golan.
Genetic and Epigenetic mechanisms underlying dioecy in *Mercurialis annua*.

Postdoctoral Fellows

1. 1997-1999 - Morozova Nadia (Weizmann Ins.)
2. 1999-2000 - George Varghese(Weizmann Ins.)
3. 2003-2005 - Ben-Meir Hagit (Weizmann Ins.)
4. 2003-2005 - Li Yan (Weizmann Ins.)
5. 2006-2008 - Noga Sikron-Persi (BGU)
6. 2006-2007 – Ben-Meir Hagit (BGU)
7. 2007-2010 – Paul Laju Kakesarry (BGU)
8. 2012-2014 - Asif Khan (BGU)
9. Since 2014 – Narendra Yadav (BGU)
10. Since 2016 – Alon Cnaani (BGU)

• Scientific Publications

(a) Editorship of collective volumes

1. **Grafi G.** Guest Editor - special issue on: Epigenetic control of cellular and developmental processes in plants (2011). *BBA-Gene Regulatory Mechanisms* V. 1809, 351-468.
Preface: Epigenetics in plant development and response to stress. *BBA* 1809, 351-352.
2. **Grafi G.** and Ohad N. (Book Eds) Epigenetic signaling in plant development and response to stress (2012). Book Series: Signaling and Communication in Plants (ed. Frantisek

Baluska), Springer.

3. **Grafi G.** and S. Barak Gguest Editors) – special issue on: Stress as a fundamental theme in cell plasticity (2014). BBA-Genet. Cell Res. 1849 issue 4.

(b) Chapters in collective volumes - Conference proceedings

1. Sela, I., **Grafi, G.**, Sher, N., et al. (1987) Resistance systems related to the n gene and their comparison with interferon. Ciba Foundation Symposia 133, 109-119.
Editors: David Evered and Sara Harnett Ciba Foundation Symposium 133 - Plant Resistance to Virus.
2. Flaishman, M.A., Shargal, A., Shlizerman, L., Stern, R.A., Lev-Yadun, S., and **Grafi, G.** (2005). The synthetic cytokinins CPPU and TDZ prolong the phase of cell division in developing pear (*Pyrus communis* L.) fruits. Acta Hort. 671, 151-157.
Editor: K.I. Theron ISHS Acta Horticulturae 671: IX International Pear Symposium
3. Flaishman, M.A., Brayer, Y., Shargal, A., and **Grafi, G.** (2005). Resumption of cyclin B and histone H1 kinase activity marks reproductive bud break in pear grown in the hot climate of Israel. Acta Hort. 671, 275-281.
Editor: K.I. Theron ISHS Acta Horticulturae 671: IX International Pear Symposium

(C) Book chapters

1. **Grafi G.**, Plaschkes I, Ofir R, and Chalifa-Caspi V. (2011) Illuminating hidden features of stem cells. In: Embryonic Stem Cells / Book 1. INTECH Open Access Publisher.
2. **Grafi G.**, Ohad N. (2012) Epigenetics in plants: a historical perspective. In: *Epigenetic signaling in plant development and response to stress* [Editors: Gideon Grafi and Nir Ohad]. Springer.

(d) Refereed articles and refereed letters in scientific journals

1. Sher, N., Edelbaum, O., Barak, Z., **Grafi, G.**, Stram, Y., Raber, J., and Sela, I. (1990) Induction of an ATP-polymerizing enzyme in TMV-infected tobacco and its homology to the human 2'-5' A synthetase. *Virus Genes* 4, 27-39.
2. Edelbaum, O., Ilan, N., **Grafi, G.**, Sher, N., Stram, Y., Novick, D., Tal, N., Sela, I. and Rubinstein, M. (1990) Two antiviral proteins from tobacco: purification and characterization by monoclonal antibodies to human beta-interferon. *Proc. Natl. Acad. Sci. USA* 87, 588-592.
3. **Grafi, G.**, Meller, E., Sher, N. and Sela, I. (1991) Characterization of S1/mung bean type nuclease activity in plant cell suspension. *Plant Sci.* 74, 107-114.
4. **Grafi, G.**, Sela, I., and Galili, G. (1993) Translational regulation of human-beta Interferon mRNA: Association of the 3'AU-rich sequence with the poly(A) tail reduces

- translation efficiency in vitro. *Mol. Cell. Biol.* 13, 3487-3493.
5. **Grafi, G.**, and Galili, G. (1993) Induction of cytoplasmic factors that bind to the 3'AU-rich region of human interferon beta mRNA during early development of *Xenopus laevis*. *FEBS letters* 336, 403-407.
 6. Rabinkov, A., Xiao-Zhu, Z., **Grafi, G.**, Galili, G. and Mirelman, D. (1994) Allin lyase (Allinase) from garlic (*Allium sativum* L.): Biochemical characterization and cDNA cloning. *Appl. Biochem. Biotech.* 48, 149-171.
 7. **Grafi, G.**, Shomer-Ilan, A., and Waisel, Y. (1994) Effects of fermented cow-manure on rooting of mung bean cuttings: The role of nutrients and abscisic acid. *J. Pl. Nut.* 17, 401-413.
 8. Weisman, Z., **Grafi, G.**, Azmon, N., Shomer-Ilan, A., and Waisel Y. (1994) Indole-3-acetic acid (IAA) and cytokinin-like activity in municipal excess activated sewage sludge: effect on rooting of mung bean [*Vigna radiata* (L.) Wilcz.] cuttings. *Soil Sci. Pl. Nut.* 40, 117-124.
 9. **Grafi, G.**, and Larkins B. A. (1995) Endoreduplication in maize endosperm: involvement of M-phase promoting factor inhibition and induction of S-phase-related kinases. *Science* 269, 1262-1264.
 10. **Grafi, G.**, and Larkins B. A. (1995) Activity of single stranded DNA endonucleases from mung bean is associated with cell division. *Plant Mol. Biol.* 29, 703-710.
 11. **Grafi, G.**, Burnett, R. J., Helentjaris, T., Larkins, B. A., DeCaprio, J. A., Sellers, W. R. and Kaelin, W. G. Jr. (1996) A maize cDNA encoding a member of the retinoblastoma protein family: involvement in endoreduplication. *Proc. Natl. Acad. Sci. USA.* 93, 8962-8967.
 12. **Grafi, G.** (1998) Cell cycle regulation of DNA replication: the endoreduplication perspective. *Exp. Cell Res.* 244, 372-378.
 13. Williams, L., and **Grafi, G.** (2000) The retinoblastoma protein – A bridge to heterochromatin. *Trends Pl. Sci.* 5, 239-240
 14. Zhao, J., and **Grafi, G.** (2000) The HMG-I/Y protein is hypophosphorylated in endoreduplicating maize endosperm cells and is involved in alleviating histone H1-mediated transcriptional repression. *J. Biol. Chem.* 275, 27494-27499.
 15. Avivi, Y., Lev-Yadun, S., Morozova, N., Libs, L., Williams, L., Zhao, J., Verghese, G., and **Grafi, G.** (2000) *Clausa*, a tomato mutant with a wide range of phenotypic perturbations, displays a cell-type-dependent expression of the homeobox gene *let6/tkn2*. *Plant Physiol.* 124, 541-551.
 16. Zhao, J., Morozova, N., Williams, L., Libs, L., Avivi, Y., and **Grafi, G.** (2001) Two phases of chromatin decondensation during cellular dedifferentiation of plant cells:

- distinction between competence for cell-fate switch and a commitment for S phase. *J. Biol. Chem.* 276, 22772-22778.
17. Fass, E., Shahar, S., Zhao, J., Zemach, A., Avivi, Y., and **Grafi, G.** (2002) Phosphorylation of histone H3 at lysine 10 cannot account directly for the detachment of human heterochromatin protein 1gamma from mitotic chromosomes in plant cells. *J. Biol. Chem.* 277, 30921-30927.
 18. Zemach, A. and **Grafi, G.** (2003) Characterization of *Arabidopsis thaliana* methyl-CpG-binding domain (MBD) proteins. *Plant J.* 34, 565-572.
 19. Williams, L., Zhao, J., Morozova, N., Li, Y., Avivi, Y. and **Grafi G.** (2003) Chromatin reorganization accompanying cellular dedifferentiation is associated with modifications of histone H3, redistribution of HP1, and activation of E2F-target genes. *Dev. Dyn.* 228, 113-120.
 20. Avivi Y., Morad V., Ben-Meir H., Zhao J., Kashkush K., Tzfira T., Citovsky V., and **Grafi G.** (2004) Reorganization of Specific Chromosomal Domains and Activation of Silent Genes in Plant Cells Acquiring Pluripotentiality. *Dev. Dyn.* 230, 12-22.
 21. **Grafi G.** (2004) How cells dedifferentiated: a lesson from plants. *Dev. Biol.* 268, 1-6.
 22. Leiva-Neto J. T., **Grafi G.**, Sabelli, P. A., Dante, R. A., Woo, Y-M., Maddock, S. Gordon-Kamm, W. J., and Larkins B. A. (2004) A dominant negative mutant of cyclin-dependent kinase A reduces endoreduplication but not cell size or gene expression in maize endosperm. *Plant Cell* 16, 1854-1869.
 23. Mosquna, A., Katz, A., Shochat, S., **Grafi, G.**, and Ohad, N. (2004) Interaction of FIE, a polycomb protein, with pRb: possible mechanism regulating endosperm development. *Mol. Genet. Genomics* 271, 651-657.
 24. **Grafi, G.**, and Avivi, Y. (2004) Stem cells: a lesson from dedifferentiation. *Trend Biotech.* 22, 388-389.
 25. Li, Y., Butenko, Y., and **Grafi, G.** (2005) Histone deacetylation is required for progression through mitosis in tobacco cells. *Plant J.* 41, 346-352.
 26. Zemach, A., Li, Y., Wayburn, B., Ben-Meir, H., Kiss, V., Avivi, Y., Kalchenko, V., Jacobsen, S.E., and **Grafi, G.** (2005) DDM1 binds *Arabidopsis* methyl-CpG binding domain proteins and affects their subnuclear localization. *Plant Cell* 17, 1549-1558.
 27. Zemach, A., Li, Y., Ben-Meir, H., Oliva, M., Mosquna, A., Kiss, V., Avivi, Y., Ohad, N., and **Grafi G.** (2006) Different domains control the localization and mobility of LIKE HETEROCHROMATIN PROTEIN1 in *Arabidopsis* nuclei. *Plant Cell* 18, 133-145.
 28. Shargal, A., Golobovich, S., Yablovich, Z., Shlizerman, L.A., Stern, R.A., **Grafi, G.** Lev-Yadun, S., and Flaishman, M.A. (2006) Synthetic cytokinins extend the phase of division of parenchyma cells in developing pear (*Pyrus communis* L.) fruits. *J. Hort. Sci. Biotech.* 81, 915-920.

29. Zemach, A. and **Grafi G.** (2007) Methyl-CpG-binding domain (MBD) proteins in plants: interpreters of DNA methylation. *Trends Pl. Sci.* 12, 80-85.
30. **Grafi, G.**, Zemach, A., Pitto, L. (2007) Methyl-CpG binding domain (MBD) proteins in plants. *BBA - Gene Regulatory Mechanisms* 1769, 287-294.
31. **Grafi, G.**, Ben Meir, H., Avivi, Y., Dahan, Y., Moshe, M., and Zemach, A. (2007) Histone methylation controls telomerase-independent telomere lengthening in cells undergoing dedifferentiation. *Dev. Biol.* 306, 838-846.
32. Zemach, A., Gaspan, O., and **Grafi, G.** (2008) The Three Methyl-CpG-binding Domains of AtMBD7 Control Its Subnuclear Localization and Mobility. *J. Biol. Chem.* 283, 8406-8411.
33. Granot, G., Sikron-Persi, N., Li, Y. and **Grafi, G.** (2009) Phosphorylated H3S10 occurs in distinct regions of the nucleolus in differentiated leaf cells. *BBA - Gene Regulatory Mechanisms* 1789, 220-224.
34. **Grafi, G.** (2009) The complexity of cellular dedifferentiation: implications for regenerative medicine. *Trends in Biotechnology* 27, 329-332.
35. Zhao, J. Paul, L.K. and **Grafi, G.** (2009) The maize HMGA protein is localized to the nucleolus, can be acetylated in vitro at its globular domain and phosphorylation by CDK reduces its binding activity to AT-rich DNA. *BBA - Gene Regulatory Mechanisms* 1789, 751-757.
36. Zemach, A., Paul, L.K., Stambolsky, P., Efroni, I., Rotter, V. and **Grafi, G.** (2009) The C-terminal domain of the Arabidopsis AtMBD7 protein confers strong chromatin binding activity. *Exp. Cell Res.* 315, 3554-3562.
37. Granot, G., Sikron-Persi, N., Florentin, A., Gaspan, O., Talwara, S., Paul, L.K., Morgenstern, Y., Granot Y. and **Grafi G.** (2009) Histone modifications associated with drought tolerance in the desert plant *Zygophyllum dumosun* Boiss. *Planta* 231, 27-34.
38. Damri, M., Ben-Meir, H., Avivi, Y., Caspi-Chalifa, V., Wolfson, M., Fraifeld, V., and **Grafi, G.** (2009) Senescing cells share common features with dedifferentiating cells. *Rejuvenation Res.* 12, 435-443.
39. **Grafi G.**, Chalifa-Caspi V, Nagar T, Plaschkes I, Barak S, Ransbotyn V. (2011) Plant response to stress meets dedifferentiation. *Planta* 233, 433–438.
40. **Grafi G.**, Florentin A, Ransbotyn V, and Morgenstern Y. (2011) The stem cell state in plant development and in response to stress. *Front. Plant Sci.* 2, 53.
41. Bai B, Sikron N, Gendler T, Kazachkova Y, Barak S, **Grafi G.**, Khozin-Goldberg I, Fait A. (2012) Ecotypic Variability in the Metabolic Response of Seeds to Diurnal Hydration-Dehydration Cycles and Its Relation to Seed Vigor. *Plant Cell Physiol.* 53,

38-52.

- 42 Florentin A., Damri, M., **Grafi G.** (2013) Stress induces plant somatic cells to acquire some features of stem cells accompanied by selective chromatin reorganization. *Dev. Dyn.* 242:1121-1133
- 43 **Grafi G.** (2013) Stress cycles in iPSCs/stem cells: implications for tissue repair. *Biogerontology* 14: 603-608
- 44 Granot G. and **Grafi G.** (2014) Epigenetic information can reveal phylogenetic relationships within Zygophyllales. *Plant Syst. Evol.* 300: 1819-1824.
- 45 Lev-Yadun S., **Grafi G.** and Grafi D. (2015) Conservative harvest habit by harvester ants exploiting fields of bread wheat. *Israel J. Pl. Sci.* 62: 17-21.
- 46 **Grafi G.** and Barak S. (2015) Stress induces cell dedifferentiation in plants. *Biochem. Biophys. Acta.* 1849: 378-384.
- 47 Granot G. Morgenstern Y., Khan A., Givaty Rapp Y., Pesok A., Nevo E. and **Grafi G.** (2015) Internucleosomal DNA fragmentation in wild emmer wheat is catalyzed by S1-type endonucleases translocated to the nucleus upon induction of cell death. *Biochem. Biophys. Acta* 1849: 239-246.
- 48 Rapp YG, Ransbotyn V, **Grafi G.** (2015) Senescence Meets Dedifferentiation. *Plants* 4:356-368.
- 49 Khan A, Yadav NS, Morgenstern Y, Zemach A, **Grafi G.** (2016) Activation of Tag1 transposable elements in Arabidopsis dedifferentiating cells and their regulation by CHROMOMETHYLASE 3-mediated CHG methylation. *Biochim Biophys Acta.* 1859: 1289-1298.
- 50 Givaty-Rapp Y, Yadav NS, Khan A, **Grafi G.** (2017) S1-Type Endonuclease 2 in Dedifferentiating Arabidopsis Protoplasts: Translocation to the Nucleus in Senescing Protoplasts Is Associated with De-Glycosylation. *PLoS One* 12: e0170067.
- 51 Raviv B, Granot G, Chalifa-Caspi V, **Grafi G.** (2017) The dead, hardened floral bracts of dispersal units of wild wheat function as storage for active hydrolases and in enhancing seedling vigor. *PLoS One.* 2017 May 11;12(5):e0177537.
- 52 Raviv B, Aghajanyan L, Granot G, Makover V, Frenkel O, Gutterman Y, **Grafi G.** (2017) The dead seed coat functions as a long-term storage for active hydrolytic enzymes. *PLoS One* 12: e0181102.
- 53 Godwin J, Raviv B, **Grafi G.** (2017) Dead Pericarps of Dry Fruits Function as Long-Term Storage for Active Hydrolytic Enzymes and Other Substances That Affect Germination and Microbial Growth. *Plants (Basel)* 6, pii: E64.
- 54 Yadav NS, Khadka J, **Grafi G.** (2018) Arabidopsis mutants may represent recombinant introgression lines. *BMC Res Notes.* 11: 227.

- 55 Khadka J, Yadav NS, Granot G, **Grafi G.** (2018) Seasonal growth of *Zygophyllum dumosum* Boiss.: summer dormancy is associated with loss of the permissive epigenetic marker dimethyl H3K4 and extensive reduction in proteins involved in basic cell functions. *Plants* 7, 59.
- 56 Raviv B, Godwin J, Granot G, **Grafi G.** (2018) The Dead Can Nurture: Novel Insights into the Function of Dead Organs Enclosing Embryos. *Int J Mol Sci.* 19, pii: E2455.
- 57 **Grafi G.** (2018) A “mille-feuilles” of stress tolerance in the desert plant *Zygophyllum dumosum* Boiss. : Highlighting epigenetics. *Isr. J. Pl. Sci.* 66, 52-59.
- 58 Yadav NS, Khadka J, Domb K, Zemach A, **Grafi G.** (2018) CMT3 and SUVH4/KYP silence the exonic retroelement Evelknievel to allow for reconstitution of CMT1 mRNA. *Epigenetics & Chromatin* 11, 69.