CURRICULUM VITAE

1. Name & Surname: Serpil ÜNYAYAR
2. Date of Birthday: March 03, 1965
3. Title: Professor Dr.

4. Educational Background:

Degree	Field of Study	University/Country	Date
BA	Biology	Hacettepe University/Turkey	1987
MA	Biology	İnönü University/Turkey	1990
PhD	Biology	İnönü University/Turkey	1995

5. Academic Titles Awarded:

Title	Field of Study	University/Country	Date
Research Assistant	Biology	İnönü University/Turkey	1988-1994
Assistant Professor	Biology	Mersin University/Turkey	1995-2000
Associate Professor	Biology	Mersin University/Turkey	2000-2006
Professor	Biology	Mersin University/Turkey	2006-2019
Professor	Medical Biology and Genetics	Girne American University	2019-

6. Postgraduated Theses Supervised

6.1 PhD Theses

1. Aytunç YILDIZLI, Investigation of effects of pathogen bacterium *Xanthomonas campestris* pv. translucens and its elicitor on stomatal behaviours of barley, Mersin University, 2019.

2. Sertan ÇEVİK, Determination of effect on protein oxidation rates and protein expression of drought stress in different two chickpea species, Mersin University, 2015.

3. Ayşin Güzel, The relationship with plasma membrane annion channels of drought tolerance: Determination of gene sequences encoding plasma membrane annion channel proteins in *Hordeum vulgare* L. (barley), Mersin University (2th co-adviser; Dr.Rob Roelfsema-Würzburg University, Germany), 2013.
4. F.Özlem Çekiç, Effect on some physiological and biochemical parameters of arbuscular mycorrhiza in peper (*Capsicum annuum* L.) under salt conditions, Mersin University, 2008.

6.2. MA Theses

1. Aytunç Yıldızlı, Investigation of effect of exogenous synthetic *myo*-inositol on drought tolerance of *Capsicum annuum* L. (biber), Mersin University, 2014.

2. Sertan Çevik, Investigation of effects on antioxidant system of ascorbate and glutathione applications in Cicer (chickpea) genotypes and comparison of their genomic variations under drought, Mersin University, 2009.

3. Ayşin Güzel, Investigation of effect of abscisic acid and calcium (Ca^{+2}) on some physiological and growth parameters in tomato plants exposed to drought stress, Mersin University, 2006.

4. Fazilet Özlem Çekiç, Investigation of antioxidant system and some physiological parameters in tomatyo plants exposed to salt (NaCl) and heavy metal (Cadmium), Mersin University, 2004.

5. Olcay Dadaloğlu, The use of bioreactor in determination of conditions of production of abscisic acid in white rot fungi, Mersin University, 2000.

6. Elif Ünal, Relationship between indole-3-acetic acid (IAA) production and peroxidase activity depending on culture period in *Funalia trogii*, Mersin University, 1998.

7. Publications

7.1 Articles

1- Esen Yıldız Bekfelavi, Aytunç Yıldızlı, Nermin Şimşek Kuş, Sertan çevik, Serpil Ünyayar, Osmoprotectant and antioxidant effects of new synthesized 6-(2-hydroxyethyl) cyclohex-3-enol on barley under drought stress, Biologia Futura, 72, 241-249, 2021.

2- Sertan Çevik, Gürler Akpınar, aytunç Yıldızlı, Murat Kasap, Kübra Karaosmanoğlu, Serpil Ünyayar, Comparative physiological and leaf proteome analysis between drought-tolerant chickpea *Cicer reticulatum* and drought-sensitive chickpea *C.arietinum*, Journal of Biosciences, **44,** 20 (2019). https://doi.org/10.1007/s12038-018-9836-4.

3- Aytunç Yıldızlı, Sertan Çevik, **Serpil Ünyayar**, Effects of exogenous *myo*-inositol on leaf water status and oxidative stress of *Capsicum annuum* under drought stress, *Acta Physiologiae Plantarum*, https://doi.org/10.1007/s11738-018-2690-z, 2018.

4- Aysin Guzel Deger, So€nke Scherzer, Maris Nuhkat, Justyna Kedzierska, Hannes Kollist, Mikael Brosche, **Serpil Unyayar**, Marie Boudsocq, Rainer Hedrich and M. Rob G. Roelfsema, **Guard cell SLAC1-type anion channels mediate flagellin-induced stomatal closure**, **New Phytologist**, 208, 162-173, 2015.

5- Çevik, Sertan; Yıldızlı, Aytunç; Yandım, Gurbet; Göksu, Haydar; Gultekin, Mehmet Serdar, Güzel Deger, Ayşin; Çelik, Ayla; Şimşek Kuş¸ N.; **Ünyayar, Serpil**, Some synthetic cyclitol derivatives alleviate the effect of water deficit in cultivated and wild-type chickpea species, **Journal of Plant Physiology**, 171 (10), 807-816, 2014.

6- Çekiç, F.**,Ünyayar, S.,** Ortaş, İ., Eff ects of arbuscular mycorrhizal inoculation on biochemical parameters in *Capsicum annuum* L. (pepper) grown under long term salt stress, **Turk.J Botany**, 36, 63-72, 2012.

7- Birgul Mazmancı, Mehmet Ali Mazmanci, Ali Unyayar, **Serpil Unyayar**, Fazilet Ozlem Cekic, Aysin Guzel Deger, Serap Yalin, Ulku Comelekoglu**, Protective Effect of *Funalia trogii* crude extract on Deltamethrin-Induced Oxidative Stress in Rats, Food Chemistry,** 125, 1037–1040, 2011.

8- **Serpil UNYAYAR**, Ayşin GUZEL DEĞER, Ayla CELİK, Fazilet Ozlem CEKİC, Sertan CEVİK, **Cadmium-induced antioxidant status and sister-chromatid exchanges in *Vicia faba* L.**, **Turk J Biol**, 34 (4) 413-422, 2010.

9- Ayla Çelik & **Serpil Ünyayar** & Fazilet Özlem Çekiç & Ayşin Güzel, **Micronucleus frequency and lipid peroxidation in *Allium sativum* root tip cells treated with gibberellic acid and cadmium, Cell Biol Toxicol**, 24/159–164,**2008**.

10- Çekiç, F.Ö., **Ünyayar, S.,** Interactive effects of NaCl and CdCl on the antioxidant enzyme activities and some biochemical compounds in two tomato genotypes, **Fresenius Environmental Bulletin**, 15 (7), 633-639, **2006**.

11- **Ünyayar, S.,** Çelik, A., Çekiç, F.Ö., Gözel, A., **Cadmium-induced genotoxicity, cytotoxicity and lipid peroxidation in *Allium sativum* and *Vicia faba***, **Mutagenesis**, 21 (1), 77-81, **2006**.

12- Ünyayar, A., Demirbilek, M., Turkoğlu, M., Çelik, A., Mazmancı, M.A., Erkurt, E.A., **Ünyayar,S.**, Çekiç, Ö., Ataçağ, H., **Evaluation of cytotoxic and mutagenic effects of *Coriolus versicolor* and *Funalia trogii* extracts on mammalian cells**, **Drug and Chemical Toxicology**, 29 (1), 69-83, **2006.**

13- **Ünyayar, S.,** Keleş, Y., Çekiç, F.Ö., Antioxidative response of two tomato species with different drought tolerance as a result of drought and cadmium stress combinations, **Plant Soil and Environment**, 51(2), 57-64, **2005**.

14- **Ünyayar, S.,** Keleş, Y., Ünal, E., Proline and ABA levels in two sunflower genotypes subjected to water stress, **Bulgarian Journal of Plant Physiology**, 30 (3-4), 34-47, **2004**.

15- **Ünyayar, S.,** Aktoklu, E., Büyükaşık, Y., The responses to exogenous abscisic acid of the roots of *notabilis* and wild-type tomato under drought stress, **Israel Journal of Plant Science**, 52 (4), 294-299, **2004.**

16- Keleş, Y., **Ünyayar, S.,** Responses of antioxidant defence system of *Helianthus annuus* to abscisic acid treatment under drought and waterlogging, **Acta Physiologiae Plantarum**, Vol. 26 (2), 149-156, **2004**.

17- **Ünyayar, S.,** Ünal, E., Ünyayar, A., Relationship Between Production of 3-Indole Acetic Acid (IAA) and Peroxidase-Laccase Activities Depending on the Culture Periods in *Funalia trogii*, **Folia Microbiologyca**, 46 (2), 123-126, **2001**.

18- **Ünyayar, S.,** Topcuoğlu, Ş.F., Bozcuk, S., Abscisic Acid Production by *Pleurotus florida* Cultured in Various Conditions and Its Relation to Growth, **Israel Journal of Plant Sciences**, 45, 19-22, **1997**.

19- **Ünyayar, S.,** Topcuoğlu, Ş.F., Ünyayar, A., A Modified Method for Extraction and Identification of Indole-3-Acetic Acid (IAA), Gibberellic Acid (GA_3), Abscisic Acid (ABA), and Zeatin Produced by *Phanerochaete chrysosporium* ME446, **Bulgarian Journal Plant Physiology**, 22 (3-4), 105-110, **1996**.

7.2 Papers

1- Ayşin Güzel Değer, Sertan Çevik, Aytunç Yıldızlı, M.Ufuk Aslan, **Serpil Ünyayar**, Physiological and proteomic analysis of cyclitol-mediated drought stress alleviation in barley as depending on time, **13th International Conference on reactive oxygen and nitrogen species in plants: Emerging roles in plant form and function**, September 10th-13th, **2017**, **Kuşadası**.

2- **Serpil Ünyayar**, Sertan Çevik, Gurbet Yandım, M.Serdar Gültekin, Ayla Çelik, Nermin Şimşek Kuş, Aytunç Yıldızlı, Ayşin Güzel Değer, Can synthetic cyclitols be induced on the growth and biologically active?, **Plant Biology Congress**, P-2-129, S.435, **2012**, **Freiburg**, **Germany**.

3- Güzel, A., **Ünyayar, S.**, Effects of abscisic acid and Ca^{2+} on pigments and ascorbate contents in tomato seedlings under drought stress, **XV FESPB Congress**, 17-21 July **2006**, **Lyon- France**.

4- Ünyayar, A., Demirbilek, M., Turkoglu, M., Mazmancı,M.A., Erkurt, E.A., **Ünyayar, S.**, Çekic, Ö., Celik, A., Atacag, H., **Cytotoxic activities of *Funalia trogii* (Berk.) Bond. Et. Singer ATCC 200800 Bioactive extract on Hela cells and fibroblast cells, The third International Medicinal Mushroom Conference**, October 12-17, **2005**, Port Townsend, Washington.

5- Gözel, A., **Ünyayar, S.,** Role of abscisic acid and Ca^{+2} on superoxide dismutase isoforms and lipid peroxidation in tomato under drought stress, **II.International Natural Protection Symposium**, 8-10 September **2005**, Dumlupınar University, Kütahya-Türkiye.

6- **Ünyayar, S.,** Changes in Abscisic Acid and Indole-3-Acetic Acid Concentrations in *Funalia trogii* Subjected to salt Stress, **Second Balkan Botanical Congress** (SBBC), 14-18 May **2000**; **İstanbul-Turkey**.

7- **Ünyayar, S.,** Topcuoğlu, Ş.F., Ünyayar, A., A Modified Method for Extraction and Identification of Indole-3-Acetic Acid (IAA), Gibberellic Acid (GA_3), Abscisic Acid (ABA) and Zeatin Produced by *Phanerochaete chrysosporium* ME446, **10th FESPP Congress**, 9-13 September 1996, **Florence, Italy**.

7.3. Books

1- Plant Biochemistry (4th edition), Heldt and Piechulla, Translation editors; Ayaz, F.A. ve Sökmen A., ISBN 978-605-320-022-2, Nobel Press, 2015, **(Translation book chapter)**

2- Plant Physiology (3 th edition), Taiz & Zeiger, Translation editor; Prof.Dr.İsmail Türkan, ISBN 978-9944-341-61-5, Palme Press, 2008, **(Translation book chapter).**

8. Projects

1- **Ünyayar, S,** Çevik, S., The role of mycorrhizal symbiosis in reduction of oxidative stress in *Cicer arietinum* L. and wild chickpea *C.reticulatum* under drought stress, Project no: 117Z004, 2018, **TÜBİTAK-(Project Leader).**

2- **Ünyayar, S**, Güzel Değer, A., The investigation of effect on some biochemical activities and stomatal opening in barley (*Hordeum vulgare L.*) under drought stress, Project no: 115Z032, 2016, **TÜBİTAK-(Project Leader).**

3- **Ünyayar, S.,** Güzel Değer, A, Çevik S, Yıldızlı A, Investgation of effect on protein expression and abscisic acid accumulation of synthetic cyclitol derivative dl-cyclopenthane-1,2,3-triol applied to leaves of *Hordeum vulgare* (arpa) under drought stress. Project no: 2015-AP3-1073, 2015, **Mersin University Research Fund-(Project Leader).**

4- **Ünyayar, S.,** Gültekin, M.S., Simsek Kuş, N., Çelik,A., Güzel Değer, A., Çevik,S.,Yandım, G., **Investigation of cytotoxic effects and biological activities of some synthetic cyclitol derivatives in Cicer (chickpea) seedlings exposed to drought stress,** Project no: FEF BY (SÜ) 2010-5 B, 2014, **Mersin University Research Fund - (Project leader).**

5- **Ünyayar, S.,** Güzel Değer, A. **Investigation of effects oxidative stress on ion channel in leaves of *Hordeum vulgare* L. (Barley) ve *Nicotiana tabacum* L. (Tobacco) plants.** Project no: FBE B (AGD) 2011-3 DR, 2014, **Mersin University Research Fund- (Project Leader).**

6- **Ünyayar, S.,** Çevik, S. **Determination of effects on protein oxidation rates and protein expression of drought stress in two chickpea species**, Project no:BB (SÇ) 2012-4 DR, 2012, **Mersin University Research Fund- (Project leader).**

7- Birgül MAZMANCI, **Serpil ÜNYAYAR**, Mehmet Ali MAZMANCI,Ali ÜNYAYAR, Fazilet Özlem ÇEKİÇ, Ayşin GÜZEL DEĞER, Investigation of effects on oxidative stress of *Funalia Trogii*, Project no:FEF BB (BM) 2006-3, 2010, **Mersin University Research Fund- (Research assistant).**

8- **Ünyayar, S.,** Çelik, A., Çekiç, F.Ö., Güzel, A., Eke, D., Investigation of genotoxic and physiological effects of cadmium on crop plants, Project no:FEF BB (SÜ) 2006-1, 2008, **Mersin University Research Fund -(Proje yürütücüsü).**

9- **Ünyayar, S.,** Çekiç, F.Ö., Investigation of effect of abscisic acid on enzyme activities and growth parameters in sunflower leaves under drought stress, Project no: **FEF BB (SÜ), 2002, Mersin University Research Fund (Project Leader).**

10- **Ünyayar, S.,** Keleş, Y., Ünal, E., Relationship between leaf growth, abscisic acid and biochemical changes under several stress conditions, TBAG-2077 (101T088), 2000, **TÜBİTAK-(Project Leader).**

11- **Ünyayar, S.,** Dadaloğlu, O., The use of bioreactor in determination of growth conditions of abscisic acid in white-rot fungi, Project no: FBE.B. (OD). 99-1, 1999, **Mersin University Research Fund (Project Leader).**

12- **Ünyayar, S.,** Ünal, E., Relationship between IAA content and peroxidase activity in Funalia trogii depending on culture period, Project no: FBE.B.YL. (EÜ) 97-1, 1997, **Mersin University Research Fund (Project Leader).**

13- **Ünyayar, S.,** Ünal, E., Production of indole-3-acetic acid, abscisic acid, gibberellic acid and zeatin in immobilized *Phanerochaete chrysosporium* ME446, FEFB(SÜ) 1995-2/1), 1995, **Mersin University Research Fund-(Project Leader).**

14- Topcuoğlu, Ş.F., **Ünyayar, S.,** Production of plant growth substances such as auxin, sitokinin and gibberellic acid and determination of their biological activities in white-rot fungus *Phanerochaete chrysosporium* ME446, Project no:DPT-TBAG/37, 1994, **TÜBİTAK-(Research Assistant).**

15- Bozcuk, S., Topcuoğlu, Ş.F., Fışkın, K., Ünyayar, A., Yeşilada, Ö., **Ünyayar, S.,** Determination of secondary enzyme activities and amounts of abscisic acid, nucleic acid (DNA) in white-rot fungi under different incubation conditions, Project no: İ.Ü.A.F.89/09), 1989, **İnönü University Research Fund (Research Assistant).**

9.Theses

MA Thesis; The relationship between abscisic acid production and growth in some fungi *Phanerochaete chrysosporium* ME446 and *Pleurotus florida* (Supervisor: Prof.Dr. Suna BOZCUK).

PhD Thesis; Determination of biological activities and production of indole-3-acetic acid, gibberellic acid, abscisic acid and zeatin depending on culture periods *Phanerochaete chrysosporium* ME446 (Supervisor: Prof.Dr.Ş.Fatih TOPCUOĞLU).

10. Other Academic and Scientific Activities

1- Ali Ünyayar & **Serpil Ünyayar**, New approaches in the biotechnology of lignocellulosics, Biotechnological exploitation of Food & Agro-Industrial Wastes for creation of added-value, **Invited Speaker, University of Patras, Department of Chemistry**, 30 March, 2009, **Patras-Greece.**

11. Membership of Scientific organisations

1- Federation of European Societies of Plant Biology (FESPB), 1993-

2-Association of Biologists, 1988-

12. Courses taught over the past two years

Title of Course	Status	Academic Unit
Medical Biology and Genetics	Undergaduated	Premedicine
Medical Biology and Genetics	Undergaduated	Pharmacy
Pharmaceutical Botany	Undergraduated	Pharmacy
Plant Biology	Undergraduated	Pharmacy