

# Curriculum Vitae

**Rafail S. Toma**  
**(B.Sc. M.Sc. Ph.D.)**

*(Agriculture, Horticulture, Plant Tissue Culture)*



## Personal Data

**Surname:** Toma

**Forenames:** Rafail Shlemon

**Gender:** Male

**Marital Status:** Married, one son and one daughter.

**Date and Place of Birth:** 1/7/1973 Duhok, Iraq

**Nationality:** Iraqi

**Academic Status:** Assistant Professor

**Languages:** Assyrian (mother tongue), Kurdish, English and Arabic  
(spoken and written)

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Kurdistan Region, Iraq.

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## Current Position

- Teaching staff member at the department of Horticulture, College of Agriculture, University of Duhok.

## **Education and Qualifications**

### **(A) Schooling**

- 1979-1985 Shorash Primary School, Duhok
- 1985-1988 Al-Bakir Intermediate School, Duhok
- 1988-1992 Kawa Secondary School, Duhok

### **(B) University**

- 1993-1997 B.Sc. Plant Production,  
College of Agriculture, University of Duhok, Kurdistan, Iraq.
- 1998-2001 M.Sc. Horticulture, College of Agriculture, University of  
Duhok, Kurdistan, Iraq.
- 2006-2009 PhD Plant Tissue Culture, Horticulture Dept., College  
of Agriculture, University of Duhok, Kurdistan, Iraq.

## **Employment**

- 1997-1998 Demonstrator and research assistant at Plant  
Production Dept., College of Agriculture, University of Duhok.
- 2001-2004 Assistant lecturer, Dept. of Horticulture, College of  
Agriculture, University of Duhok,  
Kurdistan, Iraq.
- 2004-present time, Teaching staff member at the Department of Horticulture, College of  
Agriculture, University of Duhok, Kurdistan, Iraq.

## **Professional Experience**

- (1) Teaching undergraduate courses in Plant Growth Regulators, Plant Physiology and Plant Tissue Culture.
- (2) Teaching postgraduate study course in Adv. Plant Tissue Culture, Adv. Plant Growth Regulators and Scientific Research Methodology
- (3) Supervising Master degree students at plant tissue culture
- (4) Supervising 5 MSc students and 1 PhD student
- (5) Supervising two PhD students in Plant Tissue Culture
- (6) Supervising the work at the PTC lab at the College of Agriculture for commercial economic plants production.
- (7) Supervising the examination committee of higher studies at the College of Agriculture since 2011.
- (8) Supervising the technical committee of the first, second and third Scientific Agricultural Conference at the College of Agriculture, UoD in 2012, 2016 and 2019.
- (9) A member of University committee of arranging the higher studies scientific writing and scientific affairs.
- (10) A member of University ranking committee.
- (11) Participating in 8 postgraduate examination viva (2 PhD and 6 MSc).
- (12) Visiting the University of Hannover, Germany (Institute of Horticulture) to sign a scientific protocol between CoA- UoD and Hannover University (May 2012).

- (13) Participating in a workshop about publication research papers at international journals at the University of Vanderbilt, USA. September 2016.
- (14) Coordinating a pilot agricultural project between UoD and GIZ (German organization). April 2017- November 2018. "Capacity Development and vocational training in vegetable gardening and orchards for Syrian refugees at Domiz 1 and persons from host communities around Dohuk, in Kurdistan Region of Iraq".
- (15) Participating in a workshop in Germany: "Capacity Development and Vocational Training on Agriculture Value Chains in Duhok Governorate". 19<sup>th</sup> – 23<sup>rd</sup> March 2018. Stuttgart-Hohenheim, University, Germany.
- (16) Supervising a pilot agricultural project between UoD and GIZ. January 1<sup>st</sup> 2019- June 30 2019. "Promotion and consolidation of Vegetable Production in Domiz 1 Greenhouses for Syrian Refugees and Apple Juice Production for Host Community Farmers in Kurdistan Region- Iraq".
- (17) Project Manager of potato minitubers production via tissue culture technique in cooperation with KARTOPA Company and IBP Company March 1<sup>st</sup> 2020- continued.
- (18) Project manager of Potato value chain development project in Kurdistan Region of Iraq. 2020-2025. Partnership with CABI, KH, HZPC, Directorate of Agriculture in Duhok Governorate and UoD.
- (19) Project Manager of Make Horticulture Knowledge Work Project. April 2021- April 2022. Partnership with Nuffic, Delphy, ICRA, Eco-consult, JUST, University of Basrah and UoD.

## **Research and Publications**

1. PhD dissertation entitled "Micropropagation and *in vitro* shoot-tip grafting of apple (*Malus domestica* Borkh.) and pear (*Pyrus spp.*).
2. M.Sc. Thesis entitled "Effect of planting density, boron and tuber seed size on the yield and growth of potato (*Solanum tuberosum* L.). Colleg of Agriculture, University of Duhok, Iraq 2001.
3. An economic comparison between two administrative types for peach orchard in Duhok governorate. 2002. JDU. Vol. (5) No. (2), P. 33-43
4. Effect of bulb size and planting density, on onion seed yield. 2004. JDU. Vol. (7) No. (1) P. 12-17
5. The response of potato to planting density, boron and tuber seed size. 2004. JDU. Vol. (7) No. (2), P. 8-20
6. Yield response of broad bean to planting density and spraying with a mixture of calcium and boron. 2004. JDU. Vol. (7) No. (2), P. 21-27
7. Developing an *in vitro* propagation protocol for spider plant (*Chlorophytum comosum*). Kurdistan 3<sup>rd</sup> conference of Biological sciences, University of Duhok. 4-6 May, 2010.
8. Effect of medium consistency and different growth regulators on Boston fern (*Nephrolepis exaltata*) micropropagation. The International Journal for Sciences and Technology (IJST). Vol. (5) No. (4). 2010 Amman, Jordan.
9. Factors involved in *in vitro* shoot-tip grafting of apple (*Malus domestica* Borkh.) and pear (*Pyrus sp.* L.). Tropentag, September 14-16, 2010, Zurich "World Food System— A Contribution from Europe".
10. Factors involved in *ex vitro* rooting of *Acalypha wilkesiana*, *Ficus microcarpa* var. *crassifolia*, *Bougainvillea glabra* and *Vitex rotundifolia* stem cuttings. Journal of Duhok University. Vol. (13) No. (2) 2010.

11. In vitro propagation through seed culture and regeneration of *Asparagus densiflorus* L. through callus cultures derived from hypocotyls. (Accepted for publication at International Journal of Pure and Applied Sciences and Technology, 2012)
12. In vitro micropropagation of poinsettia (*Euphorbia pulcherrima* Willd.). Journal of Kirkuk for Agricultural Sciences. Vol. (3) No. (1) 2012
13. In vitro propagation of Ginger (*Zingiber officinale* Rosc.) from a Single Bud Explant as Affected by Kinetin and Benzyle Adenine. The First Scientific Agricultural Conference at the Faculty of Agriculture and Forestry, University of Duhok, Iraq, April 10-12, 2012. JUD, Vol. 15, No. 1, 2012.
14. IDENTIFICATION AND PURIFICATION OF POTATO VIRUS Y (PVY) IN DUHOK GOVERNORATE. The First Scientific Agricultural Conference at the Faculty of Agriculture and Forestry, University of Duhok, Iraq, April 10-12, 2012. JUD, Vol. 15, No. 1, 2012.
15. In vitro morphogenic response of apple (*Malus domestica* Borkh.) and pear (*Pyrus communis* L.) to the elevated levels of copper and Myo-inositol. ACTA Agrobotanica Vol. 65 (3): 43-48, 2012
16. Rooting Response of *Rosa canina* and *Cotoneaster acuminatus* to Different in vitro Factors. *American Journal of Experimental Agriculture* 4(6): 724-731, 2014
17. Micropropagation of *Crisanthemum hortorum* L. in relation to different combinations of cytokinins and auxins. The 2<sup>nd</sup> International Conference of Horticulture Sciences 13-14 April, 2014. Mesopotamia J. of Agric. Vol. (42) Supl. (1) 2014.
18. Micropropagation Protocol of Fig (*Ficus carica* L. CV. Benaty) from Apical and Lateral Buds. Journal of Zankoi Sulaimani Part-A- Pure and Applied Sciences 17 (2). 2015
19. MICROTUBERIZATION RESPONSE OF DESIREE AND MOZART POTATOES (*Solanum tuberosum* L.) TO DIFFERENT KINDS AND LEVELS OF CARBON SOURCES. JDU, Vol 19 (1). 2016
20. IN VITRO PROPAGATION OF APRICOT (*PRUNUS ARMENIACA* L.) ROYAL CULTIVAR AS AFFECTED BY EXPLANT SOURCE AND THEIR TAKING TIME. JDU, Vol 19 (1). 2016
21. Micropropagation Response of Three Grape Vines (*Vitis vinifera* L.) Cultivars to Ferrous, Nitrate and Growth Regulators. *Vegetos* 31(3):126-131, 2018
22. AN EFFICIENT PROTOCOL FOR BEGONIA REX MICROPROPAGATION USING DIFFERENT EXPLANT TYPES, MS SALT STRENGTHS AND VARIOUS PLANT GROWTH REGULATORS. *International Journal of Advances in Science, Engineering and Technology (IJASEAT)*. 7(4): 9-15. 2020.
23. EMBRYO CULTURE AND IN VITRO CLONAL PROPAGATION OF OAK (*Quercus aegilops* L.). *The Iraqi Journal of Agricultural Science* 51 (1), 347-355. 2019
24. Effect of Carbon Source in Woody Plant Medium with Different Salt Strengths on Oak (*Quercus aegilops* L.) Micropropagation. *Journal of Plant Production* 10 (9), 751-756. 2019
25. Cost Effective Culture Medium for Micropropagation of Paulownia (*Paulownia tomentosa* Steud.) and Catalpa (*Catalpa bignonioides* Walt.). Doi:10.21608/asajs.2019.52886 2 (4), 33-46
26. "RAFAIL S. TOMA, TARIQ A. AHMED; AN EFFICIENT PROTOCOL FOR BEGONIA REX MICROPROPAGATION USING DIFFERENT EXPLANT TYPES, MS SALT STRENGTHS AND VARIOUS PLANT GROWTH REGULATORS". *International Journal of Advances in Science, Engineering and Technology (IJASEAT)*" Vol.7(4). 15-Sep 2020 IJASEAT [http://iraj.in/journal/IJASEAT/paper\\_detail.php?paper\\_id=16638&name ...](http://iraj.in/journal/IJASEAT/paper_detail.php?paper_id=16638&name ...)
27. "Fadladeen, LH; Toma, RS;" EMBRYO CULTURE AND IN VITRO CLONAL PROPAGATION OF OAK (*Quercus aegilops* L.) *The Iraqi Journal of Agricultural Science*. Vol. 51(1). 347-355. 2020. Jami'at Baghdad

28. "Fadhaladeen, Laylan H; Toma, Rafail S; Mohammed, Medya A; Shaheen, Ahmed A; Ahmed, Huda B; "Response of Red Maple (*Acer rubrum* L.) Micropropagation to Different In Vitro Conditions Journal of Plant Production. Vol. 12(6). 651-655 2021. "Mansoura University, Faculty of Agriculture.
29. "Faizy, Waad S; Toma, Rafail S; Tamer, Yousif S; Khaza'al, Wisam; Auxins and Cytokinins Involved in Micropropagation of Pepino Plant (*Solanum muricatum* Aiton). Diyala Journal of Agricultural Sciences. Vol. 13(1). 2021. Diyala University

## **Memberships**

- Member of the Kurdistan Agronomist Syndicate since 1997
- Member of Teachers Syndicate-Duhok branch, Kurdistan 1998.
- Member of Kurdistan University and Institute Teachers Syndicate since August, 2010

## **Attended Conferences**

- Plant Biotechnology Conference (19-21 April, 2005). University of Hawaii at Manoa, USA.
- Kurdistan 3<sup>rd</sup> Conference of Biological Sciences. University of Duhok, Iraq 4-6 May 2010.
- Tropentag, September 14-16, 2010, Zurich "World Food System —A Contribution from Europe".
- Revitalizing Research in Kurdistan International Conference, Erbil, Iraq 14-16 December, 2010.
- The First Scientific Agricultural Conference at the College of Agriculture, University of Duhok, Iraqi Kurdistan Region. 12-14 April 2012.
- The first Agricultural Conference at the Faculty of Agricultural Sciences, Sulaimani University. October, 2013.
- International Conference of Horticulture Sciences, University of Mosul 13-14 April, 2014.
- The second Scientific Agricultural Conference at the College of Agriculture, University of Duhok, Iraqi Kurdistan Region. 26 and 27 April 2016.
- The third International Agricultural Conference between University of Duhok and University of Mosul. 2 and 3 October 2019.
- IRES Conference and Member's Meeting at Hotel Colosseum, Rome, Italy during 20th - 21st August, 2019.

## **Training and Workshops**

- Taking a Plant Propagation course (TPSS) at the College of Tropical Plants and Soil Sciences, University of Hawai'i at Manoa, USA January- May 2005.
- English Language Institute (ELI, January-May, 2005) at the University of Hawai'i at Manoa (USA). Taking two advanced courses in Reading and Lessening Speaking.

- Participating in a workshop about publication research papers at international journals at the University of Vanderbilt, USA. 13<sup>th</sup> - 21<sup>st</sup> September 2016.
- Participating in a workshop in Germany: "Capacity Development and Vocational Training on Agriculture Value Chains in Duhok Governorate". 19<sup>th</sup> – 23<sup>rd</sup> March 2018. Stuttgart-Hohenheim, University, Germany.
- Participating in the first training on "Make Horticulture Knowledge Work" at UoD. July 4<sup>th</sup> to 8<sup>th</sup> 2021.
- Participating in the 2<sup>nd</sup> online training on "Make Horticulture Knowledge Work". August 15<sup>th</sup> to 18<sup>th</sup>.