



Biographical Resume

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Vital

Birth date: July 15, 1962

Birth Place: Mursa / Jarash, Jordan

Title: Professor of Plant Biotechnology and Biodiversity.

Education

- Sabbatical: Sept. 2005-Aug.2006. Department of Natural Resources and Environmental Sciences. University of Illinois, Urbana-Champaign, USA. Research: Production of secondary metabolites from medicinal plants. Salinity tolerance in tomato in vitro.
- Fulbright: (used as sabbatical leave) Sept. 1999-Aug.2000. Purdue University, West Lafayette, IN, USA. Plant Tissue Culture/ Plant Cell Culture and Physiology. Research: Cell culture cold acclimation, cryopreservation, cell protein, carbohydrate, RNA and other physiological and biochemical aspects.
- Post Doctorate: Sept. 1995/Jan 1997. Department of Natural Resources and Environmental Sciences, University of Illinois, Urban-Champaign, USA. Plant Tissue Culture/ Plant Cell Culture and Physiology. Research: Production of secondary metabolites via cell culture; in vitro conservation and cryopreservation of plant cells.
- Post Doctorate: Sept. 1990/June 1991. Department of Applied Sciences, Langston University. Langston, OK. USA. Research: Plant Physiology/ Salinity Stress.
- Ph.D. 1990. Department of Horticulture, University of Illinois. Illinois, USA. Horticulture, plant physiology and tissue culture. Thesis: In Vivo and In Vitro Physiological Studies of Water Requirements and Water Relations of Chrysanthemum morifolium Ramat.
- M.Sc. 1986. University of Jordan, Amman, Jordan. Plant Production, Physiology (Vegetable Crops). Thesis: Effect of Plant Population and Burst Application on Yield, Growth and Fruit Quality of Field Tomato in the Jordan Valley.
- B.Sc. 1984. Plant Production, College of Agriculture, University of Jordan, Jordan.

Professional Experience (Examples):

- President, The University of Jordan Aqaba Branch, 4/2012-Present. Jordan.
- Vice-President for Scientific Faculties and Institutes. 10/2010- Present. University of Jordan, Amman, Jordan.
- Editor, Jordan Journal for agricultural Scinces, 04/2012-Present. Ministry of Higher Education, Amman, Jordan.
- Dean, Institute of Agriculture Research, Extension, Training and Education. 12/2009-10/2010. University of Jordan, Amman, Jordan.
- Professor, 2008- present, Department of Horticulture and Agronomy, College of Agriculture, University of Jordan, Amman, Jordan.
- Assistant President. 2/2007- Present. Jordan Society for Scientific Research. Amman-Jordan
- Dean, College of Agriculture. 10/2002-8/2005. Jordan University of Science and Technology, Irbid, Jordan.
- Director, Center for Agriculture Research and Production. 9/ 2004- 8/ 2005. Jordan University of Science and Technology. Irbid-Jordan. Professor.
- Professor, 8/2001-8/2008. Department of Plant Production, College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Fulbright Scholar. 9/1999-8/ 2000. Department of Agronomy, Purdue University, West Lafayette, IN. USA.
- Chairman, Dept. Plant Production, 8 / 1998-8 / 1999, College of Agriculture. Jordan University of Science and Technology. Irbid-Jordan.
- Director, Center for Agriculture Research and Production. 2/ 1997-8/1998. Jordan University of Science and Technology. Irbid-Jordan.
- Researcher, 8/1995- 8/1996. Department of Natural Resources and Environment. University of Illinois, Urbana IL 61801.
- Director, Center for Agriculture Research and Production. 9 / 1994-8 / 1995. Jordan University of Science and Technology. Irbid-Jordan.
- Director, Biotechnology Center, 1/1993-8/1995. Jordan University of Science and Technology. Irbid- Jordan.
- Coordinator, Plant Tissue Culture Projects, 1/1992-8/1995. Jordan University of Science and Technology. Irbid- Jordan.
- Associate Professor, 8/1997-2002. Department of Plant Production, Jordan University of Science and Technology, Irbid-Jordan

- Assistant Professor, 7/1991-8/1997. Department of Plant Production, Jordan University of Science and Technology, Irbid-Jordan.
- Assistant Professor, 9/1990-1991. Department of Applied Sciences-Horticulture. Langston University, Langston, OK, USA.
- Graduate Research Assistant, 8/1988-5/1991. Department of Horticulture/University of Illinois, Urbana, Illinois, USA.
- Teaching and Research Assistant, 2-8/1988. Faculty of Agriculture, Jordan University of Science and Technology, Irbid-Jordan.
- Director of the University Orchard, 6/1987-2/1988. Jordan University of Science and Technology, Irbid-Jordan.
- Director and Propagator, 8/1986-6/1987. Al-Wir Nurseries, Zarqa, Jordan.
- Farming Engineer and Consultant, 1-6/1986. Al-Wir Fruit Tree and Vegetable Farm, Zarqa, Jordan.
- Graduate Research and Teaching Assistant, 2/1984-2/1986. Faculty of Agriculture, University of Jordan, Jordan.

Professional Activities (Examples):

- Member, Technical Committee, Agriculture and Veterinary Scientific Research. Ministry of Higher Education, Jordan. 2010.
- Member, Degrees and Certificate Monitoring Committee. Ministry of Higher Education, Jordan. 11/2009- 8/2010.
- Member, The Higher Committee for Agriculture Research and Extension, Center for Agriculture Research and Extension, 2010-Present. Baqa, Jordan.
- Member, Who's Who in Agriculture Higher Education. Jan. 2010-Present.
- Member, Agriculture Curriculum Supervising Committee, 12/2009-Present. Ministry of Education. Amman, Jordan.
- Member, Committee, Research Priorities in Jordan (Agriculture and Veterinary). 10/2009-5/2010. The Higher Council for Science and Technology, Amman, Jordan.
- Faculty Board Member, 9-2008/8-2009. Faculty of Agriculture, University of Jordan, Amman, Jordan.
- Member, Jordan Biosafety Clearing House Committee, 8/2008-Present. Ministry of Environment, Amman, Jordan.
- Member, Evaluation Committee of the Arab Center for Biotechnology and Genetic Engineering. 2008-2009. The Arab Authority for Agriculture Investment and Development. Sudan.
- Associated Editor, In Vitro Cellular and Developmental Biology-Plant, USA. 2007-Present.
- Reviewing Editor, In Vitro Cellular and Development Biology-Plant.2004-Present.
- Editorial Board Member. Jordan Journal of Agricultural Sciences. 2005-Present.
- Member, Technical Committee, Conservation of the Medicinal and Herbal Plants

Project. Ministry of Planning. May 2003 – 2005.

- Member, The higher Coordination Committee, The National Strategy for Agriculture Development, Ministry of Agriculture, Jordan. Jan. 2003 – Jan.2005.
- Member, the Science Committee, the National Strategy for Agriculture Development, Ministry of Agriculture, Jordan. Jan. 2003 – Jan. 2005.
- Board member of the National Center for Research and Extension (NCARE). Baqa, Jordan. 11/2002- 8/2009.
- University Board Member, 9/2001/ - 9/2008. Jordan University of Science and Technology, Irbid. Jordan.
- Chairman, Plant Propagation Group, Agriculture Biodiversity Project 1/ 2000 – 8/2005, Plant Biodiversity Project. National Center for Agriculture Research and Technology Transfer (NCARTT). Baq'a, Jordan.
- Technical Committee for Herbal Plants in Jordan, Member, 1 / 2001-1/2007. National Center for Agriculture Research and Technology Transfer (NCARTT). Baqa, Jordan.
- National Plant Genetic Resources Committee, Member, 1 / 2001-1/2007. National Center for Agriculture Research and Technology Transfer (NCARTT). Baqa, Jordan.
- Faculty Board, Member. 7/1991-8/2008. College of Agriculture. Jordan University of Science and Technology, Irbid-Jordan.
- Plant Genetic Resources Committee. 8/1994-8/1995. National Center for Agriculture Research and Technology Transfer (NCARTT). Baqa, Jordan.
- Biotechnology Committee, Member, 3/1992-8/1995. Jordan University of Science and Technology, Irbid-Jordan.
- Plant Tissue Culture Committee, Member, 2/1992-8/1995. Jordan University of Science and Technology, Irbid-Jordan.
- University Faculty, Member, 7/1991- 8/2008. Jordan University of Science and Technology, Irbid-Jordan.
- University Board, Member. 9/1991-9/1992. Jordan University of Science and Technology, Irbid-Jordan.
- Department Committee, Member, 7/1991-8/2008. Department of Plant Production, Jordan University of Science and Technology, Irbid-Jordan.
- Department Board Secretary, 9/1991-9/1992. Department of Plant Production, Jordan University of Science and Technology, Irbid-Jordan.
- Zarqa Valley Basin Development Project Committee, 2-8/1988, Ministry of Agriculture, Amman-Jordan.
- Al-Wir Fruit Tree and Vegetable Farm Planning Committee, Member, 2/1986-8/1988, Zarqa-Jordan.
- Al-Wir Nurseries Planning Committee, 2/1986-8/1988. Zarqa-Jordan.

Honors (Examples):

- **ISESCO Prize in Science and Technology (in Biology)**, Islamic Educational, Scientific and Cultural Organization. Rabat Morocco, 2012.
- **Ali Mango Distinguished Researcher Award for Scientific Faculties**, Hamdi Mango Center for Scientific Research (HMCSR), University of Jordan, Amman, Jordan, 2011.

- **University Distinguished Researcher Award**, University of Jordan, Amman, Jordan, 2011.
- **University Distinguished Researcher Award**, University of Jordan, Amman, Jordan, 2010.
- **Distinguished Research Award (Agriculture Sector)**, The Ministry of Higher Education, 2008, Amman, Jordan.
- **Iris Award for Distinguished Agricultural Research**, The Technical Consultancy Center. Amman, Jordan. 2006.
- **Applied Research Award**, The Agricultural Engineers Association, 2006, Amman, Jordan.
- **Distinguished Researcher Award (Agriculture Sector)**, The Ministry of Higher Education, 2004, Amman, Jordan.
- **The NCARTT/ICARDA honorarium**, 2006, Due to efforts and contribution to the agricultural research and development, Amman, Jordan.
- **Arab Fund Fellowship Program Award**, Distinguished Scholars, Arab Fund for Social Development, 2005, Kuwait.
- **The National Center For Agriculture Research and Technology Transfer Plaque** (Awarded for Distinguished Researchers in Agriculture in Jordan) 2003, Jordan.
- **The Scientific Foundation of Hisham Adeeb Hijjawi Award** (awarded to best applied researches in Jordan) in Agriculture Sector. 2001 (for the second time). Amman, Jordan.
- **One Year Seniority in Promotion to a Professor Rank**. 2001. Due to distinguish research work.
- **Fulbright Recipient**, 1999/2000.
- **American Biographical Institute**, Research Board of Advisors, 1998.
- **King's Reward. 1997**. Distinguished Scientists at Jordan University of Science and Technology. Irbid, Jordan.
- **Showman Foundation Prize for Young Arab Scientists Agricultural Sector**, 1996.
- **Islamic Development Bank Scholarship** (Jeddah, Saudi Arabia). 1995/1996.
- **The Scientific Foundation of Hisham Adeeb Hijjawi Award** (awarded to best applied researches in Jordan) in Agriculture Sector. 1994. Amman, Jordan.
- **Phi Kappa Phi**, 1990. University of Illinois, Urbana-Champaign, Illinois, USA.
- **Gamma Sigma Delta**, 1990. University of Illinois, Urbana-Champaign, Illinois, USA.
- **5.0 grade point average on a 5 point scale during Ph.D.** course work at University of Illinois. Urbana-Champaign, Illinois, USA.
- **King's Reward for University Top Graduate Students**, (M.Sc. student with the highest GPA) in his department at the University of Jordan, 1986. Amman-Jordan.
- **King's Reward for The University Outstanding Undergraduate Student**, (highest graduating student GPA in his department) at the University of Jordan, 1984. Amman-Jordan.

Society Membership (Examples):

- Member, International Society for Horticultural Science. 2008-Present.
- Member, Jordan British Friendship Society, 2004 –Present. Amman, Jordan.
- Board of Olive Research Program. July 2004- present. National Center for Agricultural Research and Technology Transfer (NCARTT). Jordan.
- Fulbright Alumni Member, 1999-Present. Amman, Jordan.
- Jordan Society of Scientific Research, 1999 – Present. Amman, Jordan.
- Agricultural Engineers Association (1987-Present).Amman, Jordan.
- Jordan Alumni Society for Graduates of U.S. Universities and Institutes (1998-Present).
- Cryoletters (1999-2000), UK.
- Bangladesh Association of Plant Tissue Culture (1999-2003).

Teaching Experience (primary responsibility):

- Plant Tissue Culture (MS programme). 2009- present University of Jordan, Amman, Jordan.
- Plant Cell Culture(MS programme). 2009- present University of Jordan, Amman, Jordan.
- Plant Science 101. Introductory Plant Science. 2008-Present. University of Jordan, Amman, Jordan.
- Genetic Engineering 423. Plant Biotechnology. 2007-2008. Jordan University of Science and Technology.
- Plant Production 423 (Plant Propagation), 2001 – 2008. Jordan University of Science and Technology. Irbid, Jordan.
- Plant Production 725 (Plant Tissue Culture). 1997-2008. Jordan University of Science and Technology. Irbid, Jordan.
- Plant Production 792 (Plant Cell Culture). 2001-2008. Jordan University of Science and Technology. Irbid, Jordan.
- Plant Production 711 (Crop Physiology). 2001-2008. Jordan University of Science and Technology. Irbid, Jordan.
- Plant Production 325 (Vegetable Production). 1997. Jordan University of Science and Technology. Irbid, Jordan.
- Plant Production 621 (Plant Tissue Culture). 1993. The University of Jordan, Amman-Jordan.
- Agriculture Science 322 (Deciduous Fruit Trees Production). 1992-1997. Jordan University of Science and Technology. Irbid-Jordan.
- Agriculture Science 423 (Nursery Management). 1992-2008. Jordan University of Science and Technology. Irbid-Jordan.
- Agriculture Science 319 (Practical Training in Agriculture). 1992-2008. Jordan University of Science and Technology. Irbid-Jordan.

- Biology 322 (Plant Physiology). 1992-Present. Jordan University of Science and Technology. Irbid-Jordan.
- Agriculture 200 (Floriculture) 1988. Jordan University of Science and Technology, Irbid, Jordan.
- Plant Production 302 (Practices in Vegetable Production, lab section) 1984-1986. University of Jordan. Amman-Jordan.

Teaching Experience (course development):

- Prepared course outline and lecture notes of Genetic Engineering 423 (Plant Biotechnology), Biology 322 (Plant Physiology), Plant Production 621, 725 (Plant Tissue Culture), Plant Production 792, (Plant Cell Culture) and Plant Production 711 (Crop Physiology). Agriculture Science 322 (Deciduous Fruit Trees Production), Agriculture Science 423 (Nursery Management),
- Helped many graduate and undergraduate students in finding scientific resources for projects and term papers in Jordan and in the USA.

Teaching Experience (guest lecturer and seminars)

Have given more than 200 lectures and seminars in different tissue culture, agriculture and environment disciplines in USA, Jordan, and many other countries.

Proposals Submitted (Examples)

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| 2011 | In vitro preservation and Cryopreservation of Transgenic Tomato plants (<i>Lycopersicon esculentum</i>) overexpressing novel cold tolerance genes. Deanship of Research . University of Jordan . |
| 2009 | Deanship of Research . University of Jordan . Micropropagation, and In vitro Conservation of <i>Arum palaestinum</i> . |
| 2009 | Research Fund, Ministry of Higher Education. Jordan. Production possibility of transgenic date palm resistant to Red Palm Weevil. |
| 2009 | Research Fund, Ministry of Higher Education. Jordan. Genetic diversity and <i>in vitro</i> conservation of selected endemic medicinal plant species grown in Jordan |
| 2007 | Jordan University of Science and Technology. Jordan. Salt Phytoremediation using in vitro and hydroponic culture systems. |
| 2007 | Jordan University of Science and Technology. Jordan. Micropropagation of oriental strawberry tree (<i>Arbutus andrachne</i> L.) |

- 2007 Jordan University of Science and Technology. Jordan. In vitro propagation, callusing and secondary metabolites in *Teucrium polium L.*
- 2005 The Higher Council of Science and Technology. Jordan. Molecular and morph-agronomic characterization and evaluation of landraces and wild types of some plant species native to Jordan.
- 2004 Damascus University. In vitro Micropropagation of Apricot cvs *Baladi, Ajami and Rootstock Reine claude P3116 (Torinel).*
- 2004 Jordan University of Science and Technology. Jordan. A Study of in vivo and in vitro seed germination of black iris (*Iris nigricans Dinsmore*).
- 2001 The Higher Council of Science and Technology. Jordan. Propagation and conservation of black iris (*Iris nigricans*): The national flower of Jordan.
- 2001 Jordan University of Science and Technology. Jordan. Comparative responses of tomato (*Lycopersicon esculentum* Mill.) microshoots, callus, cell suspension and hydroponic cultures to salinity.
- 1999 Jordan University of Science and Technology. Jordan. Cryopreservation of sour orange (*Citrus aurantium L.*) and bitter almond (*Amygdalus communis L.*).
- 1999 Jordan University of Science and Technology. Jordan. Evaluation of iron nutrition and iron chlorosis in higher plants during in vitro propagation
- 1997 Jordan University of Science and Technology. Jordan. Factors affecting callusing, cell suspension culture and production of secondary metabolites in African violet (*Saintpaulia ionantha* Wendl.)
- 1997 Jordan University of Science and Technology. Jordan. In Vitro propagation and conservation of “Nabali” olive.
- 1997 Jordan University of Science and Technology. Jordan. In Vitro Conservation of wild pear (*Pyrus Syrica*)
- 1994 Jordan University of Science and Technology. Jordan. Collection, identification, micropropagation and in vitro preservation of al-

- mond germplasm.
- 1992 Jordan University of Science and technology. Jordan. Production of disease-free vegetable seedlings via tissue culture.
- 1992 Jordan University of Science and Technology. Jordan. Influence of increased salinity on growth, yield and fruit quality of hydroponically grown tomato.
- 1992 Jordan University of Science and Technology. Jordan. A study of salt tolerance of in vitro grown apple rootstocks.
- 1992 Jordan University of Science and Technology. Jordan. Screening of wild genetic resources of the Triticiae for drought and salt tolerance.
- 1989 University of Illinois, IL, U.S.A. For Hort. 429B, Expert systems and knowledge based models An artificial classification of plants according to chlorophyll biosynthesis.
- 1988 University of Illinois IL, U.S.A. In vivo and in vitro physiological studies of *Chrysanthemum morifolium* Ramat. water requirements and water relations. Ph.D. thesis proposal.
- 1984 University of Jordan. Effect of plant density and cytokinin application on yield, growth and fruit quality of field tomato under drip irrigation. M.Sc. thesis proposal

Major Fund Received (examples):

- 2012 BOT-ERA Project, The Royal Botanic Garden (RBG) of Jordan , FP7-funded program.
- 2011 In vitro preservation and Cryopreservation of Transgenic Tomato plants (*Lycopersicon esculentum*) overexpressing novel cold tolerance genes. Deanship of Research . University of Jordan . (total amount JD 29,000)
- 2009 Micropropagation, and In vitro Conservation of *Arum palaesttinum*. Deanship of Research . University of Jordan . (total amount JD 21,000).
- 2009 Production possibility of transgenic and preserved date palm resistant to Red Palm Weevil. Scientific Research Fund, Ministry of Higher Education. Jordan. (Total amount JD 81,000)
- 2009 Genetic diversity and *in vitro* conservation of selected endemic medicinal

plant species grown in Jordan. Scientific Research Fund, Ministry of Higher Education. Jordan. (Total amount JD 50,000)

- 2004 Molecular and morph-agronomic characterization and evaluation of landraces and wild types of some plant species natives to Jordan. The Higher Council of Science and Technology. Jordan. (Total amount of fund received JDs 22,777)
- 2001-2003 *In vitro* and *In vivo* propagation and conservation of black iris: The national flower of Jordan. Funded by the Higher Council of Science and Technology, Amman, Jordan. (Total amount of fund received, JDS 25,000).
- 1991-2008 Different projects were funded from the Deanship of Research at Jordan University of Science and Technology (Total amount of fund received is about JD 80,000).
- 1995 Plant Biotechnology Project: Production of Disease Free Vegetable Seeds and Seedlings via Tissue Culture. The Higher Council of Science and Technology. Jordan. Total amount of fund received is about JD 30,000
- 1993 (Production of disease-free Vegetable seeds and seedlings via tissue culture). Funded by the Ministry of Agriculture (Agriculture Development Funding; ADF) JDS 79,400.
- 1993 Joint fund for the above mentioned project (The Higher Council of Science and Technology). , JDS 29,000

Research Experience (Examples)

- Wide understanding of plant Biotechnology and molecular characterization of plant genetic resources.
- Wide understanding of plant cell culture and secondary metabolites production.
- Wide understanding of plant physiology and tissue culture, Cryopreservation and Molecular Physiology.
- Wide understanding and experience with plant stress physiology and water relations research.
- Wide understanding of plant tolerance to salinity.
- Characterization of plant water requirements and monitoring plant water status.
- Developed a protocol for investigating *in vivo* and *in vitro* osmotic adjustment and osmoregulation as well as growth characterization under induced water stress conditions.
- Developed an *in vitro* system for screening plant responses to stress responses.
- Used Hydroponic system to study plant responses to saline stress conditions and the adaptaion of plants to water deficit.
- Initiated an efficient microprpagation system for many plant species.
- Experienced in applying microcomputerized video image analysis to studies of *in vivo* and *in vitro* plant growth response to stress.
- Studied photosynthetic and expansion growth responses of plants to stress condi-

tions.

- Investigated the effect of plant growth regulators on vegetable crop physical and chemical properties.
- Studied the effect of plant density on the yield, growth and quality of tomatoes.
- Have done massive research in plant tissue culture and micropropagation.

Publications (referred):

Papers:

1. Daradkeh N.Q., R. A. Shibli, I. M. Makhadmeh, F. Alali ,T. S. Al-Qudah. 2012. Cell Suspension and *in vitro* production of colchicine in wild *Colchicum hierosolymitanum* Feib. The Open Conference Proceedings Journal. 5, -:- (in press)
2. Abu-Khadejeh,A., R.A. Shibli., I. M. Makhadmeh, and M. Mohammad. 2012. Influence of increased salinity on physiological responses of Hydroponic grown Tomato (*Lycopersicon esculentum* Mill). Jordan Journal of Agricultural Sciences. 8: 321-332.
3. Daradkeh N.Q.; R.A. Shibli, I. Makhadmeh; F. Alali and T. S. Al-Qudah. 2012. Callus culture and somatic embryogenesis in wild *Colchicum hierosolymitanum* Feib. Jordan Journal of Agricultural Sciences. 8: 536-556.
4. Shiyab S; M. Shatnawi, R. Shibli; M. Al-Zweiri; M. Akash; and T. Aburjai. 2012. Influence of developmental stage on yield and composition of *Origanum syriacum* L. oil by multivariate analysis. Journal of Medicinal Plant Research. 6: 2985-2994.
5. Sharaf, S.A., R.A. Shibli; M. Kasrawi; and S. Baghdadi. 2012. Slow-growth preservation of wild shih (*Artemisia hrba-alba* Assoc.) microshoots from Jordan. Journal of food, Agriculture and Environment. 10: 1359-1364.
6. Al-Mahmoud, H.J.; M.A. Shatnawi, R.A. Shibli, I.M. Makhadmeh and A. N. Shadia-deh. 2012. Clonal propagation and medium-term conservation of *Capparis spinosa*: A medicinal plant. Journal of Medicinal Plants Research. 62:3826-3836.
7. Rabaa M., R.A. Shibli, M.A. Shatnawi. 2012. Cryopreservation of *Teucrium polium* L. Shoot-tips by Vitrification and Encapsulation-Dehydration. Plant Cell, Tissue & Organ Culture. In press.
8. Rabaa M., R.A. Shibli, M.A. Shatnawi. 2012. In vitro medium conservation of felty germander (*Teucrium polim* L.) micro-shoots. Jordan Journal of Agricultural Sciences. 8: 523- 535.
9. Shibli R.A., M. A. Duwayri, J. S. Sawwan, Mohamad A. Shatnawi and T. S. Al-Qudah. 2012. Regeneration via somatic embryogenesis of the endangered wild arum (*Arum palaestinum*). In Vitro Cellular and Developmental Biology – Plant. 48:335-340.
10. Ajlouni Z.I., M.A. Ajlouni, M. A. Shatnawi, , R.A. Shibli,I.M. Makdmeh, S.M Abu-

- Romman and A. Al-Ghazawi. 2012. Callus induction, plant regeneration, and growth on barley (*Hordeum vulgare* L.). South-Western Journal of Horticulture, Biology & Environment. 3:25-39.
11. Shatnawi, M., R. Shibli, H. Al-Dmoor, M. Ateyat and S. Abubaker. 2011. In vitro propagation and cryopreservation of *Stevia rebaudiana* using vitrification method. Acta Horticulturae. 908: 319-324.
 12. Baghdadi, S., R. Shibli, M. Syouf, M. Shatnawi A. Arabiat, and I. Makhadmeh 2011. Cryopreservation by vitrification of embryogenic callus of wild crocus (*Crocus hyemalis* and *Crocus moabiticus*). Acta Horticulturae. 908: 239-246.
 13. Sheyab S., R. A. Shibli, 2011 .Growth, Nutrient Acquisition and Physiological Responses of Hydroponic Grown Tomato to NaCl Salt Induced Stress. Journal of Plant Nutrition. In press.
 14. Sharaf S. A., R. A. Shibli, Kasrawi M. A., Baghdadi S. H. 2012. Cryopreservation of Wild Shih (*Artemisia herba-alba* Asso.) Shoot-Tips by Encapsulation-Dehydration and Encapsulation-Vitrification. Plant Cell, Tissue & Organ Culture.108: 437-444.
 15. Musallam I, M. Duwayri, R.A. Shibli, F. Alali. Investigation of Rutine content in different plant parts of wild caper (*Capparis spinosa* L.) population from Jordan. 2012. Research Journal of Medicinal Plants. 6: 27-36.
 16. Musallam I, M. Duwayri, R.A. Shibli. Micropropagation of Caper (*Capparis spinosa* L.) from Wild Plants.2011. Functional Plant Science and Biotechnology, 5: 17-21.
 17. Baghdadi S.H., R.A. Shibli, M.Q. Syouf, M.A. Shatnawai, A. Arabiat, I.M. Makhadmeh. 2011. Medium term preservation of wild *Crocus* (*Crocus hyemalis* and *Crocus moabiticus*) embryogenic callus. Jordan Journal of Agricultural Sciences. 3: 482-494.
 18. Shatnawi M. A., R. A. Shibli, S. M. Abu-Romman, M. S. Al-Mazra'awi, Z. I. Al Ajlouni, W. A. Shatanawi, and W. H. Odeh. 2011. Clonal propagation and cryogenic storage of the medicinal plant *Stevia rebaudiana*. Spanish Journal of Agricultural Research. 9: 213-220.
 19. Shatnawi, M.A., G. Anfoka, R. A. Shibli, M. S. Al-Mazra'awi, W. Shahrour, and A. Arebiat. 2011. Clonal Propagation and cryogenic storage of virus free grapevines (*Vitis vinifera* L.) via meristem culture. Turkish Journal of Agriculture and Forestry. 35: 173-184
 20. Al- Qudah T. S, R.A. Shibli, and F. Q. Alali. 2011. In vitro propagation and secondary metabolites production in wild germander (*Teucrium polium* L.). In Vitro Cellular and Developmental Biology – Plant. 47: 496-505.
 21. Abu-Khadejeh,A., I. M. Makhadmeh, R.A. Shibli. and M. Mohammad. 2011. Growth and Physiological Responses of Tomato (*Lycopersicon esculentum* Mill) Callus and Cell Suspension to *In Vitro* Induced Salinity. Jordan Journal of Agricultural Sciences. 7: 300-311.
 22. Shibli R. A, I. M. Makhadmeh, Abu-Khadejeh A. and M. Mohammad. 2011. Physiological Responses of Tomato Microshoot Cultures to *in vitro* Induced Salinity Stress. Jordan Journal of Agricultural Sciences. 7: 260-272.

23. Nazzal K.W., R.A. Shibli, I. M. Makhadmeh and M.Q. Syouf. 2011. Amplified Fragment Length Polymorphism (AFLP) analysis in *Crocus* spp. collected from northern Jordan. *Jordan Journal of Agricultural Sciences*.7: 1-8.
24. Shatnawi, M., A. Al-Fauri, H. Megdadi; M. K. Al-Shatnawi; R.A. Shibli; S. Abu-Romman; A. Al-Ghzawi. 2010. In vitro multiplication of *Chrysanthemum morifolium* Ramat and its responses to NaCl induced salinity. *Jordan Journal of Biological Sciences*. 3: 101-110.
25. Mostafa, S.E., N.S. Karam, R.A. Shibli and F.Q. Alali. 2010. Micropropagation and production of arbutin in oriental strawberry tree (*Arbutus andachne* L.). *Plant Cell, Tissue and Organ Culture*.103: 111-121.
26. Musallam I, M. Duwayri, R.A. Shibli. 2010. Micropropagation of Caper (*Capparis spinosa* L.) from Wild Plants. *Functional Plant Science and Biotechnology*. 5: 17-21.
27. Baghdadi S.H., R.A. Shibli, M.Q. Syouf, M.A. Shatnawai, A. Arabiat, I.M. Makhadmeh. 2010. Cryopreservation by encapsulation-vitrification of embryogenic callus of tow wild *Crocus* species (*Crocus hyemalis* and *Crocus moabiticus*). *Jordan Journal of Agricultural sciences*. 3: 436- 443.
28. Abu-Romman, S., M. Shatanwi, and R. Shibli. 2010. Allelopathic effects of spurge (*Euphorbia hierosolymitana*) on wheat (*Triticum durum*). *American-Eurasian Journal of Agriculture and Environment Sciences*. 7: 298-302.
29. Makhadmeh I., Al-Lozi S, M. Duwayri, R.A. Shibli and H. Migdadi. 2010. Assessment of genetic variation in wild *Arum* species from Jordan using Amplified Fragment Length polymorphism (AFLP) markers. *Jordan Journal of Agricultural sciences*. 6: 224-239.
30. Shibli, R.A., N.Q. Daradkeh, I.M. Makhadmeh, and S.H. Baghdadi. 2010. Colchicine production from Cohlchicum and the role of in vitro cultures: A review. *Jordan Journal of Agricultural Sciences*. 6:208-223.
31. Sheyab S., M.A. Shatnawi, R.A. Shibli, M. Obeidat, A.N. Shadiadeh, K.M. Alhussaen and T. Abu-Zahara. 2010. Micropropagation and medium-term condervation of *Antirrhinum majus* L. *Jordan Journal for Agricultural Sciences*. 6:171-182.
32. Owies, D., R. A. Shibli, K. I. Ereifej and M.A. Shatnawi. 2009. In vivo propagation of Akub (*Gundelia tournefortii* L) by seeds. *Jordan J. Agric. Sci*. 5:266-272.
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Books

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Articles and studies (Referred)

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2. Shibli R.A and Kafawin E.A. 2011. Genetically Modified Crops and Foods. Scientific Research journal. 3: 71-79, published by JSSR- Jordan.
3. Shibli R.A and Kafawin E.A. 2011. Genetically Modified Crops and Foods. Engineers association. Irbid, Jordan.
4. Shibli R.A. 2010. Investment in the Scientific Research. Scientific Research. Jordan Society for Scientific Research. Amman, Jordan.
5. Shibli R.A. 2009. Scientific Research and the private Sector. Scientific Research. Jordan Society for Scientific Research. Amman, Jordan. pp: 90-96.
6. Shibli R. A. 2007. UINDO Agriculture Biotechnology Study Investment Opportunity in Jordan. The Higher Council for Science and Technology Jordan.
7. Shibli R. A. 2007. The Agricultural Policies and their Effects on the Environment. Al-

- Marwa drops Magazine for water, Environment and development. 4: 42-44.
8. Shibli R. A., N. S. Karam, and M. M. Ajlouni. 2005. Propagation and Conservation of Black Iris (*Iris nigricans* Dinsmore): The National Flower of Jordan. (Jordan).
 9. Shibli, R.A. 2004. Improved Research and Agricultural Biotechnology Implementations. Agricultural Engineer Magazine. Issue No. 77: 92-96. (Jordan).
 10. Shibli, R.A. 2004. Black Iris Propagation and Cryopreservation Project. Petrana Magazine. Issue No. 1: 4-7. (Jordan).
 11. Shibli, R.A. 2002. New Approaches of Agricultural, Biotechnology Research and its impact on agriculture in the Arab World. A study prepared to the Arab Organization for Agriculture Development (AOAD). Sudan. (In Arabic).
 12. Shibli, R.A. 2002. Use of plant tissue culture for conservation of plant biodiversity. Agricultural Engineer Magazine. Issue No. 72: 16-20. (Jordan).
 13. Shibli, R.A., and M.M. Ajlouni. 1997. Biotechnology. In: Jordan Country Study on Biological Diversity. By: General Corporation for the Environment Protection. Jordan. pp: 195-201. (Jordan).
 14. Shibli, R.A. 1994. Use of plant tissue culture for plant propagation in nurseries. Agricultural Engineer Magazine. Issue No. 53: 19-23. (Jordan).
 15. Shibli, R.A, and M.M. Ajlouni. 1995. Plant Biotechnology Projects: Production of Disease Free Vegetable Seeds and Seedlings Via Tissue Culture. Published by the Higher Council of Science and Technology, Amman, Jordan.
 16. Shibli, R.A. 1991. Plant Tissue Culture: A high technology to solve many agricultural problems. Agricultural Engineer Magazine. Issue No. 44: 37-38. (Jordan).

Abstracts (published) (examples):

1. Daradkeh N. Q., R. A. Shibli, I. M. Makhadmeh, F. Alali, T. S. Al-Qudah. 2012. Cell suspension and in vitro production of colchicine in wild *Colchicum hierosolymitanum* Feib. 1st Biotechnology World Congress. Dubai, UAE, February 14th and 15th.
2. Al- Qudah T., R. Shibli and F. Alali. 2010. In vitro propagation and secondary metabolites production in wild germander (*Teucrium polium* L.). The Second International Symposium on Medicinal Plants: Their Cultivation and Aspects of Uses. Nov. 3-4. Petra, Jordan.
3. Daradkeh N., R. Shibli, F. Alali, I. Makhadmeh. 2010. In Vitro Production of Colchicine from Callus and Cell Suspension Cultures of wild *Colchicum hierosolymitanum* Feib. The Second International Symposium on Medicinal Plants: Their Cultivation and Aspects

- of Uses. Nov. 3-4. Petra, Jordan.
4. Dradkeh, N., R.A. Shibli and I. Makhadmeh,. 2009. Callus, cell suspension culture and colchicines production in wild *Colchicum hierosolymitanum* Feib. The Science Week. Biotechnology Section. The Higher Council for Science. Amman, Jordan.
 5. Shatnawi, M., R. Shibli, H. Al-Dmoor, M. Ateyat and S. Abubaker. 2009. In vitro propagation and cryopreservation of *Stevia rebus* (a medicinal plant) using vitrification method. Abstract Book, 1st International Symposium on Cryopreservation in Horticultural Species. April 5-8. Lueven, Belgium.
 6. Baghdadi, S., R. Shibli, M. Syouf, M. Shatnawi A. Arabiat, and I. Makhadmeh 2009. Cryopreservation by vitrification of embryogenic callus of wild crocus (*Crocus hyemalis* and *Crocus moabiticus*). Abstract Book, 1st International Symposium on Cryopreservation in Horticultural Species. April 5-8. Lueven, Belgium.
 7. Al-Qudah A, Shibli R., Al Maari K. 2008. Determination of genetic stability of micropropagated Apricot cv Ajami and Torinel rootstock using Random Amplified Polymorphic DNA (RAPD) markers. International Symposium on Biotechnology. May 4-8 2008. Safax- Tunisia.
 8. Musallam, I., M. Duwayri, R.A. Shibli., F. Q. Alali. 2008. Chemical diversity of rutin content in caper (*Caparis spinosa* L.) population from Jordan. First international Congress, Documenting, Analysing. And Managing Biodiversity in the Middle East. Oct. 20-23, 2008. Aqaba, Jordan.
 9. Shibli, R.A. Biosafety in the Arab World. The second International Jordanian-Egyptian Biotechnology Conference. Nov. 11-13. 2008. Yarmuk University. Irbid. Jordan. PP.79.
 10. Shatnawi M.A.; R. Shibli, H. Al-Dmoor, M. Mazrawi, and M.K. Ajlouni. Development of micropropagation protocol for *Stevia rebaudiana*: a Medicinal plant. The second International Jordanian-Egyptian Biotechnology Conference. Nov. 11-13. 2008. Yarmuk University. Irbid. Jordan. PP.65.
 11. Shibli, R.A. , S. Baghdadi, and M. Shatnawi. 2008. Tissue Culture Methods for Conservation of Plant Genetic Resources. The First International Symposium on Medicinal Plants: Their Cultivation and Aspects of Uses. Oct. 15-18. Petra, Jordan.
 12. Shatnawi, M., A. Fauri, M. Al-Mazraawi, R. Shibli and I. Makhadmeh. 2008. Tissue culture and salt stress in *Chrysanthemum morifolium* Sixth International Symposium on In Vitro Culture and Horticulture Breeding. Aug. 24-28. Brisbane, Queensland, Australia.
 13. Shibli, R., S. Baghdadi, I. Makhadmeh, M. Syouf, A. Arabiat, and M. Shatnawi. 2008. Cryopreservation by Encapsulatin-dehydration of Embryogenic Callus of Wild Crocus (*Crocus hyemalis* and *Crocus moabiticus*). Sixth International Symposium on In Vitro Culture and Horticulture Breeding. Aug. 24-28. Brisbane, Queensland, Australia.
 14. Shatnawi, M. A. I. Qrunfleh, R. Shibli, Y. Al-Zubi and M.Obeidat. 2007. Micropropagation and germplasm storage of *Prunus avium* using cryogenic methods. The Sixth Jordanian Agricultural Scientific Conference, Amman, Jordan.
 15. K. Al Maarri, A. Qudah, and R. Shibli. 2007. In Vitro Propagation of rootstock reine claud P3116 (Torinel). The Sixth Jordanian Agricultural Scientific Conference, Amman, Jordan.
 16. N. Karam, N Al-Khasawnwh, and R. A. Shibli. 2007. Growth and flowering of Black Iris (*Iris Nigraica* Dinsm) following treatment with plant growth regulators. The Sixth Jordanian Agricultural Scientific Conference, Amman, Jordan.

17. R. Shibli, M. Kushad, G.G. Yousef and M.A. Lila. Headspace Ethylene Accumulation and Physiological Responses of Tomato microshoot cultures grown under In Vitro Induced salinity stress. 2007. The Sixth Jordanian Agricultural Scientific Conference, Amman, Jordan.
18. A. Zatimeh, R.A Shibli, N.S. Karam, and I. Makhadmeh. Comparative responses of Muskmelon (*Cucumis Melo L.*) microshoots and hydroponic culture to salinity. 2007. The Sixth Jordanian Agricultural Scientific Conference, Amman, Jordan.
19. Subaih W. S., M. A. Shatnawi and R. A. Shibli. 2006. Cryopreservation of Date palm (*Phoenix dactylifera*) Embryogenic Callus by Encapsulation-Dehydration, Vitrification and Encapsulation-Vitrification. Proceedings: Third International Date Palm Conference. Abu-Dhabi, United Arab Emirates.
20. Syouf M., R. Shibli, and F. Alali. 2005. Biodiversity and utilization of *Crocus* Species in Jordan. International Conference on Promoting Community-driven Conservation and Sustainable Use of Dry Land Agrobiodiversity. ICARDA, Aleppo, Syria.
21. R. Shibli, W. subaih and M. Ajlouni. 2005. In Vitro Conservation of Plant Genetic Resources. 2005. International Conference on Promoting Community-driven Conservation and Sustainable Use of Dry Land Agrobiodiversity. ICARDA, Aleppo, Syria.
22. R. Shibli and M. Ajlouni. 2005. Approaches and Progress in Introducing Biodiversity Conservation in the Education System in Jordan. International Conference on Promoting Community-driven Conservation and Sustainable Use of Dry Land Agrobiodiversity. ICARDA, Aleppo, Syria.
23. N.S. Karam, R. A. Shibli, and N. M. Al-Khassawneh. Growth and Flowering of Black Iris (*Iris nigricans* Dinsmore) as Affected by Paclobutrazol. 2004. Proceeding, Seventh Scientific Day. College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
24. N.S. Karam, R. A. Shibli, and A. A. Al-Khasawneh. Patterns of Phenotypic and Genetic Variation of Black Iris (*Iris nigricans* Dinsmore) in Three Different Provinces in Jordan. 2004. Proceeding, Seventh Scientific Day. College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
25. S. Qurashi, R. A. Shibli, N. Samarah, and N.S. Karam. A Study of In Vivo and In Vitro seed germination of Black Iris (*Iris nigricans* Dinsmore). 2004. Proceeding, Seventh Scientific Day. College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
26. Shibli, R. A. Agricultural Biotechnology; Impact on Agriculture in the Arab World. 2003. Jordan Ninth Science Week, Biotechnology and its role in the Jordanian Economy. The Higher Council for Science and Technology General Secretariat. Amman, Jordan.
27. Shibli, R.A. New Approach in Modern Agriculture Biotechnology Research and Their Impact on Agriculture in the Arab World. 2003. Proceeding, Sixth Scientific Day. College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
28. Owies D. S., R. A. Shibli, and K. I. Ereifej. In Vitro Propagation of Akub (*Gundelia tournefortii L.*). 2003. Proceeding, Sixth Scientific Day. College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
29. Al-Hussein S., R. A. Shibli, and N. Karam. Direct and Indirect Regeneration in African Violet (*Saintpalia ionantha Wendl.*). 2003. Proceeding, Sixth Scientific Day. College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
30. Abu-Shama M. M., R. A. Shibli, and K. I. Ereifej. Physiological Responses of Tomato

- (*Lycopersicon esculentum* Mill.) to In Vitro Induced Water Deficit. 2003. Proceeding, Sixth Scientific Day. College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
31. Abed-Alrahman N. M., R. A. Shibli, and K. I. Ereifej. Influence of Salinity on Growth and Physiology of in vitro Grown Cucumber (*Cucumis sativus* L.). 2003. Proceeding, Sixth Scientific Day. College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
 32. Shibli, R.A., D.M. Haagenson, S.M. Cunningham. W.K. Berg and J.J. Volenec. 2000. A simple protocol for cryopreservation of alginate-coated alfalfa cells. Annual Meetings Abstracts. ASA, CSSA, ASSA. Minneapolis, Minnesota. pp. 147. USA.
 33. Shibli, R. A., D. Haagenson, . S.M. Cunningham, W.K. Berg, and J.J. Volenec. 2000. Cryopreservation of Alfalfa (*Medicago sativa* L.) Cells by Encapsulation-Dehydration. Plant Biology 2000. San Diego, CA. PP.96. Abst. # 415. USA.
 34. Shibli, R.A., M.A.L. Smith and M. Shatnawi. 1999. Pigment recovery from encapsulated-dehydrated *Vaccinium pahalae* (ohelo) cryopreserved cells. Proceedings: 2nd Biotechnology Conference. Al-Albyt University, Mafraq, Jordan.
 35. Shibli, R.A., M.A.L. Smith, and M. Kushad. 1999. Influence of ethylene on the production of anthocyanin, and carotenoid from callus culture of *Vaccinium pahalae*, ohelo. Proceedings: 3rd Agricultural Conference. Mu'tah University, Karak, Jordan.
 36. Shibli, R.A., A. Jaradat, M. Ajlouni, S. Aljanabi and M. Shatnawi. 1997. Micropropagation in wild pear (*Pyrus syrica*). Proceedings; 2nd Arab Agriculture Conference, Jordan.
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 38. Al-Juboory, K.H., J. Al-Naimi, L.K. Al-Amiry, R. Shibli, and R.M. Skirvin. 1997. Organogenesis and cormel production from callus culture of *Gladiolus* CV. "Balady". HortScience. 32: 460. Abst. #192.
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 40. Shibli, R.A., A.A. Jaradat, M.M. Ajlouni, S. Aljanabi. 1996. In vitro multiplication of bitter almond (*Prunus amygdalus*) from north Jordan. In Vitro Cellular and Developmental Biology- Plant. 32: 74A. Abstract # p-1031.
 41. Shibli, R.A., Y. Fang and M.A.L. Smith. 1996. Regeneration of *Vaccinium pahalae* (ohelo) and *V. myrtillus* (bilberry). Hot Topics Addendum Booklet. 1996. World Congress on in Vitro Biology. San Francisco, CA, USA. Abstract # SP-1010.
 42. Aljanabi, S.M., R. Shibli, M.M. Alajlouni. 1996. Insertion of maize transposable element Ac into soybean (*Glycin max* L. Merr.) by novel *Agrobacterium tumifaciens*-mediated transformation method. In Vitro Cell. Devel. Biol. 32: 111A. Abstract # P-1199.
 43. Shibli, R.A., A.M. Abu-Ein and M.M. Ajlouni. 1995. In vitro and in vivo multiplication of disease-free 'Spunta' potato. Proceedings, Congress On In Vitro Biology. Denver, CO. USA.
 44. Shibli, R.A., A. Jaradat, and M.M. Ajlouni. 1995. Salt tolerance in *Aegilops* species from Jordan. Proceedings, 87th Annual Meeting. American Society of Agronomy, Crop Science Society of America, Soil Society of America. St. Louis, MO. USA.
 45. Shibli, R.A., A. Abu-Ein and M.M. Ajlouni. 1994. In vitro propagation and in vivo acclimatization of MM 106 apple rootstock. Proceedings, First Arab Agriculture Confe-

rence. (Jordan).

46. Shibli, R.A., L.A. Spomer and M.A.L. Smith. 1991. Osmotic adjustment and growth responses of in vitro grown *Chrysanthemum morifolium* Ramat. under induced water deficit. Abstract. HortScience. 25: 1125.
47. Shibli, R.A. and L.A. Spomer. 1991. Physiological responses of *Chrysanthemum morifolium* Ramat. to water deficit. Abstract. HortScience. 26: 714.
48. Shibli, R.A. and L.A. Spomer. 1991. Characterization of *Chrysanthemum morifolium* Ramat. water status. Abstract. HortScience. 26: 741.

Papers Presented at Annual Meetings and Conferences (Examples)

1. Shibli R.A. 2012. The ninth International Conference of the history of the Levant, Cultivation in the Levant since the late Byzantine period to the end of the Ottoman Empire in 1920 AD. Olive cultivation in the Levant since the late Byzantine period from 1053 to the end of the Ottoman Empire in 1920 AD, 1-5 April, 2012, The University of Jordan, Amman-Jordan.
2. Shibli, R.A. Cryopreservation of felty germander (*Teucrium polium* L.) shoot tips by encapsulation – vitrification and droplet - vitrification. The international symposium on cryopreservation of horticultural crops. Northwest agricultural and Forest University. Yangling, China, 28-30 June 2011.
3. Shibli, R.A. 2011. Crocus in Jordan and the Middle East, Crocusbank the 4th year and final assessment meeting, the global collection of saffron for preservation and utilization of the genetic resources, 13-16th April, 2011, Valencia-Spain, Polytechnic University of Valencia.
4. Musallam I.W., Duwayri M., and Shibli R. A.. **2010**. Morphological Diversity of *Capparis spinosa* L. In Jordan. 6th Conference on Aromatic and Medicinal Plants of Southeast European Countries (6th CMAPSEEC), 18-22 April, Antalya, Turkey. Pharmacognosy Magazine 6 (22) : s108.
5. Shibli, R.A. 2010. An Experience of Distinguished Scholar, Scientific Faculties. Jordan University. Amman, Jordan, 2010.
6. Shatnawi, M.A. and R.A. Shibli. 2009. Plant Biotechnology in Jordan: Current Status and Future Prospects. The Fourth Conference on Genetically Modified Food. The Technical and Consultation Center. Nov.16-17. Amman, Jordan, 2009.
7. Musallam I.W., Duwayri M., and Shibli R. A. 2009. Micropropagation of Caper (*Capparis spinosa* L.) - A Multipurpose Medicinal Plant. Euro Med Symposium Plant natural Products from Biodiversity to Bioindustry, 8-10 December, Cairo, Egypt.
8. Musallam I.W., Duwayri M., Shibli R. A. and Alali F. Q. The Effect of Plant Parts and Locations of Caper (*Capparis spinosa* L.) on Rutin Content. 4th Global Summit on Medicinal and Aromatic Plants, 2-4 December 2009, Sarawak, Malaysia. Page 109.
9. Baghdadi S.H., R.A. Shibli, M.Q. Syouf, M.A. Shatnawai, A. Arabiat, I.M. Makhadmeh. 2009. Cryopreservation by encapsulation-vitrification of embryogenic callus of wild *Crocus* (*Crocus hyemalis* and *Crocus moabiticus*). The Fourth Conference on Scientific Re-

- search in Jordan. Jordan Society of Scientific Research. Landmark Hotel, Amman, Jordan. Nov. 7, 2009.
10. Shatnawi, M.A., R.Shibli, H. Al-Dmoor, M. Mazraawi and M.J. Ajlouni. 2009. Development of micropropagation protocol for *stevia rebaudian*: a medicinal plant. Proceeding, The Fourth Conference on Scientific research in Jordan, Agriculture. Jordan Society for scientific research, Amman, Jordan. pp. 29-48.
 11. Shibli, R.A. 2009. Scientific research in Jordan: Current status and future prospects. Workshop on Agriculture sector development in Jordan. Al-Shobak College. Al-Balqa Applied University, Shobak, Jordan. April 30.
 12. Shibli, R.; Baghdadi, S. 2008. Intellectual Property Rights Associated with Biotechnology: Inventions and Innovations in the Arab World. The Third International Conference on Intellectual Property Rights in Agriculture, April 1st-2nd 2008, Amman, Jordan.
 13. Musallam I.W., Duwayri M., Shibli R. A. and Alali F. Q. Chemical Diversity of Rutin Content in Caper (*Capparis spinosa* L.) Population from Jordan. First International Congress Documenting, Analysing and Managing Biodiversity in the Middle East, 20-23 October 2008, Aqaba, Jordan.
 14. Shibli, R., 2007. Quality of Scientific Research. The Sixth Jordan Quality Conference. 2-4, December, 2007. Movenpick Hotel, Dead Sea, Jordan.
 15. Shatnawi, M. and Shibli, R.A., 2007. Plant Biotechnology Research in Jordan and its Outcomes. Proceedings, The Third Conference on Scientific Research in Jordan. Jordan Society of Scientific Research. . Amman, Jordan. pp. 44-120.
 16. Duwayri, M., R.A. Shibli, H. Megdadi, and M. Brake. Investment prospects in Agriculture Biotechnology. 2007. Proceedings, The Third Conference on Scientific Research in Jordan. Jordan Society of Scientific Research. . Amman, Jordan. pp. 37-47. (In Arabic).
 17. Shibli, R. and Al-Horani, A. 2007. Biosafety Regulations in Arab World. The Second International Genetically Modified Food Conference. 30-31, October, The Technical Consultancy Center. Amman, Jordan.
 18. Arafeh, R. M., R. A. Shibli, M. Al-Mahmoud and M. A. Shatnawi. 2006. Callusing, Cell Suspension Culture and Secondary Metabolites Production in Persian Oregano (*origanum vulgare* L.) and Arabian Oregano (*O. syriacum* L.). Cairo, Egypt, Dec. 11-14, 2006.
 19. Subaih, W. S., M.A. Shatnawi and R.A. Shibli. 2006. Cryopreservation of date palm (*Phoenix dactylefera*) embryogenic callus by encapsulation-dehydration and encapsulation-vitrification. Third International Date Palm Conference. United Arab Emirates University, Abu-Dhabi, UAE, Feb. 19-21, 2006.
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24. Shibli, R.A., M.A.L. Smith, and M. Kushad. 1998. Influence of ethylene on the production of anthocyanin, and carotenoid from callus culture of *Vaccinium pahalae*, ohelo. Third Arab Biotechnology Conference. Dec. 14-17, 1998. Cairo; Egypt.
25. Shibli, R.A., M.A.L. Smith, and M. Kushad. 1997. Headspace ethylene accumulation reduces secondary metabolites production in *Vaccinium pahalae* cell culture. The Congress on IN Vitro Biology. Washington D.C., USA.
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27. Shibli, R.A., Y. Fang and M.A.L. Smith. 1996. Regeneration of *Vaccinium pahalae* (ohelo) and *V. myrtillus* (bilberry). World Congress on in Vitro Biology. San Francisco, CA, USA.
28. Aljanabi, S.M., R. Shibli, M.M. Alajlouni. 1996. Insertion of maize transposable element Ac into soybean (*Glycin max* L. Merr.) by novel *Agrobacterium tumefaciens*-mediated transformation method. World Congress on In Vitro Biology. San Francisco, CA, USA.
29. Shibli, R.A., A. Jaradat, M. Ajlouni and M. Shatnawi. 1996. In vitro multiplication and rooting of wild pear (*Pyrus syrica*). 2nd Arab Agriculture Conference, Jordan.
30. Shibli, R.A., A.M. Abu-Ein and M.M. Ajlouni. 1995. In vitro and in vivo multiplication of disease-free 'Spunta' potato. (May). Congress On In Vitro Biology. Denver. Colorado. USA.
31. Shibli, R.A., A. Abu-Ein and M.M. Ajlouni. 1994. In vitro propagation and in vivo acclimatization of MM 106 apple rootstock. First Arab Agriculture Conference. (Jordan).
32. Shibli, R.A. and L.A. Spomer. 1991. Physiological responses of *Chrysanthemum morifolium* Ramat. to water deficit. (July). ASHS 88th Annual Meeting. Philadelphia, Pennsylvania. USA.
33. Shibli, R.A. and L.A. Spomer. 1991. Characterization of *Chrysanthemum morifolium* Ramat. water requirements. (July). 88th ASHS Annual Meeting. Philadelphia, Pennsylvania. USA.
34. Shibli, R.A. and L.A. Spomer, and M.A.L. Smith. 1990. Osmotic adjustment and growth responses of three in vitro grown *Chrysanthemum morifolium* Ramat. cultivars to osmotic stress. ASHS 87th Annual Meetings. Tucson, Arizona. USA.
35. Qurashi, S., Shibli, R. A. , and Karam, N. 2005. A study in vivo and in vitro seed germination of black iris (*Iris nigricans* Dinsmore). (May). First scientific day of faculty of graduate studies. Jordan University of Science and Technology
36. Zatimeh, A., Shibli, R. A., and Karam, N. 2005. Comparative responses of muskmelon (*Cucumis melo* L.) micro-shoots and hydro-ponic cultures to salinity. (May). First scientific day of faculty of graduate studies. Jordan University of Science and Technology.

Conferences Attended (examples)

- The Sixth Islamic Conference of Higher Education Ministers and Scientific Research. "The role of higher education in the development of science and technology for a

- bright future”. Report on key performance indicators for the Universities of the Islamic World, Khartoum, and Republic of Sudan. 20-21/ 11/2012.
- The Seventh Scientific Agricultural Conferences SSAC-2012. Irbid-Jordan, 8-10 October, 2012, Faculty of Agriculture, The University of Science & Technology (JUST).
 - The Ninth International Conference of the History of the Levant, Cultivation in the Levant since the late Byzantine period until the end of the Ottoman Empire in 1920 AD, 1-5 April, 2012, The University of Jordan, Amman-Jordan.
 - The International Arab Conference to ensure the quality of higher education. 10-12 May/ 2011.
 - Third Conference of Research Theses. Jordan University. Amman, November 29-30, 2010.
 - The National Conference for the Development of Study Plans, Teaching and Learning and Scientific Research. Ministry of Higher Education. Amman, June 15-17, 2010.
 - Sharing Knowledge across The Mediterranean (5). Organized by Sharing Knowledge Foundation. March 1-3, 2010. Dead Sea. Jordan.
 - Pan Arab Biodiversity Conference. Bibliotheca Alexandrina. Dec. 14-16, 2009. Alexandria, Egypt.
 - The Fourth Conference on Genetically Modified Food. The Technical and Consultation Center. Nov.16-17, 2009.
 - . Amman, Jordan,.
 - The Fourth Conference on Scientific Research in Jordan. Jordan Society of Scientific Research. Landmark Hotel, Amman, Jordan. Nov. 7, 2009.
 - The Fourth Conference on Intellectual Property Rights In Agriculture. The Technical and Consultation Center. April. 19-20. Amman, Jordan, 2009.
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 - The Third International Conference on Genetically Modified Food: Biofuels. The Technical and Consultation Center. Nov. 18-19. Amman, Jordan, 2007.
 - The Sixth Jordan Quality Conference. Movenpick Hotel, Dead Sea, Jordan. 2-4, December, 2007.
 - The Third Conference on Scientific Research in Jordan. Jordan Society of Scientific Research. The Grand Hyatt Amman Hotel, Amman, Jordan. 17, November, 2007.
 - The 9th Shanghai international Forum on Biotechnology & Pharmaceutical Industry. Shanghai-China, July 3-5, 2007.
 - The Third Conference for the Biotechnology and its application in the Arab agricultural investment. Amman-Jordan. June, 2007.
 - The establishment of a National Information Sharing Mechanism on the implementation of the Global of Action (GPA) on Plant Genetic Resources for Food and Agriculture. Amman-Jordan, June 21, 2007.
 - Expert Consultation on Genetically Modified Crops. Amman-Jordan, May 14-15, 2007.
 - First Egyptian–Jordanian Conference on Biotechnology and Sustainable Development: Current Status and Future Scenarios. Cairo, Egypt, Dec. 11-14,2006.
 - Third International Date Palm Conference. United Arab Emirates University, AlAin, UAE, Feb. 19-21, 2006.

- International Conference on Promoting Community-driven Conservation and Sustainable Use of Dry Land Agrobiodiversity. ICARDA, Aleppo, Syria, 18-21 April 2005.
- The Ninth General Conference of the Association of Agricultural Research Institution in the Near East and North Africa (AARINENA). 11-13 April. 2004. Muscat, Oman.
- Jordan Ninth Science Week. The Higher Council for Science and Technology. Biotechnology and its Role in the Jordanian Economy. October 6-8, 2003. Amman- Jordan.
- Conference of Biological Research and Studies in Jordanian Badia. March 30, 1998. Al-Albait University, Mafraq, Jordan.
- Second Arab Conference on Perspectives of Modern Biotechnology. April 24-28, 1993. Amman-Jordan.
- Global change. November 19-22, 1990. Washington D.C., U.S.A. First Arab Conference on Perspectives of Modern Biotechnology. October 16-19, 1991. Amman-Jordan.

Advisor or Co-Advisor on Thesis Project (Examples):

- Younes, L. Advisor. 2011-present Ph.D. Thesis. " *In vitro* multiplication and conservation of *Achillea fragrantissima* Forssk Sch. Bip.). College of Agriculture, university of Jordan, Amman. Jordan.
- AL-Hawmdeh F. Advisor. 2011-present M.Sc. Thesis. *In Vitro* Propagation and Secondary Metabolites production In Milk Thistleb (*Silybum marianum* L.). College of Agriculture, university of Jordan, Amman. Jordan.
- Sharaf, S. Advisor. 2009-2011. Ph.D. Thesis. "*Micropropagation and in vitro conservation of Artemisi herba Alba*). College of Agriculture, university of Jordan, Amman. Jordan.
- Rabaa, M. Advisor. 2009-Present. M.Sc. Thesis. *In vitro* conservation of Felty germander (*Teucrium polium* L) shoot tips. College of Agriculture, university of Jordan, Amman. Jordan.
- Al Qudah, T. Co-Advisor. 2007-Present. M.Sc. thesis "*Micropropagation ,Callusing And Secondary Metabolites in Teucrium polium L* " College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
- Mustafa, S. Co- Advisor, 2007-Present, M.Sc. thesis "In Vitro Propagation of oriental strawberry tree (*Arbutus Andrachne*.L)" College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.
- Baghdadi, S. Advisor. 2006-present. M. Sc. Thesis "In vitro preservation and cryopreservation of embryogenic callus of wild crocus (*Crocus hyemalis* and *C. moabiticus*) ", College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan
- Al-Qudah, A., Co-advisor. 2005-present. Ph. D. Dissertation "In vitro micropropagation of apricot cvs Baladi, Ajami, and rootstock reine claud P3116 (Tori-

nel)", College of Agriculture, Jordan University of Science and Technology. Irbid, Jordan.

- Daradkah, N., Advisor. 2004-present. M.Sc. Thesis "Callus, cell suspension culture and colchicines production in *Colchicum hierosolymitanum*", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
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- Al-Qurashi, S. Co-advisor. 2002-2005. M. Sc. Thesis "A study of in vitro and in vivo seed germination of black iris (*Iris nigricans*)", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Zatimeh, A. Advisor. 2002-2005. M. Sc. Thesis "Comparative responses of Muskmelon (*Cucumis melo* L.) Microshoots and hydroponic culture to salinity", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Subaieh, W. Advisor. 2001-2004. M. Sc. Thesis "Influence of some chemical factors on regeneration in date palm (*Phoenix dactelifera* L.)", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Al-Khassawneh, N. Co-advisor 2001-2004. M. Sc. Thesis "The use of plant growth regulates to break dormancy and regulate flowering of Black Iris (*Iris nigricans* D.)" College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Al-Khasawneh, A. Co-advisor 2001-2004. M. Sc. Thesis "Patterns of phenotypic and genetic variation of Black Iris (*Iris nigricans* D.) in three different provinces in Jordan" College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Ibrahim, N. Advisor. 2000-2004. M Sc. Thesis "Micropropagation of some coffee (*Coffea arabica* L.) cultivars from Yemen", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Abdelrahman, N. Advisor. 2000-2003. M Sc. Thesis "The effect of induced salinity stress on tolerance and physiology of wild pear in vitro", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Dagnev, A. Advisor. 2000-2003. M Sc. Thesis "Slow growth preservation and cryopreservation in African violet", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Al-Hussein, S. Advisor. 2000-2003. M Sc. Thesis "Direct and indirect regeneration in African violet", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Abu-Sham'a, M. Advisor. 2000-2003. M Sc. Thesis "Response of wild pear to in vitro induced water deficit", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan
- Oweis, D. Advisor. 2000-2003. M Sc. Thesis "In vivo and in vitro propagation of Akoub", College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Taye, E. Advisor. 2000-2002. M Sc. Thesis "Morphological and Physiological and Yield traits of faba bean genotypes as affected by drought stress", College of

- Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Abu-Khadejeh, A. Advisor. 2000-2002. M Sc. Thesis “Comparative responses of tomato (*Lycopersicon esculentum* Mill.) microshoots, cell suspension and hydroponic cultures to salinity”, College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Al-Khateeb, W. Co-Advisor. 2000-2002. M Sc. Thesis “Orobanche and tomato interaction as influenced by salinity and water deficit under in vivo and in vitro conditions”, College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Harb, A. Co-Advisor. 2000-2002. M Sc. Thesis “The role of indole-3-acetic acid in host-parasite (orobanche) interaction”, College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Abu-Sharbi, A. Co-Advisor. 1997-2001. Ph.D. Thesis “The role of thermal therapy and tissue culture on virus elimination in grape vine”, College of Agriculture, University of Jordan, Amman, Jordan.
 - Al-Ababneh, S. Advisor. 1998-2001. M Sc. Thesis “Cryopreservation of bitter almond and source orange”, College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Ajlouni, Z. Co-Advisor. 1998-2001. M Sc. Thesis “Callus and in vitro regeneration systems in Barley (*Hordeum vulgare* L.): Influence of genotype”, College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Shawawreh, K. Co-Advisor. 1998-2002. M.Sc. Thesis “Productivity and growth tomato (*Lycopersicon esculentum* Mill.)”, College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Al- Shyab, S. Advisor, 1998-2001. M Sc. Thesis “ Influence of salt stress on in vitro growth and mineral uptake in sour orange”, College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Al-Sane’, K. 1997-2000. Advisor, M.Sc. Thesis “Factors Affecting Callusing, Cell Suspension Culture and Production of Secondary Metabolites in African Violet (*Saintpaulia ionantha* Wendl.)”. College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Arafeh, R. 1997-1999. Advisor, M.Sc. Thesis. “Factors Affecting In Vitro Propagation, Callusing, Cell Suspension Culture and Secondary Metabolites Production in Sweet Marjoram (*Origanum vulgare* L.) and Syrian Marjoram *Majorana syriaca* L. Rafin (*Origanum syriacum* L.)”. College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Tahtamoni, R. 1996-1998. Advisor, M.Sc. Thesis “In Vitro Conservation of wild Pear (*Pyrus syriaca*)”. College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
 - Hozain, M. 1994-1996. Co-Advisor, M.Sc. Thesis “Effect of Various Media on Micropropagation of M111 Apple Rootstock”. College of Agriculture, University of Jordan, Amman, Jordan.

Committee Member on Thesis Examination (examples):

- Al Shhab, M. A. 2011. Clonal propagation medium term conservation and antimicrobial

activities of *Ruta graveolens*: Jordanian medicinal plant. M. Sc. Faculty of Agriculture, Al Balqaa Applied University, Salt, Jordan.

- Shahrestani, S. 2011. Physiological Response of three olive cultivar under saline conditions. M. Sc. Faculty of Science, the Hashemite University, Zarqa, Jordan.
- Al Majali, R. 2011. Analysis of short Tandem Repeats (STRs) of Y-Chromosome Among the Arab Iraqi Population. M. Sc. Faculty of Science, Al Al-Bait University, Mafraq, Jordan.
- Zaeater, A. 2010. Bioinformatics Analysis of the Proanthocyanidin Biosynthetic Pathway in Hawthorn (*Crataegus* spp.). M. Sc. Faculty of Agriculture, University of Jordan, Amman, Jordan
- Zatimeh, A. 2010. Diversity Analysis and Conservation of Milk Thistle (*Silybum marianum* (L.) Gaertn. Populations in Jordan .Ph.D. Dissertation. Faculty of Agriculture, University of Jordan, Amman, Jordan
- Barakat, A. 2010. A study of tissue compatibility between almond rootstocks and apricot using micro and ordinary grafting. Ph.D. Dissertation. Faculty of Agriculture, Aleppo University, Aleppo- Syria.
- Bawaliz A. 2010. Assessment of Agro-morphological and genetic variation among two Jordanina landraces of vetc (*Vicia sativa* abd *Vicia ervilla* L.) revealed by AFLP molecular marker. Ph.D. Dissertation. Faculty of Agriculture, University of Jordan, Amman, Jordan
- Al-Tamimi, H. 2010. Identification and Cell Culture of Green Microalgae from the Gulf of Aqaba. Ms.C., thesis, faculty of Agriculture, University of Jordan, Amman, Jordan.
- Hussien, M. 2009. Response of Soybean and pearl millet grown I a row intercropping system under different soil salinity and irrigation levels. Ph.D., faculty of Agriculture, University of Jordan, Amman, Jordan.
- Zoubi, B.H. 2009. Establishment of callus and cell suspension culture of hawthorn (*Crataegus azarolus* L.). The University of Jordan, Amman, Jordan.
- Saleh, B.A. 2008. ATR analysis of Y-chromosome in the population of middle district of Jordan. In Al-Albayt University. Mafraq, Jordan.
- Al-Hazayme, I., 2007. Antibiotic production from *Streptomyces* QU66C. In Al-Albayt University. Mafraq, Jordan.
- Al-abadi, B., 2007. Genetic variations among Jordanian tomato landraces using simple repeat (SSR) and their salt tolerance at germination and seedling stages. In Jordan. Jordan University of Science and Technology. Irbid, Jordan.
- Husain, M., 2007. Tissue Culture Studies on Propagation of Two Multipurpose Tree Species- *Pterocarpus marsupium* Roxb. and *Melia azedarach* L. In Aligrah Muslim University. Aligrah, India.
- Rawashdeh, I., 2007. Variation among and within Populations of *Achillea fragrantissima* (Forsk.) Schultz Bip. From Jordan and Their Cultivation Potential. University of Jordan.
- Al-Omouh, M. 2007. Gross Chemical Composition, Mineral Content, Phenolics, Anthocyanines and Antioxidant Determination in Some Wild Plants with Medical Potential from Jordan. In Jordan. Jordan University of Science and Technology. Irbid, Jordan.
- Al-Lozi, S. 2007. Phenotypic and Genotypic Variation of Arum Species In Jordan. Jordan

University of Science and Technology. Irbid, Jordan.

- Rawashdeh, I. 2007. Variation Among and within Populations of *Achillea Fragrattissima* (Forsk.) Schultz Bip. From Jordan and Their Cultivation Potential. University of Jordan. Amman, Jordan.
- Ahmed F. Hussain. 2005. Development of Transgenic Tomato Plants Resistant to Tomato Yellow Leaf Curl Virus (TYLCV) via Gene Silencing Technology. Al-Balqaa' Applied University. Sult, Jordan.
- Isleem, W.R. 2005. In vitro Establishment of Somaclonal Olive (*Olea europaea* L.) cultivar. College of Agriculture, University of Jordan, Amman, Jordan.
- Al Sakran, L. S. 2004. M. Sc. Arabicization of Agricultural Terms from a Terminology Planning Perspective. Yarmouk University, Irbid, Jordan.
- Al-Rawashdeh, N. 2004. M.Sc. Phenotypic diversity for agronomic and morphological traits for durum wheat landraces from Jordan. College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Al-Fawaz, A., 2003. Production of Antimicrobial Agents from Cyanobacteria. In Al-Albait University. Mafraq, Jordan.
- Al-Omari, Y. 2003. M.Sc. Influence of Potassium and Salinity on cucumber plants (*Cucumis sativus* L.) grown in hydroponics. College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
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- Damer S. I. 2003. *Gypsophila paniculata* L. Micropropagation. College of Agriculture, University of Jordan, Amman, Jordan.
- Al Dehadheh A. M. 2003. Morphological and biochemical characteristics of pollen from some olive (*Olea europaea* L.) cultivars in Jordan. College of Agriculture, University of Jordan, Amman, Jordan.
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- Najji, A. S. 2002. Agar production from marine algae in the red sea (Gulf of Aqaba, Jordan and Port of Makha, Yemen). Department of Biology. Al-Albait University. Mafraq, Jordan.
- Arikat, N.A. 2002. M.Sc. In vitro propagation and secondary metabolite production in sage (*Salvia fruticosa* L.). College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Haddad J. 2002. M.Sc. Effect of H₂O₂ and ethephone on seedling chilling tolerance, fruit yield and post harvest qualities of tomato. College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Al-Hamouri, A. 2002. M.Sc. Fertilizer use efficiency under vegetable drip fertigation systems. College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Al-Mahadeen, A. Y. 2001. Ph.D. Analysis of growth and seed production of onion in response to GA₃, bulb size, cold storage, planting and population pressure at Ghor Al-Safi. University of Jordan, Amman, Jordan.
- Al-Sukkar, O.A. 2000. M.Sc. Germination studies on *Pistacia palestina* Boiss

seeds using chemical and physical treatments. University of Jordan, Amman, Jordan.

- Chibani, K.A. 2000. M.Sc. Effect of auxin source and concentration on in vitro regeneration of two citrus rootstocks. University of Jordan, Amman, Jordan.
- Qubaj, T. 1999. M.Sc. Effect of acid or base treatments on rooting of semi-hard wood cuttings of 'Nabali' olive cuttings. University of Jordan, Amman, Jordan.
- Al-Majthoub M. 1999. M.Sc. In vitro propagation of wild cyclamen (*Cyclamen persicum* Mill). College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Al-Salhi, T. 1998. M.Sc. Identification of Potato Virus Y (PVY) Variants Affecting Pepper Cultivars (*Capsicum* spp.) in Jordan. College of Agriculture, University of Jordan, Amman, Jordan.
- Al-Soudi, L. 1998. M.Sc. Removal of Wastewater Nutrients and Heavy Metals by Immobilized Microalgae. Department of Biology. Al-Albyat University. Mafraq, Jordan.
- Bashabsheh, N. 1998. M.Sc. Effect of Soil Conditioners and Plastic Mulches on the Performance of 'Ashuri' Pistachio in Almuqar Area. College of Agriculture, University of Jordan, Amman, Jordan.
- Al-Azizi, M.J. 1998. M.Sc. The effect of potassium fertilizers on yield and quality of processing tomatoes. University of Jordan, Amman, Jordan.
- Abu-Samra, W. 1998. M.Sc. Salt Tolerance of Wheat (*Triticum* spp.) Cultivars at Three Stages of Growth. College of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
- Hammoudeh, H. 1994. M.Sc. Micropropagation and Regeneration of Strawberry Cultivar Honoeye. College of Agriculture, University of Jordan, Amman, Jordan.
- Yousef, A. 1994. M.Sc. Micropropagation of Spunta potato. College of Agriculture, University of Jordan, Amman, Jordan.

Member in Steering Committee

- Member in the Committee of " Format the second National Report on the implementation of the Cartagena protocol on Biosafety. Ministry of Environment. Amman, Jordan. 2011. Sep. 22- present.
- Communal Management And Optimization Of Mechanized Microcatchment Water Harvesting For Combating Desertification In The East Mediterranean Region. The International Center For Agricultural Research In The Dry Areas. 2003
- Olive Program, The National Center for Agricultural Research and Technology Transfer (NCARTT), Baq'a, Jordan.

Workshops and Training Courses (attended or participated) (Examples):

- Royal Botanic Garden 1st Annual Scientific day. Amman, January 12, 2012.
- Workshop on "enerMENA R & D Infrasructure Workshop- Almeria, support to establish R& D and test infrastructure at partner institutions, German Aerospace Center (DLR).

15-16/12/2011. Almeria Spain.

- Shibli R.A. 2011. Basic vs. Applied Research in Jordan. Workshop on Research and Higher Education: A Discussion Hosted by Columbia University Middle East Research Center.
- Workshop on "enerMENA Launching workshop" advanced CSP-Teaching Materials. 29-June/ 1 –July, 2011. Cologne, Germany.
- Workshop on "The Use of Nanotechnology in Agriculture". The national Center for Agriculture Research and Extension. July, 26, 2010. Baqa, Jordan.
- Workshop on Identification of Native Plants in Jordan to Prepare for A Red List. The Royal Botanical Garden. July 12, 2010, Amman, Jordan..
- Workshop on Strengthening Capacities towards the Establishment of a Regional Platform for the Detection of Genetically Modified organisms. FAO and NCARE, July 28-30/7, 2009. Amman, Jordan.
- Workshop on the Uses of the Synchrotron Center. Al-Zytoneh University. Amman, Jordan. June 2009.
- Workshop on Promoting Innovation and Intellectual Property for Development. (April 27, 2008), Royal Scientific Society. Amman, Jordan.
- Workshop on Freezing and Its Influences on Agriculture Sector in Jordan. The National Center for Agriculture Research and Extension (NCARE). April 2008, Baqa, Jordan.
- Workshop on Launching the International Assessment of Agricultural Science and Technology Development (IAASTD) (October 8th 2008).. International Center for Agricultural Research in the Dry Areas. Amman, Jordan.
- Training Course in Production of Virus Free Plants by Plant Tissue Culture. March, 16th, 2008. National Center for Agriculture Research & Extension. Baqaa, Jordan.
- Workshop on Accreditation for Agriculture Specialties. April 23, 2005. Jerash University, Jordan.
- Workshop on National Partnership in the Implementation of the National Biodiversity Strategy. March 14, 2005. Amman. Jordan.
- Workshop on Jordan National Network for Medicinal Plants. March 8, 2005. Jordan University of Science and Technology, Jordan.
- Environmental Regulations with Perspectives to Biodiversity. Jordan Environment Society. July 29, 2004. Amman, Jordan.
- Influence of Salinity on Plant Growth and Development (Plant physiology- growth stages/germination). July 19-22, 2004. National Center for Agriculture Research and Technology Transfer (NCARTT). Baqa, Jordan. (Lecturer).
- Promoting Regional Cooperative Agricultural R&D in the Middle East. Binational Agricultural Research and Development Fund. July 6-7, 2004. Istanbul, Turkey.
- Upgrading and sustaining the parliamentarians participation in the understanding of Jordanian environmental legislation with reference to emerging key issues. Strategies of agriculture and its reflections on environment. May 3-4, 2004. Amman, Jordan.
- Regional Workshop on Technology Transfer. Association of Agricultural Research Institution in the Near East and North Africa (AARINENA). 11-13 April, 2004. Oman, Mus-

cat.

- Sub-regional Workshop on Technology Transfer. FAO. March 31-April 1, 2004. Jordan University of Science and Technology, Irbid, Jordan
- Conjugate Research Project to Determine DNA-fingerprint of Different Olive Cultivars in Jordan, Egypt, and Morocco. Arabic Organization for Agricultural Development. Dec. 10-12, 2003. Cairo, Egypt.
- Food Security Projects of Jordan. FAO. Dec. 2, 2003. Amman, Jordan.
- The Frontiers of Science and Engineering. The national Academies, Advisors to the Nation on Science, Engineering, and Medicine. Istanbul, Turkey. September 21 – 23, 2003. KOC University.
- Biosafety in Agricultural Biotechnology, theoretical. 30 August – 1st September, 2003. Damascus, Syria.
- Biosafety in Agricultural Biotechnology, practical. September 1 – 4, 2003. Aleppo, Syria.
- Biosafety regulations. May 25, 2003. Ministry of Environment. Amman, Jordan.
- Medicinal and Herbal Plant Project. June 14, 2003. Ministry of Planning. Amman, Jordan.
- Agricultural Biotechnology Expert Meeting Oct. 27-29, 2002. Coordination of agricultural biotechnology research efforts in the Arab world. Organized by the Arab organization for agriculture development, Cairo, Egypt (Participant)
- Commercialization of Genetically Modified Crops (GMC). April 14, 2002. American Embassy –USAID Program. Amman, Jordan. (participant).
- Plant Tissue Culture and In vitro Conservation. Feb. 3-7, 2002. National Center for Agriculture Research and Technology Transfer (NCARTT). Baqa, Jordan. (Lecturer)
- Plant Tissue Culture. Sept. 23-27, 2001. National Center for Agriculture Research and Technology Transfer (NCARTT) and The Agriculture Engineering Association. Baqa, Jordan (Lecturer).
- Second Workshop on Plant Genetic Resources and Biodiversity. Sept. 19-20, 2001. National Center for Agriculture Research and Technology Transfer (NCARTT) and the International Plant Genetic Resources Institute (IPGRI). Dana Natural Reserve. Dana, Jordan. Lecture: Cryopreservation of Plant Genetic Resources).
- Workshop on Education Technology (Evaluation and Measurement). Feb. 4-6, 2001. Jordan University of Science and Technology. Irbid, Jordan. (Attendance).
- Pistacia Biodiversity. Dec. 14-17, 1998. Jordan University of Science and Technology, Irbid, Jordan. Organized by the International Plant Genetic Resources Institute (IPGRI). (Coordinator).
- Medicinal and Herbal Plants in Jordan. June 28, 1998. The National Center for Research and Technology Transfer (NCARTT), Baqa, Jordan. (Participant)
- Cryopreservation of Plant Genetic Resources. May 4-8, 1998. The International Plant Genetic Resources (IPGRI), and the Horticulture Research Institute (IFS). Rome, Italy. (Trainee).
- Plant Biotechnology: Nov. 20, 1994. Amman (Higher Council of Science and Technology). (Lecture: Uses of Plant Tissue Culture for Plant Propagation and Production of Nursery Stock).
- Applications of Biotechnology for Agriculture Development in Arid Regions. Nov. 15-

18. 1994. Safawi (Jordan Badia Research and Development Programme). (Lecture: Plant Tissue Culture in Jordan: Status and Aims).

- Plant Tissue Culture. Sept. 24-28, 1994. Jordan University of Science and Technology, Irbid, Jordan. (Organizer and lecturer)
- Plant Tissue Culture. Sept. 15, 1994. Amman (Higher Council of Science and Technology). (Lecture: Use of Plant Tissue Culture for Production of Disease Free Vegetable seedlings).
- Plant Genetic Resources in Jordan. Aug. 4-8, 1994, Baqa, Jordan. (Lecture: In Vitro Conservation of Plant Genetic Resources in Jordan).
- Plant Genetic Resources. May 10-12, 1994. Aleppo, Syria. (Lecture: In vitro Conservation of Plant Genetic Resources).
- Vegetables seed production. May 24-28, 1992. Amman-Jordan. (Attendance).
- Vegetables Seed Technology and Production. March 22-23, 1992. Amman-Jordan. (Attendance)
- Genetically Modified Organisms, Risks and impacts. May 7-8, 2005, Amman, Jordan

Community Education:

- **Have helped many private companies and institution in developing their biotechnology projects and programs.**
- Have participated in many radio programs and TV shows explaining the aspects of utilizing tissue culture techniques for nursery production and farming.
- Have written many newspaper and magazine articles (i.e. Agriculture Engineer Magazine) about tissue culture and its utilization.
- Have participated in many forums explaining different aspects of plant tissue culture and biotechnology to interested people.
- Have participated in the organization of many workshops and was a member of the Committee of many conferences in Jordan.

References:

- Dr. Mary Ann Lila, Professor of Plant Physiology *
- Dr. Jeffrey J. Volenec. Professor of Crop Molecular Physiology**
- Dr. Mohammad Suwwan, Professor of Vegetables Physiology***
- Dr. Mahmoud Duwwary, Professor of Plant Breeding***

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