Ayman A. Diab, Ph.D

Dean, Faculty of Biotechnology

University for Modern Sciences & Arts

Director, Molecular Manipulation and Gene transfer Lab

Agricultural Genetic Engineering Research Institute (AGERI)

Agricultural Research Center (ARC)

Visiting Professor, School of Science, Greenwich University – UK

Manager, Technology Innovation and Commercialization Office at MSA - Academy of Scientific Research and Technology - Ministry of Higher Education

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Faculty of Biotechnology
Faculty Acting Dean
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9 Gamaa Street,
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E-mail: Aymanalidiab@gmail.com
Internet:http://www.ageri.sci.eg

Education

Cornell University: (Ithaca, New York – USA)
Ph.D. Plant Breeding and Genetics, 2003
Dissertation Title: "*Genomic Analysis of Drought Tolerance in Barley and Wheat*"

AinShams University: (Cairo, Egypt)
Master in Microbiology (Molecular Biology), 1997
Thesis Title : "*Agrobacterium Tumefaciens Mediated Transformation of Some Egyptian Cotton Varieties*"

Ain Shams University: Postgraduate courses as partial fulfillment for the master degree in microbiology , 1994

Cairo University: Bachelor of Science, 1992

Scholastic Honors and Awards:

1. 2009: National Encouragement Award for Advanced Technological Sciences that Serve the Agricultural Fields. جائزة الدولة التشجيعية فى العلوم التكنولوجيه المتقدمة التى تخدم المجال الزراعى
2. 2007: Top 100 Scientists in 2007 award from IBC- Cambridge – Great Britain
3. 2003: Teaching award of merit. North American Colleges and Teachers of Agriculture (NACTA)
4. 2003: Outstanding teaching award. Cornell University, Ithaca, NY – USA
5. 2003: Baccalaureate service award from Cornell United Religious Work (CURW) for intellectual integrity, a commitment to a pluralistic community, and excellence in scholarship and active citizenship. Cornell University, Ithaca, NY – USA
6. 2002: Munger/Murphy award for outstanding performance in the areas of scholarship, research and service as a graduate student in the field of plant breeding. Cornell University, Ithaca, NY- USA
7. 2002: The class of '63 award for cultural program - Cornell University, Ithaca, NY- USA

Academic Appointments:

2011-2012	**President**, University of Modern Sciences - Dubai, UAE
2010- 2011	**Academic Advisor**, Biotechnology University College, UAE Academy- Abu- Dhabi Chamber for industry and commerce
2004–present	**Dean** Faculty of Biotechnology University for Modern Sciences & Arts Wahat Baharia Street P. O. Box 2511 6th of October, Cairo, Egypt
2009-present	**Associate Professor**, Agricultural Genetic Engineering Research Institute (AGERI) Agricultural Research Center (ARC) - Egypt.
2003-present	**Director** of the Molecular Manipulation and Gene Transfer Lab AGERI – ARC - Egypt
2003–2009	**Visiting Scholar** Plant Breeding and Genetics Department Cornell University Ithaca, 14850 - New York – USA

2003–2009 **Researcher**
Gene Expression and Regulation Technology Laboratory (GERT)
Agricultural Genetic Engineering Research Institute (AGERI)
Agricultural Research Center (ARC) - Egypt.

1998–2003 **Assistant Researcher**
Gene Expression and Regulation Technology Laboratory (GERT)
Agricultural Genetic Engineering Research Institute (AGERI)
Agricultural Research Center (ARC) - Egypt.

1993–1998 **Research Assistant**
Gene Expression and Regulation Technology Laboratory (GERT)
Agricultural Genetic Engineering Research Institute (AGERI)
Agricultural Research Center (ARC) - Egypt.

Non-Academic Appointments:

2003–2004 **Consultant for Training Development**
Training Department
FUJITSU (Multi-national Firm)
13 Goal Gamal St. El-Mohandeseen – Giza - Egypt

2005– 2009 **Vice-President**
International Center for Environmental Consultancy (ICEC)
Cairo – Egypt

Short-Term Appointments:

2003-2004 **Assistant Professor**
Biology Department
The American University in Cairo
113 Kasr El Aini Street, Box 2511
11511, Cairo, Egypt

2002–2003 **Instructor**
Department of Plant Breeding and Genetics
Cornell University
Ithaca, New York – USA

1999–2002 **Teaching Assistant**
Department of Plant Breeding and Genetics
Cornell University
Ithaca, New York – USA

Administrative Experience:

- **University President**: (2011-2013): University of Modern Sciences (UMS) - Dubai - UAE
- **Faculty Dean**: (2004 - present): Faculty of Biotechnology, University for Modern Sciences & Arts.
- **Director:** Molecular Manipulation and Gene Transfer Lab AGERI – ARC - Egypt.
- **Vice-President:** Egyptian Society for Stem Cell Research
- **Vice-President:** International Center for Environmental Consultancy (ICEC) – Egypt.
- **Committees**: Served on several departmental, school and standing committees at Cornell University (1999–2003), University of Modern Science and Art and the Agricultural Genetic Engineering Research Institute (1993–present).

Research Areas:
Genomic Analysis of biotic and abiotic stresses; Functional genomics of cereals; Structural genomics of wheat and barley; Comparative genetics of cereals; QTL analysis; Cloning, Gene profiling; Gene transfer and Construction of genomic, cDNA and EST libraries, Stem cell research

Courses Taught:
Human genetics, Advanced plant genetics, Plant tissue and organ culture, Plant genetics, Cell biology, Cell Physiology, Food microbiology , Introduction to microbiology, Plant molecular biology, Microbial genetics, General botany, Unity of life, Introduction to biotechnology, Genomics and proteomics, Molecular Genetics, Industrial project, DNA forensics, Environmental biotechnology, Advanced Genetic Engineering

Students Supervised: **Served as a Committee member for the following graduate students:**

1. Amgad Radi, Teaching Assistant at Faculty of Biotechnology – MSA University Ph.D," Thermostable Arginase from Fungi: Purification, Immobilization and Molecular Characterization"
2. Shaza Ahmed, Teaching Assistant at Faculty of Biotechnology – MSA University M.Sc., "*Studying the role of cytokines in Transactivation of the growth factors receptors signaling pathways*"
3. Arwa Obada Kohela, Teaching Assistant at Faculty of Biotechnology – MSA University M.Sc., "*Molecular Characterization and Expression Profile Analysis of Metallothionein in the Mosquito Culex quinquefasciatus upon Exposure to Cadmium*"
4. Amgad Radi, Teaching Assistant at Faculty of Biotechnology – MSA University M.Sc., " Cloning, Sequence Analysis and Expression of Choline Dehydrogenase (betA) Gene from Psudomonas aeruginosa under Salt Stress"

5. Bassem Ali Abdel-Gawad: Assistant lecturer at Faculty of Biotechnology – MSA University Ph.D., "*Characterization and Cloning of Differentially Expressed Sequence Tags from Durum Wheat under Drought Stress Condition*"

6. Marwa Sayed Fouad : Teaching Assistant at Faculty of Science – Cairo University Ph.D., "*Molecular assessment of in vitro fungal elicited culture-derived variations of grain legumes for enhanced phytoalexin expression*"

7. Marwa Samir: Assistant Researcher at Agricultural Genetic Engineering Research Institute (AGERI). M.Sc., "*Construction and Characterization of Bacterial Artificial Chromosome from Durum Wheat*"

8. Lamiaa Salaheldin: Assistant Researcher at Agricultural Genetic Engineering Research Institute (AGERI). M.Sc., "*Identification and cloning of drought inducible gene coding for Trehalos*"

9. Yousry said refaat: Teaching Assistant at Faculty of Biotechnology – MSA University. M.Sc. "*Identification, Cloning and Expression Studies for Osmotic Induced Gene Coding for Betaine Aldehyde Dehydrogenase (BADH) from Aspergillus spp*"

10. Amal Husein Sobhy Maghraby: Teaching Assistant at Faculty of Science – Cairo University M.Sc., "*Construction and Characterization of cDNA Libraries from Egyptian Durum Wheat (Triticum turgidum var. durum)Under Drought Stress*"

11. Mohamed Salah Eldin Elhadidi: Teaching Assistant at Faculty of Biotechnology – MSA University. M.Sc. "*Improvement of salinity tolerance in plants using genetic engineering technology* "

12. *Ashraf Mohamed Elhusseiny: Major in the Egyptian police. M.Sc, "The Legislation of Cloning and its Effect on Biological Diversity*"

13. Ayman Farouk Mohamed Soudy: Major in the state security investigation – The Egyptian Police. M.Sc, "The Dangers of Biological Terrorism on the Environment and the Society

14. Served as an external advisor for the following research project: The Legislation of Human Cloning: By Mr. Mohamed Elshamy (Deputy District Attorney)

Professional Service Activities:

- Reviewer Scientific Research and Essays
- Reviewer/ Advisory Board of Journal of Plant Breeding and Genetics
- Reviewer for the African Journal of Biotechnology
- Editorial board member of the International Journal of Bio-Technology and Research (IJBTR)
- Editorial board member of the International Journal of Biological Research and Development(IJBRD)
- Editorial board member of the Journal of Bio-Technology and Research(JBTR)

- Editorial board member of the Journal of Biological Research and Development(JBRD)
- Reviewer for the Science and Technology Development Fund (STDF) projects- Academy of Scientific Research & Technology (ASRT), Ministry of Scientific Research
- Supervisor and responsible for student selection in the International Platform of Young People to Discover and Develop Their Potential.
- Member of the Specialized Advisory Committees (Science and Technology Committee) at the Library of Alexandria
- Vice-President of the Egyptian Society for Stem Cell Therapy
- Board Member of the International Study Group for Stem Cell Research (ISGSCR)
- Member of The Egyptian Society For Study Of Updates
- Member of the Egyptian Society of Genetics
- Associate Editor in American-Eurasian network for scientific information (2007-present)
- Associate Editor-in-chief for the American-Eurasian Journal of Scientific Research (2006-present)
- Member of the editorial board of the IDOSI publications (2006 – present)
- Elected member of the counsel of representative (COR), Cornell University Board. (2002 – 2003)
- Secretary of the Egyptian Society at Cornell University – Ithaca – New York – USA (1999-2000).
- Coordinator of the plant society, Faculty of Science – Cairo University (1990 – 1992).
- Member of the Scientific Professional Syndicate (1992 – present)

Training Courses, Workshops and Conferences

- Session Chairman and Member of the Organizing Committee for the First International Conference for Genetic Modified Plants and Crops. Faculty of Agriculture - Cairo University. 27-29 November, 2012
- Capacity Building for MCPs to improve participation in FP Projects. Bari, Italy. 26-28 October, 2011
- Chairman of the Annual Conference for Pharmacy and Biotechnology students. October University for Modern Sciences and Arts. 30th June and 1st July 2010.
- Chairman of the 2nd International Conference for Applications of Biotechnology (ICAB-2009) – Faculty of Biotechnology - October University for Modern Sciences and Arts. 17th – 18th 2009
- Chairman of the 1st International Conference for Applications of Biotechnology (ICAB-2008) – Faculty of Biotechnology - October University for Modern Sciences and Arts. 16th – 17th 2008

- Workshop on Standardization of Rules and Regulations of Public and Private Universities. 29th of December 2007. Organized by the Bibliotheca Alexandrina.
- The 1st Annual International Conference for Stem Cell Therapy. 8th – 11th May 2007. Organized by the International Study Group for Stem Cell Therapy in collaboration with Egyptian Society for Stem Cells. Le Meridien Makadi Bay Hurghada – Egypt.
- Workshop on Better Plants for Better Life. 24th April 2007. Organized by German-Egyptian year of Science and Technology in collaboration with AGERI – ARC – Egypt.
- Workshop on Strategic Modernization of Industrial Biotechnology. 6th February 2007. Organized by Industrial Modernization Center
- Workshop on the Global Status of Commercialized Biotechnology GM Crops. 24 January 2007. Organized by Egyptian Biotechnology Information Center and Agricultural Research Center.
- Chair person in the stem cell therapy session – the 4th Annual Meeting of The Egyptian Society for Study of Updates - Hilton Green Plaza, Alexandria - 25-27 January, 2007.
- Workshop on the Development of Biotechnology in Islamic Countries: Sharing Experience on Issues and Challenges. 6-8 March 2006. Organized by Inter-Islamic Network on Genetic Engineering and Biotechnology and Egyptian Biotechnology Information Center
- Workshop on Implication of Regulatory Sciences in Developing Insect Resistant Cotton. 8-9 February 2006. Organized by Egyptian Biotechnology Information Center and Agricultural Research Center.
- Workshop on Biotechnology in Egypt. 19 July 2004. Egyptian Biotechnology Information Center and Agricultural Research Center.
- International Triticeae Mapping Initiative Workshop (ITMI). 14 - 16 June 2000. University of Delaware Newark, Delaware USA
- Writing in the discipline training course 2000. Knight Institute, Cornell University- Ithaca, NY- USA
- Radiation safety course (17th – 19th March, 2000), Cornell University, Ithaca, USA
- Regional biosafety workshop (24th – 31 January, 1999), Agricultural Genetic Engineering Institute (AGERI) and USAID – Egypt.
- International training course in biotechnology, micropropagation and related techniques for conservation and use of plant genetic resources for the improvement of crops, (11th January – 11th May, 1996), German foundation of international development – Germany.
- Agricultural and environmental biotechnology training course (25th July – 18th August, 1994), National Agricultural Research Project (NARP) and USAID – Egypt
- The Egyptian Delegate in the scientific meeting of Egypt, Syria and Gulf countries in Kuwait (17-26 January 1993

Invited Presentations

April 2013	Presented an invited lecture "new trends in training and development" National Academy for Research and Development. 14 April 2013. Dubai - UAE.
November 2009	Presented an invited lecture "Genomic analysis for drought tolerance in wheat and barley" International Conference of Biotechnology - Genetics & Genomics for Crops Development in the Mediterranean Area. 15 – 16 November 2009. Italy – Egypt Year of Science & Technology.
July 2008	Presented an Invited Lecture, "Genome Mapping" in training course organized by Agricultural Genetic Engineering research Institute (AGERI) for the 4th year students from Faculty of Agriculture – Cairo University
June 2007	Presented an invited seminar "Biotechnology and future prospects" Rotaract Club of Heliopolis Nozha - Egypt, District 2450, Rotarian Year 2006 - 2007
April 2005	Presented an Invited Lecture, "Genome Organization" in Plant Tissue Culture and Transformation Techniques training course organized by Non Aliens Movement (NAM) and Agricultural Genetic Engineering research Institute (AGERI)
June 2005	Presented an Invited Lecture, "Genome Organization" in Plant Tissue Culture and Transformation Techniques training course organized by AERI Institutional Linkage Project Midwest Universities Consortium for International Activities (MUCIA) Inc., University of Illinois and Agricultural Genetic Engineering research Institute (AGERI), Agricultural Research Center (ARC) – Giza – Egypt
November 2004	Presented an Invited Lecture, "Wheat Genomics: application and future prospects" at Agricultural Genetic Engineering research Institute (AGERI), Agricultural Research Center (ARC) – Giza – Egypt
October 2003	Presented an Invited Lecture, "Bioinformatics and the Pharmaceutical Applications" at Egyptian Organization for Vaccines and Sera (VACSERA).
March 2003	Presented an Invited seminar, "Genomic Analysis of Drought Tolerance in Wheat and Barley" at plant breeding and genetics department – Cornell University, Ithaca – NY, USA

Funded projects:

1. **20013-2015:** The **principal Investigator** of the project "**Establishment of Technology and Innovation Commercialization Office at MSA University and fostering research innovation in 6th October city**". The Project is funded by the Academy for Scientific Research and Technology – Ministry of Higher Education. Awarded Fund is **700,000 L.E.**

2. **2011-2013:** The **co-principal Investigator** of the project "Development of marker assistant selection system for Net blotch resistance in barely". The Project is funded by the Science and Technology Development Fund (STDF) – Academy for Scientific Research and Technology – Ministry of Higher Education. Awarded Fund is **960,000 L.E.**

3. **2009-2011:** The **principal Investigator** of the project "Genomics in the service of Durum Wheat Breeding: Development of Cultivars with High Water Use Efficiency in Egypt". The Project is funded by the Science and Technology Development Fund (STDF) – Academy for Scientific Research and Technology – Ministry of Higher Education. Awarded Fund is **1,000,000 L.E.**

4. **2005-2008: Team member** of the project "Structural and Functional Genomic Analysis of Some Economical Important Crops in Egypt". The project is Funded by the Ministry of Agriculture- Egypt. Awarded fund is **3,750,000 L.E**

Publications

a) Book Chapters:

1. Ramesh V. Kantety, **Ayman A. Diab** and M.E. Sorrells (2005). Comparative Genetics of Durum Wheat and Other Triticeae (Chapter 7). In Durum Wheat Breeding: Current Approaches and Future Strategies volumes 1 &2. The Haworth press, INC

2. Mark E. Sorrells, **Ayman Diab**, and Dominique This (2006). Drought Adaptation in Barley (Chapter 7). In Drought Adaptation in Cereals. The Haworth press, INC

(b) Published Research (peer reviewed):

1. **Ayman A. Diab,** Mohamed A. M. Atia, Ebtissam H. A. Hussein, Hashem A. Hussein and Sami S. Asawy **(2013).** A Multidisciplinary Approach for Dissecting QTL Controlling High Yield and Drought Tolerance-Related Traits in Durum Wheat. International Journal of Agricultural Science and Research (IJASR) 3(3) 99-116 1.

2. Ayman Y. Amin and **Ayman A. Diab (2013)**. QTL Mapping For SGDH Doubled Haploid Population of Wheat (Triticum aestivum L.) In Response to Salt Stress. International Journal of Bio-Technology and Research (IJBTR) 3(4) 47-60

3. Sami S. Adawy, **Ayman A. Diab**, Abdel-Hadi I. Sayed, Shafik D. Ibrahim, Shafik I. El-Morsy and Mahmod M. Saker **(2013)**. Construction of Genetic Linkage Map and QTL analysis of Net Blotch Resistance in Barley. International Journal of Advanced Biotechnology and Research (4):3 348-363

4. **Ayman A. Diab**, Ahmed M. K. Nada, Ahmed Ashoub **(2013)**. Molecular Cloning, Expression, Sequence Analysis and In Silico Comparative Mapping of Trehalose 6-Phosphate Gene From Egyptian Durum Wheat. International Journal for Biotechnology and Molecular Biology Research. 4(1):9-23

5. Sami S. Adawy, **Ayman A. Diab**, Mohamed A. M. Atia and Ebtissam H. A. Hussein **(2013).** Construction of Genetic Linkage Map with Chromosomal Assignment and Quantitative Trait Loci Associated with Some Important Agronomic Traits in Cotton. Journal of GM Crops and Food: Biotechnology in Agriculture and the Food Chain 4(1):1-14

6. **Ayman A. Diab**, S. M. Khalil, Roba M. Ismail **(2012).** Regeneration and Micropropagation of Grapevine (Vitis vinifera L.) through Shoot Tips and Axillary Buds. International Journal of Advanced Biotechnology and Research 2(4): 484-491

7. Irini Beshir, Sherif El Sharbasy, Gehan Safwat and **Ayman Diab (2012).** The effect of some natural materials in the development of shoot and root of banana (*musa spp*) using tissue culture technology. New York Science Journal 5(1) 132- 138

8. **Ayman A. Diab**, Ayman Y. Amin, Salwa Badr, Bassem A. Abdelgawad, Sami S. Adawy, RH Sammour **(2012)**. Identification and Functional Validation of Expressed Sequence Tags (ESTs) Preferentially Expressed in Response to Drought Stress in Durum Wheat. International Journal of Plant Breeding 6(1): 14-20

9. **Diab, A.,** El-Sadi, Y., Ageez, A., Kapiel, T. and Abd El-Salam E. **(2011)** Cloning and Expression Analysis of Betaine Aldehyde Dehydrogenase from *Pseudomonas fluorescens*. Egypt. J. Genet. Cytol., **40**, 161-173.

10. Omar M. Akram, Mona Gaafar, Gehan Safwat, **Ayman Diab (2011)**. Comparative Study Among the Germination and Propagation of Different *Capsicum Annuum* Cultivars using Tissue Culture Techniques. Nature and Science 9(7): 183-189

11. Fouda AH, Gad Khaled IM, **Diab AA**, Safwat G, Hussien MH **(2011).** Genetics Diversity of Some Egyptian Durum Wheat Cultivars. Journal of American Science 7(7): 214-221

12. Kamel A kh, Al-Naggar AM, Safwat G, **Diab AA**, Hussien MH **(2011)**. Molecular Characterization of Some Egyptian Bread Wheat Genotypes. Arab Journal of Biotechnology 14(1): 113-124

13. Nourhan El-Gohary, Gehan Safwat, Maged Ibrahim, **Ayman Diab** and Mona Hashim **(2011)**. Effect of carboplatin and Nigella sativa oil on human breast cancer cells in vitro and Ehrlich ascites tumor bearing mice in vivo. Arab Journal of Biotechnology 14(1): 13-24

14. El-Hoseny M.E., El-Fallal A. Amira, A.K.El-Sayed, **A. Diab** and A.S.Sadik **(2010).** Biology, cytopathology and molecular identification of an Egyptian isolate of Zucchini yellow mosaic potyvirus (ZYMV-Eg). Pak. J. Biotechnol. 7 (1-2) 75-80

15. Sherif El-Sharabasy, Mai Ahmed Farag ,Gehan Safwat and **Ayman Diab**. Effect of amino acids on the growth and production of steroids in date palm using tissue culture technique. **(2010).** Researcher 4(1): 75-84

16. Abd El-Halim H., Nada A., El-Domiaty F., Abou Ali R., **Ayman A. Diab** and Bahi El-Din A. **(2010).** Cloning, Sequence Analysis and In-Silico Mapping of An ABA-Inducible Gene Coding for Ornithine δ-Aminotransferase from Vicia villosa. Egypt. J. Genet. Cytol (1) 143-156.

17. Munther A. Nashashibi , Maged I. Ibrahim , Ayman Amin , **Ayman Diab** and Mona H. Hussein. Genetically and biochemical changes of anticancer drugs and the protective action of curcumin in tumor bearing mice **(2010)**. Arab Journal of Biotechnology 13(2): 185-198

18. **Diab A.A.,** R.V. Kantety, N.Z. Ozturk, D. Benscher, M.M. Nachit and M.E. Sorrells **(2008).** Drought - Inducible Genes and Differentially Expressed Sequence Tags Associated with Components of Drought Tolerance in Durum Wheat. Scientific Research and Essay 3 (1):9-26

19. Sami S. Adawy, **Ayman A. Diab**, Mohamed A. M. Atia and Ebtissam H. A. Hussein **(2008)**. Construction of Genetic Linkage Map Showing Chromosomal Regions Associated with Some Agronomic Traits in Cotton. International Journal of Plant Breeding 2(1): 27-38

20. **Ayman A. Diab**, Amr Ageez, Bassem A. Abdelgwad , Tamer I. Zaki **(2007)**. Cloning, Sequence Analysis and in-silico mapping of a Drought-Inducible Gene Coding for S-Adenosylmethionine Decarboxylase from Durum Wheat. World Applied Sciences Journal 2(4):333-341

21. **Ayman A. Diab**, Ashraf H. Fahmy, Osama S. Hassan, MM. Nachit, Osama A. Momtaz **(2007).** Identification of Chromosomal Regions and Genetic Contributions of Genes Controlling Yield and Other Agronomic Traits in Durum Wheat Grown under Different Egyptian Environmental Conditions. World Journal of Agricultural Science 3(4): 401-422

22. **Diab A.A.**, Ramesh Kantety, Carlos Mauricio La Rota and Mark E. Sorrells. Comparative Genetics of Stress-Related Genes and Chromosomal Regions Associated with Drought Tolerance in Wheat, Barley and Rice **(2007)**. Genes, Genomes and Genomics 1(1): 47-55

23. Osama, A. Momtaz, Ahmed El-Fatih A. El-Doliefy, Ashraf H. Fahmy, **Ayman A. Diab (2007)**. Comparative Sequence Analysis of Actin Related Gene Family Isolated from Gossypium barbadense. World Journal for Agricultural Sciences 3(1):130-139

24. Ashraf H. Fahmy, **Ayman A. Diab**, Hanafy Ahmed AH, Osama A. Momtaz **(2007)**. Comparative Analysis of Amino Acid between Transgenic and non Transgenic Egyptian Cotton (Gossypium barbadense) Lines under Different Salt Stress Conditions. American-Eurasian Journal of Agricultural and Environmental Science 2(1): 6-15

25. **Ayman A. Diab (2006)**. Construction of barley consensus map showing chromosomal regions associated with economically important traits. African Journal of Biotechnology 5(3): 235-248

26. **Diab A.A.**, Béatrice Teulat-Merah, Dominique This, Neslihan Z. Ozturk, David Benscher and Mark E. Sorrells **(2004)**. Identification of Drought- Inducible Genes and Differentially Expressed Sequence Tags in Barley. Theoretical and Applied Genetics. 109:1417-1425

27. John Dennis, **Ayman A. Diab** and Peter Trutmann. **(2002)**. The Planning of Emergency Seed Supply for Afghanistan in 2002 and Beyond. Tashkent, 20-21 January 2002.

28. **Diab A.A.**, Benscher D., Nachit M., Momtaz O.A, Madkour M.A. and Sorrells M.E. **(2000)**. Identification and characterization of drought genes in grasses. 10th International Triticeae Mapping Initiative Workshop (ITMI). University of Delaware Newark, Delaware USA

29. Sorrells M.E., **Diab A.A.**, and Nachit M. **(2000)**. Comparative Genetics of Drought Tolerance. Proceedings of Durum Wheat Improvement in the Mediterranean Region: New Challenges. 40: 191-201.

30. Momtaz, O.A., **Diab A.A.**, and Madkour M.A. **(1998)**. Development of Transgenic Egyptian Cotton Varieties (Gossypium barbadense) from Meristematic Tissue. Proceedings of Beltwide cotton conferences, San Antonio, Texas, USA. P 513-516

31. Magda H. Radi, **Ayman A. Diab**, and Osama A. Diab **(1997)**. Role of Genetic Engineering in the Prevention of Insect Born Diseases. 5th Annual International Ain Shams Medical Students Congress.

(C) Graduation projects supervised: -

I have served as a supervisor for the following graduation projects

2013-2014

1. Significant sampling and Identification of crime scene. Forensics Medial Authority - Egypt
2. Novel scoring system of optimize selection of banking cord blood grafts for transplantation. Cell Safe Bank - Egypt
3. Anti bacterial activity of photo - activated zinc oxide Nanoparticle (ZnO NP3) capped with different polymers - Nanotech Company - Egypt
4. Differentiation of Myogenic cells from cultured Mesenchymal stem cells isolated from perivascular tissue present in Chorionic villi in placenta. Cell Safe Bank - Egypt
5. Using decellularization technique for production of an aortic scaffold from rabbit. Cell Safe Bank - Egypt
6. Decellularized Tracheal Matrices for Tracheal tissue engineering. Cell Safe Bank - Egypt
7. A new sampling technique of placental blood using cell demargination by AMD3100 and CPDA to increase the CD 34/45 and CD 90 cell count. Cell Safe Bank - Egypt
8. The cord blood Apgar: A novel scoring system for optimum cord blood Bone Marrow Transplantation outcome. Cell Safe Bank - Egypt
9. Significant sampling and identification of crime scene. Forensics Medial Authority - Egypt

2012 - 2013

10. Using DNA techniques in the assessment of paternity, burns and firearm cases. Forensics Medial Authority - Egypt
11. Searching for mutations in GAA gene causing pompe disease - Greenwich University - UK
12. The detection of chondrocytes cells as a treatment of various arthritis diseases. Cell Safe Bank - Egypt
13. Investigation of potential Bio- hazards of Wi-Fi technology on Wharton's Jelly Mesenchymal stem cell (MSCs) using proteome analysis. Faculty of Biotechnology - MSA University

14. The differentiation of Mesenchymal stem cell into chondrocytes for the treatment of joint diseases.
15. Gender identification for sex re-assignment surgeries. Cell Safe Bank - Egypt
16. The effect of the over expression of CG7565 gene in the wiring of the sensory nerves of drosophila melanogaster. Greenwich University - UK
17. The differentiation of Mesenchymal stem cells to generate pancreatic cells for the treatment of diabetes mellitus. Cell Safe Bank - Egypt
18. Anti bacterial effect of different sizes of gold Nanoparticles prepared with different reducing agent. Nanotech Company - Egypt
19. Anti viral and anti bacterial activity of Leiurus quinguestriatus venom. VACSERA Holding company for Vaccines and Sera Drugs- Egypt
20. Cadmium induced oxidative stress in rat and protection by Physalis Angulata.
21. Synthesis and antitumor biological evaluation of benzimidazole derivatives.
22. Genetic and Cytogenetic studies on some pomegranate (punica granatum) local cultivars. National Gene Bank - ARC, Egypt
23. Anti bacterial activity of silver nanoparticle prepared by a new green method. Nanotech research Center - Egypt
24. Differentiation and detection of induced pluripotent stem cells (iPSCs) into islet-like cells.
25. A new sampling technique of placental blood using cell demargination by AMD3100 and CPDA to increase the CD 34/45 and CD 90 cell count. Cell Safe Bank - Egypt
26. Organ re-engineering through recellularized liver graft using decellularized liver matrix. Cell Safe Bank - Egypt
27. Decellularized tracheal matrices for tracheal tissue engineering. Cell Safe Bank - Egypt
28. The use of Chondrocytes as a treatment for Osteoarthritis disease in animal model. Cell Safe Bank - Egypt
29. The treatment of equine orthopedic diseases through injection of Mesenchymal stem cells extracted from Wharton's Jelly. Cell Safe Bank - Egypt
30. The cord blood Apgar: A novel scoring system for optimum cord blood Bone Marrow Transplantation outcome. Cell Safe Bank - Egypt
31. Role of DNA in Homicidal cases. Forensics Medial Authority - Egypt
32. Harvesting the Hematopoietic stem cells from human placenta. Cell Safe Bank - Egypt
33. Novel scoring system to optimize selection of banking cord blood grafts for transplantation. Cell Safe Bank - Egypt
34. Anti bacterial activity of photo – activated zinc oxide nanoparticles (ZnO NPs) capped with different polymers. Nanotechnology Research Center - Egypt
35. Differentiation of Myogenic cells from cultured Mesenchymal stem cells isolated from perivascular tissue present in chorionic villi in placenta. Cell Safe Bank - Egypt
36. The differentiation of Mesenchymal stem cells into chondrocytes for the treatment of joint diseases. Cell Safe Bank - Egypt
37. The detection of Chondrocytes cells as a treatment of various arthritis diseases. Cell Safe Bank - Egypt
38. Hematopoietic stem cell cord blood transplantation for type 1 Diabetes. Cell Safe Bank - Egypt
39. Differentiation of Hematopoietic stem cells into WBCs and RBCs from Human placenta. Cell Safe Bank - Egypt

40. Differentiation of Hematopoietic stem cells into WBCs and RBCs from Human Placenta as a high capacity source. Cell Safe Bank - Egypt

2011 - 2012

41. Effect of DMSO- Cryopreservation on the differentiation of human Mesenchymal stem cells into cardiac cells. Cell Safe Bank - Egypt
42. Dedifferentiation of germ line cells to embryonic like stem cells. Cell Safe Bank - Egypt
43. A comprehensive study for comparing umbilical cord and Wharton's Jelly Mesenchymal stem cells to the Golden Mesenchymal stem cells originating from the Bone Marrow. Cell Safe Bank - Egypt
44. Using Mesenchymal stem cells in fertility treatment in mice as regenerative medicine. Cell Safe Bank - Egypt
45. The role of DNA evidence analysis for the assessment of sexual offenses. Forensics Medial Authority - Egypt
46. Extraction and Cryopreservation of Mesenchymal stem cell. Cell Safe Bank - Egypt
47. Induction of sterility to mice for fertility regeneration.
48. Differentiation of induced pluripotent stem cells into corneal epithelial cells to be used in corneal transplantation. Cell Safe Bank - Egypt
49. DNA analysis for the assessment of stab wounds as well as human identification. Forensics Medial Authority - Egypt
50. The effect of Mesenchymal steam cell IL-2 and FIt3 ligand on the ex vivo expansion of HSCs and NK cells from Mononuclear cells from umbilical cord blood after depletion of T-lymphocytes. Cell Safe Bank - Egypt
51. Diagnosis of B-cell non –Hodgkin's lymphoma using heavy chain rearrangement by PCR.
52. Differentiation of IPSCs into cardiac cells and their detection. Cell Safe Bank - Egypt
53. Extraction and Cryopreservation of Mesenchymal stem cells from placenta. Cell Safe Bank - Egypt
54. Comparative study between DMSO vials and DMSO manually prepared for Cryopreservation of stem cells – count and viability. Cell Safe Bank - Egypt
55. Role of DNA in solving various forensic cases. Forensics Medial Authority - Egypt
56. Bone Marrow stem cells separation and extraction follows by T cells lymphocytes depletion.
57. Investigation of the antitumor potential of oleo europaea (Olive) oil and Nigella Sativa (black seed) ethanol extract.
58. Extraction and Cryopreservation of Mesenchymal stem cells. Cell Safe Bank - Egypt
59. Generation of dendritic cells and its activation against hepatocellular carcinoma. Ansary Lab - Egypt
60. Isolation of Mesenchymal stem cells from mice bone marrow to be used in the treatment of sterility. Ansary Lab - Egypt
61. Separation of Mesenchymal stem cell from Wharton's jelly, culturing it and detecting the markers of embryonic stem cells in this type of cell. Cell Safe Bank - Egypt
62. Dedifferentiation of germ line cells to embryonic like stem cells. Cell Safe Bank - Egypt
63. Extraction and culturing of germline cells from testis of rat. Cell Safe Bank - Egypt
64. Effect of DMSO – Cryopreservation of on the differentiation of human Mesenchymal stem cell into cardiac cells. Cell Safe Bank - Egypt
65. Using Mesenchymal stem cells in fertility treatment in mice as regenerative medicine. Cell Safe Bank - Egypt

66. Ex-vivo, culturing, expansion and detection of Mesenchymal stem cells from human placenta. Cell Safe Bank - Egypt
67. The differentiation of Mesenchymal stem cells to generate epithelial cells for the regeneration of the cornea. Cell Safe Bank - Egypt
68. A comparative study for comparing the umbilical cord and Wharton's Jelly Mesenchymal stem cells to the golden Mesenchymal stem cells originating from the bone marrow. Cell Safe Bank - Egypt
69. The role of DNA evidence analysis for the assessment of sexual offenses. Forensics Medial Authority - Egypt
70. How does DNA help forensic science in solving criminal cases (DNA the silent witness) Forensics Medial Authority - Egypt
71. Reversal of murine hepatic fibrosis using human cord blood stem cells. Cell Safe Bank - Egypt
72. Cord blood stem cells separation and extraction followed by T-cell lymphocyte depletion. Cell Safe Bank - Egypt
73. Comparative study between the effect of Mesenchymal stem cells, ILs and combined ILs Mesenchymal stem cells in the expansion of natural killers cells and hematopoietic stem cells during the expansion of bone marrow stem cells with depleted T-lymphocytes. Cell Safe Bank - Egypt
74. Detection of transformation of iPSCs into a Teratoma.
75. Ex vivo expansion of umbilical cord blood hematopietic stem cells and proliferation of natural killer cell using IL2, FIt-3L, and Mesenchymal stem cells. Cell Safe Bank - Egypt
76. Genetic diversity of some Egyptian durum wheat. Agricultural Research Center - Giza, Egypt
77. The potential role of melatonin on aluminium – induced nephrotoxicity in albino rats.
78. Evaluation of lycopersicon esculentum cultures for rapid plant regeneration. Agricultural Genetic Engineering Research Institute. ARC - Egypt
79. DNA analysis for the assessment of stab wounds as well as human identification. Forensics Medial Authority - Egypt
80. Identification of fruit ripening gene(s) in strawberry. Faculty of Biotechnology - MSA Univeristy

2010 - 2011

81. Using ISSR and SSR Molecular maker in fingerprinting of wheat. Faculty of Agriculture - Cairo University - Egypt
82. Ex-vivo isolation of Wharton Jelly Mesenchymal stem cell followed by their conversion into insulin secreting. Ansary lab - Egypt
83. Partial isolation of FMR 1 gene mutated site of the genome that causes x-fragile mental retardation. School of Science, Greenwich University - UK
84. Comparative study among separation techniques of mononuclear stem derived from umbilical cord blood. Cell Safe Bank - Egypt
85. Differentiation of Mesenchymal stem cells that separated from Wharton's Jelly of Umbilical cord into cardiac cells. Cell Safe Bank - Egypt
86. Detection of human OCT-4 gene in human urinary bladder cancer. School of Science, Greenwich University - UK
87. How does DNA help forensic science in solving criminal cases. Forensics Medial Authority - Egypt
88. Molecular diagnosis of Alpha 1 antitrypsin deficiency. School of Science, Greenwich University - UK
89. Detection of transformation of IPSCs into a Teratoma. School of Science, Greenwich University - UK

90. Antioxidant and its role in reducing browning in Date Palm (Dactylifera L.). Date Palm Research Center - ARC, Egypt

(d) Reviewed Books, projects and publications: -

I have reviewed and edited the following: -

1. Michael Baum, Maria van Korff, Peiguo Guo, Berhane Lakew, Sripada M. Udupa, Haitham Sayed, Wafa Choumane, Stefania Grando and Salvatore Ceccarelli. Marker-Assisted Selection of Drought Tolerance in Barley,. Chapter in Genomics-Assisted Crop Improvement, a Book published by Springer Kluwer - Dordrecht, The Netherlands.

2. Response of selected bread wheat (Triticum aestivum L.) to drought stress conditions during reproductive stage in semi-arid tropics (SAT)- Submitted for African Journal of Plant Science

3. A Functional Genomic Approach to Improve Nitrogen Use Efficiency in Maize. US-Egypt joint project. Project ID: 1939. Submitted to STDF

4. QTL Mapping for drought stress related traits in Bread Wheat (Triticum astevium L.) US-Egypt joint project submitted to STDF

5. Study of drought stress on agronomic traits of winter canola (Brassica napus L.) - African Journal for biotechnology

6. DNA Barcode for genetic management of commercial Egyptian fish - Project ID: 5605. project submitted to STDF

7. Genetic Population Structure, Gene Flow, DNA barcoding and Molecular Phylogenetic for Conservation of the Commercial Egyptian Marine Sparidae Fish. Project ID: 5609. project submitted to STDF

8. Genetic and biotechnological approaches for increase disease resistance in Nile tilapia. Project ID: 5632. project submitted to STDF

9. Farmers' common bean variety and seed management in the face of drought and climate instability in southern Ethiopia. Submitted for Journal of Scientific Research and Essays