

SAMEH EL-SAYED IBRAHIM HASSANEIN

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CURRENT POSITION

HEAD, BIOINFORMATICS AND FUNCTIONAL GENOMICS DEPT.

FALL 2018 - NOW

EDUCATION

BIOMEDICAL BIOINFORMATICS DIPLOMA

Helwan Univ. College of Computers and Information Sciences

Jul. 2011

PhD

Ain Shams Univ., Faculty of Agriculture, Genetics Dept.

Dissertation title: "Improvement of wheat plants for environmental stress tolerance by genetic engineering methods"

Major Field: "Genetic Engineering"

Aug. 2008

M. Sc.

Ain Shams Univ., Faculty of Agriculture, Genetics Dept.

Dissertation title: "Physiological genetic studies on some inbred lines and hybrids of maize (*Zea mays* L.)"

Major Field: "Molecular Genetics"

Feb. 2002

B.Sc.

Ain Shams Univ., Faculty of Agriculture, Genetics Dept.

Major Field: "Genetics"

Jun. 1996

TEACHING & ADVISING

A) RESEARCH & PROFESSIONAL EXPERIENCES

1996-present

- Experimental design and statistical analysis (1996 - till now).
- Determining ESTs related to abiotic stresses tolerance (salt and drought) in wheat, barley and rice.
- Using RNAi technology to determine the roles for certain gene(s) in plant development.
- A staff member of Genetic Engineering Services Unit (GESU) now became the Bioinformatics and Computer Networks Dept. at AGERI (2000 - till now), work involved networks building and maintenance, computer administrating and maintenance, images scanning and analysis, Gel documentations and Bioinformatics reference guide for all AGERI staff.
- Expert on Information Technologies in FAO TCP/RAB/3202 project entitled "Strengthening Capacities towards the Establishment of a Regional Platform for the Detection of Genetically Modified Organisms". (2009 - 2011)
- e-Expert Consultant on Biotechnology for Sustainable Agriculture, The Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA). (2009 - 2011)
- Senior Scientist (Team Leader), Founder, Plant-Pathogen Interaction Lab. (PPIL), Agricultural Genetic Engineering Research Institute, AGERI, ARC, Cairo, Egypt. (Sept. 2008 - till now).

- Head of Bioinformatics and Computer Networks Dept., AGERI, ARC, Cairo, Egypt. (Oct. 2011 - till now).

B) LITERATURE INSTRUCTOR

2005-present

- **Visitor scientist** at Department of Plant Sciences and Plant Pathology, Montana State University (MSU), Bozeman, MT 59717, USA. As a member of the joint project entitled "Genetic transformation of some pathogenesis-related genes for fungal resistance into bread wheat". Between AGERI and MSU. July -Dec. 2005.
- **Instructor**, training courses entitled "Introductory Course in Bioinformatics" held at AGERI in collaboration with UNCTAD in 4th - 15th Feb., 2007.
- **Instructor**, training courses entitled "Bioinformatics: Computer Methods in Molecular Biology" held at Bibliotheca Alexandrina, Alexandria, Egypt, in 8th - 13th Dec. 2007.
- Successfully **completed the Specialized Diploma** entitled "Advanced Management Program" (AMP 24), Future Generation Foundation, Center for Exclusive Excellence. Feb. - May 2010.
- Successfully **completed the Specialized Training Course** on "Statistical Design and Data Analysis" held at the ICARDA Cairo Office, Egypt. 13th - 17th May 2012.
- **Instructor and Coordinator**, "An Introduction to Bioinformatics; Short course" held at Girls College, Ain Shams Univ., 25th – 27th June 2012.
- **Instructor and Coordinator**, (Bioinformatics; A Post Grade course as an Instructor and Coordinator), Girls College, Ain Shams Univ., (Fall 2012).
- **Instructor and Coordinator**, "Integrated Pest Management, IPM" Sharjah, United Arab Emirate, 2nd – 5th June 2013.
- Attend annual "Functional Soft Matter" 46th IFF Spring School 2015, 23th Feb. – 6th Mar. 2015, Juelich, Germany.
- **Visitor scientist**, the Institute of Ecology and Biodiversity, Goethe University, Frankfurt am Main, Frankfurt, Germany, as a PI for the project entitled "Wild barley as a genetic resource for abiotic stress improvement under climate change conditions". (28th October - 14th November 2016).
- Successfully **completed all eLearning courses** and received passing grades for a verified certificate in "IBDL Essential (Understanding Business)" Business Administration Standers (BAS). International Business Driving License IBDL, Management Development Institute 'International MDI of Missouri State University'. May 2020.
- **Delegate (Part-time)**, Ain Shams University, Faculty of Science, Applied Biotechnology Program. Instructor & Coordinator, Course entitled "Computational Biology and Bioinformatics BINF202". (Spring 2018 - 2019, Spring 2019 - 2020).
- **Delegate (half-time)** Associate Prof., (Bioinformatic Principles "BINF 301", Advanced Bioinformatics "BTBI 404, Postgrads", Genome Analysis "GANL 401" and Proteomics Analysis "PANL 402" courses as an Instructor and Coordinator. Also, Biotechnology Seminar "BTSM 402" and Research in Biotechnology I, II "RSBT 401, 402"), Faculty of Biotechnology, Misr University for Science and Technology (MUST). (Fall 2011 – Spring 2020).

- **Full Professor, (Full Time), Head of Bioinformatics and Functional Genomics Dept.** College of Biotechnology, Misr University for Science and Technology (MUST). **Instructor and Coordinator for undergraduate courses:** Computer programming I (COPR 204E), Computer programming II (COPR 205E), Principals of Bioinformatics (BINF301), Genomic Analysis (GANL401), and Proteomic Analysis (PANL402). Also, Biotechnology Seminar (BTSM 402) and Research in Biotechnology I, II (RSBT 401, 402). **In addition to Postgraduate Courses:** Advanced Bioinformatics (BTBI 404), Comparative Genomics (EACG 504), Pharmacogenomics (MPPG 513), Bioinformatics, Genomics and Proteomics (EABI 515) and Functional Genomics (MPFG525).

Supervised many M.Sc. and Ph.D. theses in many national universities and institutes, such as:-

- Development of transgenic wheat (*Triticum aestivum*) resistant to insects attacking cereal stored products insects. **Ph.D. thesis**, faculty of science, Botany Dept., Plant cytogenetics Unit, Ain Shams Univ.
- Molecular Genetic Studies for Some Fungal Resistance in Wheat. **Ph.D. thesis**, faculty of agriculture, Ain Shams Univ.
- Analysis of drought related miRNAs in Wheat. **Ph.D. thesis**, faculty of agriculture, Ain Shams Univ.
- Isolation of a drought stress related gene from wild plants via gene expression. **Ph.D. thesis**, faculty of science, Cairo Univ.
- Cheminformatics study and structure analysis for some fungal pectinases' inhibitors **Ph.D. thesis**, faculty of agriculture, Ain Shams Univ.
- Transcriptome analysis and in silico studies for the inhibition of Botrytis cinerea grey mold in strawberry fruits. **Ph.D. thesis**, faculty of science, Botany Dept., Plant cytogenetics Unit, Ain Shams Univ.
- Bioinformatics approaches for biocontrol of Foot-and-mouth disease (FMD) virus. **Master thesis**, College of Biotechnology, Misr University for science and Technology (MUST).
- Bioinformatics analysis of Haemagglutinin gene as a potential universal vaccine against influenza viruses. **Master thesis**, College of Biotechnology, Misr University for science and Technology (MUST).
- Molecular genetic studies on some faba bean varieties in response to *Rhizoctonia solani*. **Master thesis**, faculty of agriculture, Ain Shams Univ.
- Identification of some genes related to Rusts resistance from bread wheat by differential display technique. **Master thesis**, faculty of agriculture, Ain Shams Univ.
- Optimization of transformation systems in wheat. **Master thesis**, faculty of agriculture, Ain Shams Univ.
- Separation and identification of *Orobanche* spp. seeds germination stimulators that produced by roots of Faba Bean. **Master thesis**, faculty of Agric., Ain Shams Univ.
- Investigation of The Brassinosteroids Role During Rice (*Oryza Sativa*) Callus Differentiation Through Somatic Embryogenesis. **Master thesis**, Girls College, Ain Shams Univ.

- Molecular and Serological Studies on Virus(es) which Infecting *Beta vulgaris* (Sugar Beet) in Egypt. **Master thesis**, faculty of agriculture, Al-Azhar Univ.

RECORDS OF EMPLOYMENT

1996-present

- **Research assistant** in many projects at Ain Shams University, Department of Genetics, Faculty of Agriculture, Cairo, Egypt. (1996-2000)
 - Studies on the production of maize plants tolerant to abiotic environmental stresses by the use of biotechnology (AST 3/3, 1996 - 1998).
- **Research assistant** at Field Crop Institute, creating molecular banding pattern for the most grown cereal cultivars (1998-1999).
- **Research assistant** at the ministry of agriculture and land reclamation, (Department of seed certification), DNA, Protein, and Isozymes figure printing for the most grown Egyptian plant cultivars (1999-2000).
- **Research assistant** at Agricultural Genetic Engineering Research Institute, AGERI, ARC, Biocomputing Unit, (March 2000 – Feb. 2002).
- **Assistant researcher** at Agricultural Genetic Engineering Research Institute, AGERI, ARC, Cairo, Egypt; to make research in wheat transformation with biotic and abiotic stress tolerance gene(s), by genetic engineering methods (Feb. 2002 – Sept. 2008).
- **Researcher** at Agricultural Genetic Engineering Research Institute, AGERI, ARC, Cairo, Egypt. (Sept. 2008 – Aug. 2015).
- **Senior Scientist (Team Leader), Founder**, Plant–Pathogen Interaction Lab. (PPIL), Agricultural Genetic Engineering Research Institute, AGERI, ARC, Cairo, Egypt. (Sept. 2008 – till now).
- **Head of Bioinformatics and Computer Networks Dept.**, AGERI, ARC, Cairo, Egypt. (Oct. 2011 – till now).
- **Delegate Lecturer**, (Bioinformatics; A Post Grade course as an Instructor and Coordinator), Girls College, Ain Shams Univ., (Fall 2012).
- **Associate Professor**, Agricultural Genetic Engineering Research Institute, AGERI, ARC, Cairo, Egypt. (Aug. 2015 – Oct. 2020).
- **Full Professor**, Agricultural Genetic Engineering Research Institute, AGERI, ARC, Cairo, Egypt. (Oct. 2020 – till now).
- **Head of Bioinformatics and Functional Genomics Dept.** (Spring 2018 – till now), College of Biotechnology, Misr University for Science and Technology (MUST).
- **Full Professor, (Full Time), Head of Bioinformatics and Functional Genomics Dept.** College of Biotechnology, Misr University for Science and Technology (MUST). (March 2020 – till now).
- **Scientific Advisor**, the International Dryland Development Commission (IDDC) www.drylanddevelop.org.

MAJOR RESEARCH/SCIENTIFIC INTEREST

The long-term goal of my research is to develop an understanding of the molecular genetic basis of host-pathogen interactions in order to develop novel strategies for bio-

controlling host pathogens. My research interests include Bioinformatics, Molecular Genetics, Genomics, Transcriptomics, Proteomics and Metabolomics Analysis, and System Biology.

AREA OF SPECIALIZATION

As a Bioinformatician, I have an experience in many Bioinformatics applications, databases and software packages aided in wide range of bioinformatics, genomics and proteomics research topics, e.g. similarity searching, phylogenetic analysis and constructions, epitope prediction, molecular modeling, secondary structure prediction, primer design, big data analysis (clustering, normalization, ...), 3D structure prediction, gene finding (motif finding and prediction), genomic analysis, transcriptome analysis, pathways and networks analysis and prediction.

My goal is revealing new insights and principles in life sciences, managing and analyzing biological data, especially genomic, transcriptomic metabolomic and proteomic research data such as sequence analysis, interpretation and annotation. Study tremendous details of biological process (such as diseases) using the tools of bioinformatics.

RESEARCH & DEVELOPMENT PROJECTS

The following are biotechnology research projects addressing the promotion of sustainable agricultural production in Egypt in an environmentally safe and friendly manner. They include research in different domains as the following:

- “Development of Transgenic Wheat with Improved Salt and Drought Tolerance”
- “Development of Transgenic Wheat with Improved fungal resistance”
- “Developing Drought and Salinity Tolerant Wheat and Maize for Egyptian Agriculture”

Now, member of the teamwork of the projects funded by STDF (Science and Technology Development Fund) and ARDF (Agricultural Research & Development Fund), which entitled:

- Development of Transgenic Wheat with Improved fungal resistance. (**Project ID: 256**, Science & Technology Development Fund, **STDF**).
- Identification of Stress-Related Genes from Rice Using Microarray Technology. (**Project ID: 301**, Science & Technology Development Fund. **STDF**).
- Development of Drought-Tolerant Bread Wheat via Biotechnological Approaches. (**Agricultural Research and Development Fund, ARDF**).
- **Principle Investigator (PI)** of the project entitled “Identification of Biotic Stress-Related Genes from Wheat Using Microarray Technology”. (**Project ID: 947**, Science & Technology Development Fund. **STDF**).
- **Focal Point** for Supercomputing facility provided by (Cy-Tera and LinkSCEEM High Performance Computing ACCESS project) through Bibliotheca Alexandrina.
- **Principle Investigator (PI)** of the project entitled “Wild barley as a genetic resource for a biotic stress improvement under climate change conditions”. (German Egyptian Research Fund **GERF**, Egypt – **German Joint Project, ID: 5034**).
- **Co-Principle Investigator (Co-PI)** of the project entitled “Desert Cereals – Boost

Drought Tolerance by Jasmonate Signaling”. (German Egyptian Research Fund GERF, Egypt – **German Joint Project, ID: 5109**).

LIST OF PUBLICATIONS

- Abdel-Tawab, F.M., Eman M. Fahmy, M. A. Rashed, Gh. A. Gad El-karim, S. H. Abdel-aziz, and **S. E. Hassanein (2002)**. Development of Molecular Markers for Salt and Drought Tolerance in Maize (*Zea mays*, L.). Egypt. J. Genet. Cytol., 31:355-371, July, 2002.
- Eissa, H.F., A. Shokry, O.M. Saleh, **S. E. Hassanein**, A.M. Ramadan, A. Bahieldin and W. E. Dyer **(2006)**. Genomic characterization of stress-related genes from wild barley. Second International Conference of Genetic Engineering and its applications. Sharm El-Sheikh, Egypt.
- Gadalla, N.O., Eman M. Fahmy; A. Bahieldin, A.I. Abdel-Sattar, S. Edris, A. Shokry and **S.E. Hassanein (2008)**. Functional genomics for *Orobanche* tolerance in faba bean (*Vicia faba* L.). Journal of Genetics Engineering and Biotechnology, 2008, 6(1): 1-10
- Hassanein, S.E.**, F.M. Abdel-tawab, E.M. Fahmy, Gh.A. Gad El-karim, Th. Alniemi, M. Abdelsalam, S. Mostafa, A.M. Ramadan, O.M. Saleh, Hala F. Eissa and A. Bahieldin **(2009)**. Molecular assessment of chitinase activity in transgenic wheat. Egypt. J. Genet. Cytol., 38: 207-220, July, 2009.
- Hassanein, S.E.**, A.Z. Abdel Azeiz, A.M. Ramadan and Afaf Z. El-Meneisy **(2012)**. Screening for Pectinase and Cellulase inhibitors from the root exudates and protein contents of five plants against six phytopathogenic fungi. J. Biol. Chem. Environ. Sci., (2012), Vol. 7(3): 454-553. www.acepsag.org
- Khaled M.A. Ramadan, Abdel Azeiz A., **Hassanein S. E.** and Eissa H.F. **(2012)**. Biodegradation of used lubricating and diesel oils by a new yeast strain *Candida viswanathii* KA-2011. African Journal of Biotechnology Vol. 11(77), pp. 14166-14174.
- F.M. El-Domyati, A.M. Ramadan, N.O. Gadalla, S. Edris, A.M. Shokry, S.M. Hassan, **S.E. Hassanein**, M.N. Baeshen, N.H. Hajrah, M.A. Al-Kordy, O.A. Abuzinadah, A.S.M. Al- Hajar, C.C. Akoh and A. Bahieldin **(2012)**. Identification of molecular markers for flower characteristics in *Catharanthus roseus* producing anticancer compounds. Life Science Journal 2012; 9 (4), pp. 5949-5960.
- A.M. Ramadan, H.F. Eissa, **S.E. Hassanein**, A.Z. Abdel Azeiz, O.M. Saleh, H.T. Mahfouz, F.M. El-Domyati, M.A. Madkour and A. Bahieldin **(2013)**. Increased salt stress tolerance and modified sugar content of bread wheat stably expressing the *mtLD* gene. Life Science Journal 2013; Vol. 10 (2), pp. 2757-2770
- Rasha, A. Mohammed, Kh. M.A. Ramadan, **S.E. Hassanein**, R.R. Francis and A.Z. Abdel Azeiz **(2013)**. Butyl-Iso-butyl phthalate as an *Orobanche crenata* seed germination activator secreted by roots of *Vicia faba*. J. Biol. Chem. Environ. Sci., (2013), Vol. 8(4): 157-167. www.acepsag.org
- El Banna, M. N.; H. M. F. El-Wakil.; A. A. Abd-Allah; Hala F. Eissa; **S. E. Hassanein** and R. A. Sallam. **(2013)**. Identification of drought tolerant molecular markers in rice (*Oryza sativa* L.): I-Assessment of F1 genotypes under normal and drought condition. J. Plant Production. Mansoura Univ., Vol. 4(1) :79-105. ISSN 1110-0346.

- Hassanein, S.E.**, A.M. Ramadan, A.Z. Abdel Azeiz, R.A. Mohammed, S.M. Hassan, A. Atef, K.B.H. Kamal, S. Rabah, J.S.M. Sabir, O.A. Abuzinadah, F.M. El-Domyati, G.B. Martin and Ahmed Bahieldin (2013). Thymoquinone causes multiple effects, including cell death, on dividing plant cells. *C. R. Biologies Nov-Dec*;336(11-12):546-56. doi: 10.1016/j.crv.2013.10.007. Epub 2013 Nov 19.
- Heba E. Ghareb, Basita A. Hussein, Hala F. Eissa, A.M. Shokry, **S. E. Hassanein**, Mahdia F. Gaber and Naglaa A. Abdallah (2014). Isolation of some drought stress related cDNAs from *Rhus tripartite* plant via differential display. *Arab J. Biotech.*, Vol. 17, No. (1) January (2014): 43-58.
- A.M. Ramadan and **S.E. Hassanein (2014)**. Characterization of *P5CS* gene in *Calotropis procera* plant from the *de novo* assembled transcriptome contigs of the high-throughput sequencing dataset. *C. R. Biologies Dec*;337(12):683-90. doi: 10.1016/j.crv.2014.09.002. Epub 2014 Oct 7.
- Sameh E. Hassanein (2014)**. Characterization of *ATP* gene in *Calotropis procera* Mitochondrial Genome. *Egypt. J. Genet. Cytol.*, 43: 257 – 269. July 2014
- Heba H Abouseadaa, Gamal H Osman, Ahmed M Ramadan, **Sameh E Hassanein**, Mohamed T Abdelsattar, Yasser B Morsy, Hussien F Alameldin, Doaa K El-Ghareeb, Hanan A Nour-Eldin, Reda Salem, Adel A Gad, Soheir E Elkhodary, Maher M Shehata, Hala M Mahfouz, Hala F Eissa and Ahmed Bahieldin (2015). Development of transgenic wheat (*Triticum aestivum* L.) expressing *avidin* gene conferring resistance to stored product insects. *BMC Plant Biology* 15:183 (2015) 1-8.
- Donia K. Hanafi, **Sameh E. Hassanein** and Ahmed Z. Abdel Azeiza (2015). Identification of a new antifungal oligoacetal derivative produced by *Streptomyces toxytricini* against *Candida albicans*. *Natural Product Research: Formerly Natural Product Letters*. doi:10.1080/14786419.2015
- Lobna A. Moussa, Ahmed Z. Abdel Azeiz and **Sameh E. Hassanein (2017)**. Microbial Biodegradation of Crude Petroleum Oil as Affected by Salinity. *J. Biol. Chem. Environ. Sci.*, 2017, Vol. 12(1): 545-558. www.acepsag.org.
- Hala F Eissa, **Sameh E Hassanien**, Ahmed M Ramadan, Moustafa M El-Shamy, Osama M Saleh, Ahmed M Shokry, Mohamed Abdelsattar, Yasser B Morsy, Maher A El-Maghraby, Hussien F Alameldin, Sabah M Hassan, Gamal H Osman, Hesham T Mahfouz, Gharib A Gad El-Karim, Magdy A Madkour and Ahmed Bahieldin (2017). Developing transgenic wheat to encounter rusts and powdery mildew by overexpressing barley *chi26* gene for fungal resistance. *Plant Methods* (2017) 13:41
- Morsy Y.B., Abdel-Tawab F.M., Eman M. Fahmy, Hala F. Eissa and **S.E. Hassanein (2017)**. Functional Genomic Profiling of Drought Responsive Micro-RNA In Wheat. *Egypt. J. Genet. Cytol.* 2017, 46(2): 363-370.
- Ahmed M Ramadan, Ahmed Abdel Azeiz, Saeed Baabad, **Sameh E. Hassanein**, Nour O Gadalla, Sabah Hassan, Mardi Algandaby, Salwa Bakr, Thana Khan, Heba H Abouseadaa, Hani Mohammed Ali, Areej Al-Ghamdi, Gamal Osman, Sherif Edris, Hala Eissa, Ahmed Bahieldin (2019). Control of β -sitosterol biosynthesis under light and watering in desert plant *Calotropis procera*. *Steroids* 141 (2019) 1–8. <https://doi.org/10.1016/j.steroids.2018.11.003>.
- Sameh E. Hassanein**, A. M. Shokry, Hala F. Eissa, A. M. Ramadan, H. F. Alameldin, Y. B.

- Morsy, A. M. K. Nada, A. Bahieldin, M. Al-Shamy and Gh. A. Gad El-Karim (2019). Bread Wheat Comparative Expression Analysis in Response to Leaf Rust (*Puccinia triticina*) Using Microarray Techniques. *Egypt. J. Genet. Cytol.* 48(2): 139-154, July, 2019.
- Rania M. I. Abou Ali, Warda A. M. Hashim, Eman I. Ibrahim, Inas F. Fahmy, **S. E. Hassanein** and A. M. K. Nada (2019). Enhancement of Drought Tolerance in Rice (*Oriza sativa* L.) Using Oxo-Phytodienoate Reductase7 (*OPR7*) Gene. *Egypt. J. Genet. Cytol.* 48(2): 155-177, July, 2019.
- Ahmed Z. Abdel Azeiz, Abeer Elhalwagi, **Sameh E. Hassanein** and Lobna A. Moussa (2019). Microbial water source for the desert plants. *Journal of Agricultural Science and Technology A* 9 (2019) 71-80. doi:10.17265/2161-6256/2019.02.001
- Rasha A. Mohamed; K.M., Ramadan; **S. E. Hassanein**; R. R. Francis; A. Z. Abdel Azeiz. (2019). "Chemoinformatic Analysis of Some Fungal Pectinases Inhibitors". *Arab Universities Journal of Agricultural Sciences*, 27, 3, 2019, 1803-1818. doi: 10.21608/ajs.2019.76089
- Nermin G. Mohamed, Rashed M.A., **Hassanein S.E.**, El-Orabey W., Morsy Y., Samir O. and Hala F. Eissa (2019). Comparative Studies on Gene Expression of Rice and Wheat in Response to Fungal Infection. *AUJASCI, Arab Univ. J. Agric. Sci.*, 27(2), 1529-1539, 2019.
- Habib PT, Alsamman AM, **Hassanein SE**, Ghada A. Shereif and Aladdin Hamwiah (2019). SNPector: SNP inspection tool for diagnosing gene pathogenicity and drug response in a naked sequence. *F1000Research* 2019, 8:2133 (<https://doi.org/10.12688/f1000research.21556.1>)
- Habib PT, Alsamman AM, **Hassanein SE**, Kerolos M. Yousef and Aladdin Hamwiah (2020). Pharmosome: an integrative and collective database for exploration and analysis of single nucleotide polymorphisms associated with disease [version 1; peer review: awaiting peer review] *F1000Research* 2020, 9:14 (<https://doi.org/10.12688/f1000research.21773.1>)
- Habib PT, Alsamman AM, **Hassanein SE**, and Aladdin Hamwiah (2020). TarDict: Random Forest Classifier-based software predict Drug-Target interaction. *BioRxiv* (2020). doi: <https://doi.org/10.1101/2020.01.08.899005>.
- Habib P.T., Alsamman A.M., **Hassanein S.E.**, and Hamwiah A. (2020). Developing Convolutional Neural Networks-Based System for Predicting Pneumonia Using X-Radiography Image. *Highlights in BioScience*, 3.3 (2020): n. pag. Web. 23 Mar. 2020 <http://highlightsin.org/index.php/bioscience/article/view/14>
- Wasimah B Alshammari, Huda Alhamdan, Thana Khan, **Sameh E. Hassanein**, Ahmed M Ramadan (2020). Differential RNA editing of ATP complex in different tissues of *Catharanthus roseus* plastid. *Advances in Environmental Biology*. 2020 January; 14(1): pages 48-55. DOI: 10.22587/aeb.2020.14.1.8
- Huda Alhamdan, Wasimah B Alshammari, Thana Khan, Sherif Edris, **Sameh E. Hassanein** and Ahmed M Ramadan (2020). Differential RNA editing of mitochondrial *atp1* gene in *Catharanthus roseus* tissues. *Advances in Environmental Biology*, 2020 March; 14(3): pages 1-9. DOI: 10.22587/aeb.2020.14.3.1
- Mai M. Labib, M.K. Amin, A.M. Alzohairy, M.M.A. Elashtokhy, O. Samir, I. Saleh, I.A.

- Arif, G.H. Osman and **S.E. Hassanein (2020)**. *In silico* Targeting, inhibition and analysis of polyketide synthase enzyme in *Aspergillus* spp. Saudi Journal of Biological Sciences 27 (2020) 3187–3198. <https://doi.org/10.1016/j.sjbs.2020.10.012>
- Mai M. Labib, M. K. Amin, A. M. Alzohairy, M. M. A. Elashtokhy, O. Samir and **S. E. Hassanein (2020)**. Inhibition analysis of aflatoxin by *in silico* targeting the thioesterase domain of polyketide synthase enzyme in *Aspergillus* spp. Journal of Biomolecular Structure and Dynamics, <https://doi.org/10.1080/07391102.2020.1856186>
- Suliman Khan, Huseyin Tombuloglu, **Sameh E. Hassanein**, Surya Rehman, Ayhan Bozkurt, Emre Cevik, Shaimaa Abdel-Ghany, Ghulam Nabi, Ashaq Ali, Hussein Sabit **(2020)**. Coronavirus diseases 2019: Current biological situation and potential therapeutic perspective. European Journal of Pharmacology 886 (2020) 173447. <https://doi.org/10.1016/j.ejphar.2020.173447>
- El-Sayed, A.S., Shindia, A.A., AbouZeid, A., Koura, A., **Hassanein, S.E.**, and Rania M. Ahmed. **(2021)**. Triggering the biosynthetic machinery of Taxol by *Aspergillus flavipes* via cocultivation with *Bacillus subtilis*: proteomic analyses emphasize the chromatin remodeling upon fungal-bacterial interaction. Environ Sci Pollut Res (2021). <https://doi.org/10.1007/s11356-021-13533-1>

CONFERENCE POSTERS & PRESENTATIONS

- Mohamed Teima, F.M. Abdel-Tawab, Eman M. Fahmy, A.M. Ramadan, H.F. Eissa, A.M. Shokry, **S. E. Hassanein**, H.F. Alameldin, A.Z. Abdel Aziez, M.A. Madkour, and A. Bahieldin. **(2014)**. Development of Transgenic Wheat Plants Tolerant to Abiotic Stress Using MDAR Gene. Poster Presentation, BioVision Alexandria 2014.
- Hala F. Eissa, **Sameh E. Hassanein**, Ahmed M. Ramadan, Moustafa M. El-Shamy, Osama M. Saleh, Ahmed M. Shokry, Mohamed Abdelsattar, Yasser B. Morsy, Maher A. El-Maghraby, Hussien F. Alameldin, Sabah M. Hassan, Gamal H. Osman, Hesham T. Mahfouz, Gharib A. Gad El-Karim, Magdy A. Madkour, and Ahmed Bahieldin **(2018)**. Developing Transgenic Wheat to Facing Rusts and Powdery Mildew by Chi26 Gene for Fungal Resistance. Poster Presentation, BioVision Alexandria 2018.
- Sameh E. Hassanein**, Omar Samir **(2019)**. *De novo* transcriptome assembly and Functional Annotation of *Calotropis procera* reveals understanding about Extreme Climate adaptation. Theme: Conservation and Use of Agrobiodiversity in Drylands, Developing Adapted Cultivars. 13th International Conference on Development of Drylands, Converting Dryland Areas from Grey into Green. February 11-14, 2019, **Jodhpur, India**.
- Omar Samir, Omar S. Keshk, Nesma S. Shafie, **Sameh E. Hassanein**, Yasser Morsy, Asmaa A. El Leithy and Marwa Amer **(2021)**. A Comprehensive Genome and Transcriptome Profiling for Oncoviruses. EMBO | EMBL Symposium: Multiomics to Mechanisms: Challenges in Data Integration. Poster Presentation, Online Symposium 15th – 17th Sep 2021.
- Mohamed Abdo, Omar Amin, Moataz El-Safoury, Youssef Tawfik, Omar Samir, **Sameh E. Hassanein**, and Marwa Amer **(2021)**. Meta-comparative analysis of the gut microbiome studies illustrates the differences between stool and biopsy samples in IBD patients. EMBO | EMBL Symposium: Multiomics to Mechanisms: Challenges

in Data Integration. Poster Presentation, Online Symposium 15th – 17th Sep 2021.

PROFESSIONAL MEMBERSHIPS

- Member of the Egyptian Society of Genetics, Egypt.
- Member of the Egyptian Syndicate of Agricultural Professions, Egypt.
- Genetic Engineering Services Unit (GESU) at AGERI (2000 - Present).
- Biocomputing and Networks Unit (BCNU) at AGERI (2000 - Present).
- Scientific advisor, The International Drylands Development Commission (IDDC), (2016 – Present)

REFERENCES

Prof. Dr. Adel El-Beltagy

- Chair, The International Drylands Development Commission ([IDDC](#))
- Professor, Arid Land Agricultural Graduate Studies & Research Institute (ALARI), Ain Shams University, Egypt.

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- Professor of Molecular Medicine,
- University Vice-Dean for Accreditation.

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melzawahri@yahoo.com

Prof. Dr. Hala F. Eissa

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