



### Brief biography

#### Antar El-Banna

**Scopus:** <https://www.scopus.com/authid/detail.uri?authorId=35620251800>

**Current position:** Professor, Department of Genetics, Faculty of Agriculture, Kafrelsheikh University. Egypt.

#### **Research interests:**

- 1- Improvement resistant and/or tolerant of plants for biotic and abiotic stresses using Tissue culture and genetic engineering technologies
- 2- Gene function analysis using Next generation sequencing and gene silencing approaches.
- 3- Molecular genetics, genetic diversity and phylogenetic analysis.
- 4- Molecular characterization and exploitation of rhizosphere microorganisms for crop yield improvement.

#### **List of publications:**

- 1- Mohammed Elsayed El-Mahrouk, Mossad Khairy Maamoun, Omneya Farouk Abu El-Leel, Yaser Hassan Dewir, **Antar Nasr El-Banna**, Yougasphree Naidoo & Subodh Kumar Datta (2020). Morpho-agronomical and Biochemical Traits Screening and Genetic Variability in Selected Black Cumin (*Nigella sativa*) Mutant Lines. *Sains Malaysiana* 49(3): 503-515
- 2- Farahat S. Moghanm , **Antar El-Banna** , Mohamed A. El-Esawi , Mohamed M. Abdel-Daim, 6Ahmed Mosa and Khaled A.A. Abdelaal (2020). Genotoxic and Anatomical Deteriorations Associated with Potentially Toxic Elements Accumulation in Water Hyacinth Grown in Drainage Water Resources. *Sustainability* 12, 2147; doi:10.3390/su12052147.
- 3- ASH Derbalah, **A El-Banna**, MS Allah (2020). Efficiency of *Candida tropicalis* for Potential Degradation of Metalaxyl in the Aqueous Media. *Current Microbiology* 77 (10), 2991-2999
- 4- A. A Ali, **A.N. El-Banna**, A. Z Ahmed, E.E. El-Dabaawy (2019). Assessment of genetic divergence, stevioside and rebaudioside a contents and the effects of gamma irradiation on the performance of stevia (*Stevia rebaudiana* bertoni) genotypes. *Egypt. J. Genet. Cytol.*, 48:295-315.
- 5 -Mohammed Elsayed El-Mahrouk, Mossad K. Maamoun, **Antar Nasr EL-Banna**, Soliman A. Omran, Yaser Hassan Dewir, and Salah El-Hendawy (2018). *In Vitro* Gynogenesis and Flow Cytometry Analysis of the Regenerated Haploids of Black Cumin (*Nigella sativa*). *HortScience*, 53:681-686.
- 6- **Antar N. El-Banna**, Ismael A. Khatab (2018). Molecular verification of released potato mutants resistant to *ralstonia solanacearum* under consequent pathogen stress. *Asian Journal of Microbiology and Biotechnology*, (2): 61-69.
- 7- Khattab A.A., Ahmed El-Sherbini and **Antar N. El-Banna** (2018). Generation of new high mutants of *Corynebacterium glutamicum* for glutamic acid production. *Middle East Journal of Applied Sciences*, 8:436-443.6
- 8- **A.N. El-Banna**, A.R. El-Shereif and Doaa, M. Abou Alyazid (2018) Morphological and genetic variations in "Balady" Mandarin induced by gamma irradiation, *Annals of Agriculture Science*, 1: 459-472.
- 9- **A.N. El-Banna** and M.M.F. Ghazy (2017). Assessment of genetic components and genetic diversity of six egyptian clover (*trifolium alexandrinum* l.) genotypes using issr and URP markers. *Egypt. J. Genet. Cytol.*, 46: 313-328.

- 10- **Antar El-Banna** and Janos Taller (2017) Functional characterization of the silenced potato cysteine proteinase inhibitor gene (PCPI) in *Phytophthora infestans* resistance. *Physiological and Molecular Plant Pathology* 100 (2017) 23-29
- 11- H.A. Freeg , G.B. Anis , A.A. Abo-Shousha , **A.N. El-Banna** , A. El-Sabagh (2017). Genetic diversity among some rice genotypes with different drought tolerance based on SSR markers. *Cercetări Agronomice în Moldova* ,3 (167) / 2016: 39-50
- 12- A. A. Ali, A. E. Draz, **Antar. N. El-Banna**, Walaa, M. Essa (2017). Identification of blast resistance genes and marker assisted selection of some local and exotic rice genotypes. *Egypt. J. Plant Breed.*, 21 (5): 219-236.
- 13- **Antar El-Banna** (2016) Overexpression of the antiporter AtNHX1 leads to improved salt tolerance in rice (*Oryza sativa* L.). *Annals of Agriculture Science*, 1: 21-28.
- 14- **Antar Nasr El-Banna**, Mohammed Elsayed El-Mahrouk, Mohammed Eraky El-Denary, Yaser Hassan Dewir and Yougasphree Naidoo (2016). Genetic Relationship and Diversity in Some Ornamental Palms Based on Proteins and Randomly Amplified Polymorphic DNA Markers. *HORTSCIENCE* 52(3):338–342. 2017.
- 15- Mohammed El-Sayed El-Mahrouk , Mosaad K. Maamoun, Yaser Hassan Dewir, Soliman A. Omran and **Antar Nasr El-Banna** (2015) Morphological and molecular characterization of induced mutants in *Nigella sativa l.* using irradiation and chemical mutagens. *Egypt. J. Plant Breed.* 19 (3):257 -272.
- 16- **A.N. El-Banna**, S.A. Dora, A.A. Aboshosha and Nada A. El-Morsy (2015). Horticultural and Genetical Characteristics of Tomato Somaclones under Salt and Heat Stresses. *International Journal of Current Research in Biosciences and Plant Biology*, 2 (4): 128-142.
- 17- A. A. Ali, A. A. Aboshosha, M.K. Kassem, Eman I. EL-Dabaawy and **A. N. EL-Banna** (2015). Salinity Tolerance and Stevioside Improvement of *in vitro* Selected Stevia (*Stevia rebaudiana*) Mutants. *Int. J. Curr. Res. Biosci. Plant biol.*, .2(4): 11-20.
- 18- Y.H. Dewir, M.E. El-Mahrouk, **A.N. El-Banna** (2015). *In vitro* propagation and preliminary results of *Agrobacterium*-mediated genetic transformation of *Cordyline fruticosa*. *South African Journal of Botany*, 98, 45-51.7
- 19- Ismael A. Khatab, **Antar N. El-Banna**, Amira S. El-Keredy(2015). Genetic divergence among Egyptian populations of *Drosophila melanogaster* and Canton-S wild type strain, *Journal of Biodiversity and Environmental Sciences*. 7 (1): 173-179.
- 20- **A. N. EL-Banna**, I. A. Kattab and Mona A. Farid (2015). Characterization of some rice genotypes for fertility restoring genes using RAPD and SSR markers *Egypt. J. Genet. Cytol.*, 44:253-264
- 21- Ismael A. Khatab and **Antar N. El-Banna** (2014) Establishment of high-efficiency *agrobacterium*-mediated transformation conditions of soybean callus. *Indian Journal of Biotechnology*, 13(4): 459-463.
- 22- Abo Shosha, A. A., A.A. Abdalla, Antar, N. El-Banna, Hytham, A. Fereg (2014). Effect of water stress on yield and its components of deferent genotypes of rice (*Oryza sativa L.*). *J. Agric. Res. kafr El-Sheikh univ.*, 40(2) 425-435.
- 23- Ismael A. Khatab, **Antar N. El-Banna** and Akram R. Morsy (2014). Molecular and biochemical markers for some soybean genotypes associated with cotton leaf worm resistance. *Annals of Agriculture Science*, 2: 31-37
- 24- Moemen S. Hanafy, **Antar El-Banna**, Heinz Martin Schumacher, Fathi S. Hassan, Hans-Jörg Jacobsen (2013). Enhanced tolerance to drought and salt stresses in transgenic faba bean plants expressing *PR10a* gene from potato. *Plant Cell Rep.* 32:663–674.
- 25- **A. N. El-Banna**, M. F. El-Nady, Y. H. Dewir, M. E. El-Mahrouk (2013) Stem fasciation in cacti and succulent species - tissue anatomy, protein pattern and RAPD polymorphisms. *Acta Biologica Hungarica* 64 (3): 305–318
- 26- Tarek, A. Shalaby and **Antar El-Banna** (2013). Molecular and Horticultural characteristics of *in vitro* induced tomato mutants, *Journal of agricultural science, Journal of Agricultural Science*; 5(10): 155-163
- 27- Rahim Ahmadvand Ramin Hajianfar, Ahmad Mousapour Gorji, **Antar El-Banna**, Zsolt Polgár, and János Taller (2013). Development of Intron molecular markers as a tool for molecular breeding in response to pathogens in tetraploid potato. *Egyptian Journal of Plant Breeding*, 17

(2): 545-554.

- 28- Ismael A. Khatab and **Antar El Banna** (2013). Efficiency of genetic transformation of Egyptian soybean cultivars Giza 21 using *Agrobacterium tumefaciens*. Egyptian Journal of Plant Breeding, 17(2): 555-564.
- 29- Tarek, A. Shalaby and **Antar El-Banna** (2013). Genetic diversity and horticultural characteristics of tomato mutants regenerated from tissue cultures, Egyptian Journal of Plant Breeding, 17(2) 225-231.8
- 30- **Antar El Banna** and Ismael A. Khatab (2013). Assessing genetic diversity of some potato (*Solanum tuberosum* L.) cultivars by protein and RAPD markers. Egyptian Journal of Genetics and Cytology. 42:89-101.
- 31- Samah A. Mariey, Maher Noaman Mohamed, Ismail A. Khatab, **Antar N. El-Banna**, Amro Farouk Abdel Khalek and Medhat Eraqy Al-Dinary (2013). Genetic Diversity Analysis of Some Barley Genotypes for Salt Tolerance Using SSR Markers. Journal of Agricultural Science; 5 (7):12-28.
- 32- **El-Banna, A.** and Tarek Shalaby (2012). Detection of mutations in tomato induced by EMS using RAPD and SSR markers. Annals of Agriculture Science, 1: 21-28.
- 33- Ali, A, Yossef, T. and **El-Banna, A.** (2012). Cytokinin – cytokinin interaction ameliorates the callus induction and plant regeneration of tomato (*Solanum lycopersicum* MILL.), *Acta Agronomica Hungarica*, 60(1), 47-55
- 34- Heinz Martin Schumacher, **Antar El Banna**, Zahid Ali, Heiko Kiesecker, Lea Vaas and Elke Heine-Dobbernack (2011). Design of transgenic cell cultures as model systems for cryopreservation research. Proceedings of the final meeting AGROCAMPUS OUEST INHP, Angers - FRANCE, pp 6 11.
- 35- Elke Heine-Dobbernack, **Antar El Banna**, Heiko Kiesecker, Lea Vaas and Heinz Martin Schumacher (2011). Transgenic potato cell cultures – Application as a model system to investigate the relation of cryopreservation and osmotic tolerance Proceedings of the final meeting AGROCAMPUS OUEST INHP, Angers - FRANCE, pp 12-17.
- 36- **El-Banna, A.** and I. Khattab (2011). Biochemical characterization of rice somaclones resistant to blast. Current Research Journal of Biological Sciences. 4 (2): 137-142.
- 37- I. A. Khatab and **Antar, N. El-Banna** (2011) Detection of somaclonal variation in potato using RAPD markers. Egypt. J. Genet. Cytol., 40:227-238.
- 38- **El-Banna A.**, Wissing J., Reza Hajirezaei M., Jacobsen H-J., Schumacher H.M. , Kiesecker H. (2010). Overexpression of Pr-10a leads to increased salt and osmotic tolerance in potato cell cultures. J.Biotechnol. 150 (2010) 277–287.
- 39- Ali, Z., Schumacher, H.M., Heine-Dobbernack, E., **El-Banna, A.**, Hafeez, F.Y., Jacobsen, H.J., Kiesecker, H., (2010). Dicistronic binary vector system-A versatile tool for gene expression studies in cell cultures and plants. J. Biotechnol. 145, 9-16.
- 40- Elke Heine-Dobbernack, **Antar El Banna**, Mohammed Hajirezai, Heiko Kiesecker, Heinz Martin Schumacher (2010). Changes in cryotolerance after overexpression of pr10a in *Solanum tuberosum* cv. Desiree. CryoLetters, 31 (2), 169-197.9
- 41- El-Degwy, I.S and **A. El-Banna (2010)**. Agronomic characterization and biochemical genetic markers for drought tolerance in rice (*Oryza sativa* L.). Egypt. J. Genet. Cytol., 39:315-334.
- 42- Abdel-Hamid A. Ali; Galal H.E.; and Naser M.A. and **El-Banna A.** (1998). *In vitro* selection and somaclonal variation as tools for releasing salt tolerant rice lines. Proceedings of the 26th Annual meeting of Genetics Alex. 29-30 Sept. 1:1-15.
- 43- Galal, H.E.; Abdel-Hamid, A. Ali; and Naser M.A and **El-Banna A.** (1998). Genetic evaluation of rice lines derived via androgenesis. Proceedings of the 26th Annual meeting of Genetics Alex. 29-30 sept 1: 57-73.