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Date of birth	October 15, 1967
Nationality	Tunisian
Language	Arabic, French, English
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Education & Academic Qualification

PhD: 1998 plant cellular and molecular biology – INA –PG (Paris-Grignon) FRANCE

Master degree: 1993 ENSH Versailles (FRANCE)

Engineer: 1991 Horticulture ESH Chott-Mariem (TUNISIA)

Bac (last class of secondary school): 1986 Mathematics and Sciences (TUNISIA)

Research Interest:

1. Plant Tissue culture
2. Plant Molecular Biology and physiology
3. Extremophile plants
4. Next Generation Sequencing (NGS), Genomics and Bioinformatics
5. Transgenic plant: for improving abiotic and biotic stress tolerance
6. Chloroplast transformation
7. Plant Biotechnology and Biopharming

PRACTICAL EXPERIENCE

@ October 2010 to present: Associate professor at. College of Food and Agriculture Sciences (King Saud University Saudi Arabia)

@ January 2001 to 2010: Senior scientist at Centre of biotechnology of Sfax -Tunisia
“Laboratory of Plant Molecular Genetics ” www.cbs.rnrt.tn

∞ High throughput sequencing of ESTs from a halophyte grass; identification and functional validation of candidate genes for drought and salt tolerance, producing transgenic durum wheat to improve abiotic stress tolerance.

@ January 2001 to 2010: Teaching in the Faculty of Sciences at Sfax: Master degree “Cellular and molecular biology”

*Plant Molecular Biology (DNA replication, transcription, RNA splicing and translation; protein-protein interaction, signal transduction...)

*Plant Genetic Engineering: Methodology and applications

* Biopharming: benefits and risks

*Plant Biotechnology

* Supervisor of three PhD and three master degree students

@ March 2003 – August 2003: AUF (Francophone Agency) France-Montpellier, Excellence Award

Construction of SSH cDNA libraries from a halophyte grass and using of Macroarray to screen for up and down regulated genes by salt stress. Centre de Coopération Internationale en Recherche Agronomique pour le Développement « **CIRAD-BIOTROP Montpellier France** » www.cirad.fr.

@ January 1999 - December 2000: Post-Doc in ICGEB New Delhi laboratory of plant molecular biology (**plant transformation group, group leader Dr. V. Shiva Reddy**) : **International Center for Genetic Engineering and Biotechnology (ICGEB)** PO Box 10504 Aruna asaf ali marg , New Delhi 110067 INDIA Tel: 00-91-11-6148539:

*Construction of two vectors for **chloroplast transformation** of cotton and potato

*Purification of an anti-fungal protein from **chickpea** seeds

@ February 1994 – April 1998: PhD supervised by Prof. Marc Jullien; Prof. Christophe Robaglia **Producing transgenic potato and tobacco plants resistance to potato virus Y (PVY) by expressing different heterologous coat protein genes: CP-LMV, CP-LMVΔ29aa or CP-PSbMV** Laboratory of « Biotechnologie végétale » Centre of biotechnology of Sfax TUNISIA ; Laboratory of « Cellular Biology » INRA-Versailles FRANCE

♣ **March 26 – April 3, 1996:** “Ecole thématique FRANCO-TUNISIENNE” plant molecular Biology CNRS Montpellier FRANCE

♣ **September 1992 – October 1993:** Master degree directed by Prof Noelle Dorion

Plant regeneration from strips of stem in Dutch elm hybrid “Commelin” and *Agrobacterium* susceptibility as prerequisites for elm genetic transformation

Laboratory of “Physiologie végétale appliquée” ENSH Versailles France

Supervising

♣**Munawar Manzoor Manzoor Ahmed:** Master degree 2015-2016

♣**Walid Ben Romdhane:** PhD 2011-2016

♣**Omar Mustapha Azab:** Master degree 2013-2015

♣ **Rania Ben Saad:** PhD 2006-2011

♣ **Walid Ben Romdhane:** Master degree 2008-2010

♣**Emna Fetoui:** Master degree 2006-2007

♣ **Rania Ben Saad:** Master degree 2004-2006:

♣ Supervising students for preparing thesis of end study for engineer diploma

Previous projects

♣ Oct 2012-2015: Principal investigator of the Project 11-BIO1828-02 "Deciphering the regulatory mechanisms of abiotic stress tolerance conferred in transgenic plants expressing the AISAP gene from the halophyte grass A. littoralis" The National Plan for Sciences & Technology (budget 1774060 SAR- King Saud University).

♣ Sept 2010- November 2012:

Principal investigator of the Project 09-BIO682-02 "Isolation of candidate resistance-genes from the halophyte C4 grass "Aeluropus littoralis" for improving salt and drought tolerance in crops" The National Plan for Sciences & Technology (budget 500000\$ - King Saud University)

♣ Jan 2006- Oct 2009:

Principal investigator in Tunisia of the EU project FP6 "INCO-CT-2005-015468 CEDROME": "Developing drought-resistant cereals to support efficient water use in the Mediterranean area" budget 105000 Euros (CBS-TUNISIA)

♣ Jan 2001-2005:

Improving drought and salt stresses in durum wheat using genetic engineering. Ministry of higher education Tunisia (CBS-TUNISIA)

♣ Jan 1999-Dec 2000: ICGEB-New-Delhi (India)

1. Chloroplast transformation of cotton

2. Purification of an antifungal peptide from chickpea and isolation of its coding gene

♣ Jan 1994-April 1998: Producing of transgenic cultivars "spunta" and "claustar" immune to PVY "potato virus Y"

♣ Jan 1991-Dec 1993: establishment of a protocol for elm tree transformation (ENSH-Versailles-FRANCE)

Current projects

♣ 2015-2017: Principal investigator of the Project 13-BIO2050-02 "Shotgun De novo sequencing and draft genome assembly of the C4 halophyte grass *Aeluropus littoralis*: towards the cloning of the halophyte-specific genes and their promoters"

International publications

♣ Rania Ben-Saad, Donaldo Meynard, Walid Ben-Romdhane, Delphine Mieulet, Jean-Luc Verdeil, Abdullah Al-Doss, Emmanuel Guiderdoni, **Afif Hassairi** (2015). The promoter of the AlsAP gene from the halophyte grass *Aeluropus littoralis* directs a stress-inducible expression pattern in transgenic rice plants. *Plant Cell Reports*, 1-16. doi: 10.1007/s00299-015-1825-6 **IF :3.07**

♣ Meynard, D ; Mieulet, D ; Ben-Saad, R ; Breitler, J-C ; Petit, J ; Gantet, P ; **Hassairi, Afif** ; Guiderdoni, E. (2013) Use of genetic engineering in rice improvement. **Cahiers agricultures**, vol. 22, no 5, p. 494-505. **IF :0.39**

♣ Rania Ben Saad; Denis Fabre; Delphine Mieulet; Donaldo Meynard; Michael Dingkuhn; Abdullah Al-Doss; Emmanuel Guiderdoni; **Afif Hassairi**. (2012) Expression of the *Aeluropus littoralis* AlsAP gene in rice confers broad tolerance to abiotic stresses through maintenance of photosynthesis. **Plant, Cell & Environment**; vol 35; pp 626-643. doi: 10.1111/j.1365-3040.2011.02441.x. **(IF:5.1)**

♣ R Ben-Saad, W Ben-Ramdhan, N Zouari, J Azaza, D Mieulet, E Guiderdoni, R Ellouz and **Afif Hassairi** (2012) Marker-free transgenic durum wheat cv. Karim expressing the AlsAP gene exhibits a high level of tolerance to salinity and dehydration stresses. **Molecular Breeding**, vol 30; pp 521-533 DOI: 10.1007/s11032-011-9641-3 **(IF: 2.1)**

♣ Triki, M. A., Hadj-Taieb, S. K., Mellouli, I. H., Rhouma, A., Gdoura, R., & **Hassairi, A.** (2012). Identification and screening of bacterial isolates from Saharan weeds for *Verticillium dahliae* control. *Journal of Plant Pathology*, 94(2), 305-311.

♣ R. Ben Saad; W. Ben Romdhan; N. Zouari; J. Azaza; D. Mieulet; J-Luc Verdeil; E. Guiderdoni; **Afif Hassairi** (2011). Promoter of the AlsAP gene from the halophyte grass *Aeluropus littoralis* directs developmental regulated, stress-inducible, and organ-specific gene expression in transgenic tobacco. **Transgenic Research**; Vol 20, Issue 5, pp 1003-1018 DOI: 10.1007/s11248-010-9474-6 **(IF: 2.5)**

♣ R. Ben Saad; N. Zouari; W. Ben Ramdhan; J. Azaza; D. Meynard; E. Guiderdoni; **Afif Hassairi**. (2010). Improved drought and salt stress tolerance in transgenic tobacco overexpressing a novel A20/AN1 zinc-finger "AlsAP" gene isolated from the halophyte grass *Aeluropus littoralis* **Plant Molecular Biology**: 72 pp 171-190 DOI : 10.1007/s11103-009-9560-4. **(IF: 4.1)**

♣ Rania Ben Saad; Nabil Zouari; Walid Ben Ramdhan ; Jalel Azaza; **Afif Hassairi** (**17/09/2008**). A method for “in embryo” transformation with *Agrobacterium* of wheat and production of transgenic fertile plants over-expressing the AISAP gene, isolated from the halophyte grass "A. littoralis", for improvement of abiotic stress tolerance" **Tunisian Patent SN08356**

♣ CEDROME consortium: Ouwerkerk P.B.F., Liu C.M., Guiderdoni E., Lupotto E., Xiong L., El-Azim El-Tantawi Badawi A., **Hassairi A.**, El Hadrami I., Wang H., Price A.H.P.

CEDROME FP6 EU project 2006-2009: developing drought-resistant cereals to support efficient water use in the Mediterranean area --From seed to pasta: the durum wheat chain--
International durum wheat symposium I : June 30. July 3 2008 BOLOGNA ITALY

♣ Nabil Zouari, Rania Ben Saad, Thierry Legavre, Jalel Azaza, Xavier Sabau, Mohamed Jaoua, Khaled Masmoudi, **Afif Hassairi**. Identification and sequencing of ESTs from the halophyte grass *Aeluropus littoralis*, **Gene, Vol 404 Issue 1-2 pp: 61-69 (2007) (IF: 2.6)**

♣ Islam, A., **Hassairi, A.**, Reddy, V.S. Analysis of molecular and morphological characteristics of plants transformed with antifungal gene. **Bangladesh Journal of Botany**, Volume 36, Issue 1, 2007, Pages 47-52

♣ Faïçal Brini, Moez Hanin, Victoria Lumbreras, Imen Amara, Habib Khoudi, **Afif Hassairi**, Montserrat Pagès, Khaled Masmoudi. Overexpression of wheat dehydrin DHN-5 enhances tolerance to salt and osmotic stress in *Arabidopsis thaliana* . **Plant Cell Reports, Volume 26, Number 11 / November, 2007 (IF: 2.2)**

♣ Triki, M. A., Hassairi, A., & Mahjoub, M. (2006). Premières observations de *Verticillium dahliae* sur olivier en Tunisie. EPPO Bulletin, 36(1), 69-71.

♣ **A. Hassari** and V. S. Reddy. “A new antifungal protein isolated from the seeds of chickpea, methods for isolation of such proteins, cloning of the encoding gene and transgenic plants incorporating such genes”. **Indian Patent Application No.617/DEL/ (2004)**.

♣ Masmoudi K., Yacoubi I., **Hassairi A.**, Elarbi L., Ellouz R. Tobacco plants transformed with an untranslatable form of the coat protein gene of the potato virus Y are resistant to viral infection. **European Journal of Plant Pathology 108: 285-292(2002) (IF: 1.57)**

♣ Masmoudi K., Brini F., **Hassairi A.**, Ellouz R. Isolation and characterization of a differentially expressed sequence tag from *Triticum durum* salt stressed roots. **Plant Physiology and Biochemistry 39: 971-979(2001) (IF: 2.4)**

♣ **A. Hassairi**, K. Masmoudi, J. Albouy, C. Robaglia, M. Jullien. R. Ellouz. Transformation of two potato cultivars « spunta » and « claustar » (*Solanum tuberosum*) with lettuce mosaic virus coat protein gene and heterologous immunity to potato virus Y. **Plant Science 136 pp31-42 (1998) (IF: 2.48)**

♣ H. Ben Jouira, **A. Hassairi**, C. Bigot, N. Dorion. Adventitious shoot production from strips of stem in the Dutch elm hybrid 'commelin': plantlet regeneration and neomycin sensitivity.

Plant Cell Tissue and Organ Culture 53: 153-160, (1998) (IF: 1.24)

♣ N. Dorion, **A. Hassairi**, P. Guyon, B. Godin, C. Bigot. In vitro budding ability of woody internode and *Agrobacterium* susceptibility as prerequisites for elm genetic transformation. **J. Plant. Physiol. Vol.146 pp: 699-703 (1995) (IF: 2.6)**

Oral communications

♣ Walid Ben Romdhane, Rania Ben Saad, Abdullah Al-Doss, Emmanuel Guiderdoni, **Afif Hassairi** "The Extremophile Grass *Aeluropus littoralis*: a Source of candidate genes for Improving Salt and Drought Stress in Cereals" First International of Biotechnology at Dubai 14-15 February 2012

♣ **Afif Hassairi**, Abdullah Al-Doss" The Halophyte Grass *Aeluropus littoralis* as a Model Plant for Improving Salt and Drought Stress in Cereals" " THE 26th MEETING OF THE SAUDI BIOLOGICAL SOCIETY May 2011 ".

♣ Rania Ben Saad, **Afif Hassairi**. "Isolation and characterization of promoter gene AlSAP from *Aeluropus littoralis* in transgenic rice"; oral communication in the Seminary of the Tunisian Association of Biological Sciences (ATSB, March 2010).

♣ Rania Ben Saad, Nabil Zouari, Walid Ben Romdhane, Jalel Azaza, **Afif Hassairi**. "Enhancement of abiotic stress tolerance in transgenic tobacco over expressing an A20/AN1 zinc finger protein gene from a halophyte grass *A.littoralis* "; Participation at the international workshop organised by the Federation of the European biochemical societies (FEBS), Adaptation Potentiel in Plants, GMI, Vienne, Austria 19-21 Mars (2009).

♣ Rania Ben Saad, Nabil Zouari, Walid Ben Romdhane, Jalel Azaza, **Afif Hassairi**. "Amélioration de la tolerance aux stress salin et hydrique de plantes transgéniques de tabac sur-exprimant le gène *AlSAP* isolé à partir d'une graminée halophyte *A.littoralis* "; Participation at the international congres Biotech (AUF) Agrocampus, Rennes-France 30 june-3 juillet (2008).

♣ Rania Ben Saad, Nabil Zouari, Walid Ben Romdhane, Jalel Azaza, **Afif Hassairi**. "Over expression of an alien *ZnFAL* from *A.littoralis* in tobacco enhances salt and drought stress tolerance "; Oral communication in an international symposium of Biotechnology (ISB); Sfax-Tunisia 4-8 Mai (2008).

♣Nabil Zouari, Rania Ben Saad, Walid Ben Romdhane, Jalel Azaza, Afif Hassairi. "Identification and sequencing of ESTs implicated in salt and drought stress tolerance from the halophyte grass *Aeluropus littoralis*"; Oral communication in the International Seminary of the Tunisian Association of Biotechnology (ATB) Sousse-Tunisia 23-26 December (2007).

♣Rania Ben Saad, Afif Hassairi. "The developpement of drought-resistance cereals to support efficient water use in the Mediterranean area"; Oral communication in the second meeting of International CEDEROME Project/ Contrat No.015468 **GIZA, Egypt** 23 september (2006).

INTERNATIONAL COLLABORATION

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