



BIOGRAPHICAL SKETCH

NAME		POSITION TITLE	
Med Dahmani Fathallah 49 years		<i>Senior Biologist/Professor of Molecular Biotechnology</i> <i>Institute Pasteur of Tunis, Tunisia</i> <i>General Manager & Chief scientific Officer. RethAb Biotech, affiliate:</i> <i>Jeddah Biocity. Jeddah, Kingdom Of Saudi Arabia</i>	
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
Paul Sabatier University, Toulouse, France	Bachelor Biological science	1978	Biological sciences & Molecular biology
“ “ “ “	Master [w/ honours]	1981	Molecular Genetics
“ “ “ “	Certificate of speciality in Immunology [w/ honours]	1981	Basic & Clinical immunology
“ “ “ “	Master Immunology [w/ honours]	1982	Molecular Immunology
Pasteur Institute, Paris,	Diploma of Microbial Immunology [w/ honours]	1982	Basic & Clinical microbial Immunology
University Paul Sabatier, Toulouse, France in Association with the University of Oxford, UK)	PhD [w/ honours]	1985	Molecular Biology
University of Tunis Al Manar & [Harvard University, Boston, USA]	PhD [w/ honours]	1992	Molecular Genetics
Harvard University , Medical school, Boston , USA	Post doctoral Training	1985-1992	Molecular Immunology
Academy of Tunisia, Institute Pasteur de Tunis	Habilitation [State Doctorate in Biological Sciences]	1999	Biotechnology & Biological Sciences Research

A. Positions and Honors.

- 1982-1985 European Molecular Biology, Doctoral Fellow , Department of Biochemistry , Oxford University , UK
- 1985-1986: Research associate, French National Institute of Health [INSERM unit 100], Toulouse France.
- 1986-1992 : Post doctoral fellow , Harvard Medical School, Boston USA
- Since 1992-2004: Senior Biologist at the Pasteur Institute of Tunis, Founder & Head of the Molecular Biotechnology Group & Professor of Molecular Biology at the University of Tunis El Manar.
- 1994 AUPELF-UREF (Francophony Agency) Montreal-Canada, Research Excellence Award.
- 1-1995 to 6-1995 Visiting professor at Harvard Medical School, Massachusetts General Hospital, Charlestown, (Massachusetts USA)
- 1997 Prize of Excellence in Molecular Genetics, The Royal Academy of Science, International Trust (New Jersey USA)

- 1997-2001: Elected member of the Scientific Council at the Institute Pasteur of Tunis.
- 1996- 2004 : Founder & Head of the Genetic Typing Unit, [DNA Fingerprinting, Paternity testing and Forensic] Institute Pasteur de Tunis
- 2000-2003: Co-founder and CEO of Cylyx a Biotech Company.
- 2003-to date: Consultant in Biotechnology for the Tunisian Institute of Strategic Studies.
- 2004-to date : Founder and General Manager of RethAb a Biotech Company, located in Jeddah , Kingdom of Saudi Arabia
- 2004-to date: Consultant in Biotechnology for the International Development and Research Center, Canada.
- Members of several international scientific societies.
- Member of the editorial board and reviewer in several biotech Journals [Journal of biotechnology, Biotechnology Progress, Cytotechnology...]
- Co-founder in 1995 of MEGA, the Middle East Geneticist Association of America and President of the Oversea Branch. 1996-2000
- Co-founder in 1999 of the Tunisian society for Biotechnology, acting Secretary General.

B- Academic & Research Record:

- Teaching Biotechnology, Molecular Biology & Molecular genetics
 - Invited lecturer: Several International universities: Algeria, Bahrain, Kingdom Saudi Arabia, Mexico, Pakistan
 - Supervision of : 6 PhD thesis & 20 Master degrees
- Two books published:
 - How to write & Publish a Scientific article, IPT Eds 1996
 - Safety issues for the laboratory use of Radionucleotides, Character Eds 1998
 - Over 100 lectures worldwide at seminar and scientific conferences

Selected peer-reviewed publications.

- Cambon-Thomsen, A., Blancher, A., Clement, D., Fathallah, D. and Thomsen, M. (1984). Comparison of human-human and human-mouse hybridoma systems for the production of alloreactive human monoclonal antibodies. *Histocompatibility testing*, ed. E.D. Albert, et al. Springer Verlag, Berlin Heidelberg, pp. 444.
 - Abbal, M. , Thomsen, M., Cambon-Thomsen, A., Archambeau, J., Calot, M. and Fathallah, D. (1985). Two subtypes of BFF by isoelectrofocusing : differential linkage to other HLA markers. *Human Genetics*. 69 : 181-183.
 - Fathallah, D. , Abbal, M., Thomsen, M., Cambon-Thomsen, A. and Campbell, R.D (1985). A DNA restriction fragment length polymorphism in the complement region of the human MHC shows an absolute correlation with polymorphism of complement factor B (BF) defined by isoelectrofocusing. *J. ImmunoGenet.* 12: 321-326.
 - Fathallah, D., Isenman, D.E. and Carroll, M.C. (1987). Structure-function studies on complement protein C4 using site directed mutagenesis. *Journal of Cellular Biochemistry. Sup. IIC*, Alarn R. Liss, Inc., New York.
 - Carroll M.C., Fathallah D. , Bergamaschini L., Isenman D. (1990) Substitution of a single amino acid (aspartic acid for histidine) converts the functional activity of human complement C4B to C4A. *Proc. Nat. Ac. Sc. (USA)* 87 ; 6868-6872
 - Arnaout M.A., Dana N., Simmons D. & Fathallah D.. (1990). Two point mutation in the leukocyte CD18 gene in a patient with CD11/CD18 deficiency *J. Clin. Inves.* 85; 977-980.
 - Dana N., Fathallah D. , and Arnaout M.A. (1991) Expression of a soluble and functional form of the human Beta2 integrins CD11b/CD18. *Proc. Nat. Ac. Sc. (USA)* 88, 3106-3110
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- Fathallah D., Cherif D., Dellagi K. and Arnaout M.A. (1993) Molecular cloning of a novel HSP-70 gene from a mutant B cell line. *Journal of Immunology* 151, 813-815
- Fathallah D., Bejaoui M. , Sly W. Lakhoua R. & Dellagi K.(1994) A unique mutation underlying the carbonic anhydrase II deficiency syndrome in patients of arab descent. *Human Genetics* : 94 : 581-584
- Nava D., Fathallah D., Arnaout M.A. & (1994). Role of the beta 2 integrins in leukocyte adhesion: cells adhesion molecules II. *Integrins: The Biological Problems*. CRC Press; Yoshikazu Takada.
- Fathallah D., Bejaoui M., Chater K. , Sly W.S. & Dellagi K. (1997). Genetic analysis in Carbonic anhydrase II (CA II) deficient Maghrebien patients: Evidence for founder effect and presence of a hot spot recombination in the CA II locus. *Human Genetics* 99: 634-637.
- Fathallah D., Dellagi K , M. Qumsiyeh & Teebi A. (1998) Molecular genetics of the Maghreb and the middle east populations. *American Journal of Medical Genetics* 78: 90-91
- Fathallah D., Zerria K., Barbouche R., & Dellagi K.(1999) A Model to Study the Effects of a viral inactivator (β -Propiolactone) on DNA ligation and gene expression in E.Coli and Cos cells. *Vaccine* 17, 95-98
- T.Jamal, R.Barbouche, M. Ben Hariz, K.Dellagi and Fathallah D. Genetic and Immunological assessment of a bone Marrow transplantation in a patient with a primary immune deficiency : Leukocytes adhesion deficiency . *Archives de l'Institut Pasteur*,
- Fathallah D., T Jamal, R. Barbouche, M. Bejaoui, M. Ben Hariz & Dellagi K (2001) Two Novel Frame Shift, Recurrent and De Novo Mutations in the ITGB2 (CD18) Gene Causing Leukocyte Adhesion Deficiency in a Highly Inbred North African Population.. *J Biomed Biotechnology* 1(3):114-121.
- H Kallel, H.Zaïri, S. Rourou , M. Essafi, M. Barbouche, K. Dellagi & Fathallah D. (2002) Optimization of a hybridoma cell line Growth and Antibody production in a spinner flask using a Taguchi Experimental Design. *Cytotechnology*, 39:9-14
- A.Bobba, E. Marra, D.M. Fathallah & S. Giannattasio (2003) Non radioactive detection of five common microsatellite markers for ATP7B gene in Wilson disease patients. *Mol Cell Probes*. 2003 Dec;17(6):271-4.
- H. Kallel and D. M. Fathallah (2003) A process to produce an anti β 2 integrin monoclonal antibody by a hybridoma cell line grown in a 2-liter stirred tank bioreactor. *Bioprocess International* V.1 No 12, 54-60.
- Zerria K., K. Dellagi & Fathallah D.M. (2003) Cloning of the rat CR3 alphaM (CD11b) subunit, expression and binding assay of recombinant isolated CD11b VA (A-domain) and ICAM-1 Ig modules. *Arch Inst Pasteur Tunis*. 2002;79 (1-4):11-7.
- Imen Rabhi, Naouel Guedel, Imen Chouk, Khaled Zerria , Koussay Dellagi & Dahmani M. Fathallah. (2004) A Novel simple and rapid PCR-based site directed mutagenesis method. *Mol. Biotechnology*. 26(1):27-34.
- Arredi B, Poloni ES, Paracchini S, Zerjal T, Fathallah DM, Makrelouf M, Pascali VL, Novelletto A, Tyler-Smith C.A (2004) Predominantly neolithic origin for Y-chromosomal DNA variation in North Africa. *Am. J. Hum. Genet*. Aug;75(2):338-45
- Ajroud K, Sugimori T, Goldmann WH, Fathallah DM, Xiong JP, Arnaout MA (2004) Binding Affinity of Metal Ions to the CD11b A-domain Is Regulated by Integrin Activation and Ligands. *J Biol. Chem*. 11;279(24):25483-8.
- Guedel-Ben Tanfous N., Kallel H., Jarboui M. A Fathallah D. M.(2005) Expression in *Pichia pastoris* of a recombinant scFv form of MAb 107, an anti human CD11b integrin antibody. *Enz. Micro. Tech*. Vol 38 (5): 636-642
- A. Tlili , M. Ali Jarboui, A. Abdelghani,*, D.M. Fathallah, M.A. Maaref (2005) A novel silicon nitride biosensor for specific antibody-antigen interaction. *Materials Sciences & Engineering C* 25,490-495
- C. Benabdeselem M.R. Barbouche, M.A. Jarboui, J. L. Ho, K. Dellagi and D. M. Fathallah (2005) Expression in *Pichia pastoris*, purification and characterisation of recombinant *Mycobacterium tuberculosis* culture filtrate protein CFP32. In press *Mol.Biotechnology*.
- C. Benabdeselem, D. M. Fathallah, R. C. Huard, Hongxia Zhu, M. A. Jarboui, K. Dellagi, John L. Ho, and Ridha M. Barbouche (2005) Enhanced patient serum immunoreactivity to recombinant *Mycobacterium tuberculosis* CFP32 produced in the yeast *Pichia pastoris*: Potential for the serodiagnosis of tuberculosis. In press "Journal Clinical Microbiology"
- K. Zerria, E. Jerbi, S. Hammami , S. Boubaker, J.P. Xiong, , M.A. Arnaout[§] & D. M. Fathallah (2005) Recombinant CR3 α A domain Protects Against Skeletal Muscle Inflammatory Injury in Rat. in Press "Immunology".
- N. Guedel-Ben Tanfous¹, M. Essafi, B.Larguech, M. A. Jarboui, R. Barbouche and D. M. Fathallah (2006) Characterization of a High Affinity mAb with restricted specificity to the free (CD11b) Integrin α M subunit and of its recombinant scFv Form. Submitted
- I.Rabhi, A. Ayed, N. Khalf and D.M. Fathallah (2006) High level expression of soluble and functional human interferon alpha as a GST-fusion protein in the modified E.coli *trx(-)/gor(-)* strain.. Submitted

C-Biotech Record

- Five Patents application [PTA] in the field of Health biotech.
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- Two clones and a full process for the production of recombinant human interferon alpha in *Pichia pastoris*.
- An *E.Coli* clone that produces soluble recombinant human interferon alpha from an engineered DNA plasmid.
- Selegrin : A novel Chimeric , genetically engineered adhesion molecule with anti inflammatory potential.
- A novel antibody to the pro inflammatory leukocyte adhesion molecule CR3
- A novel antigen for the Sero- diagnosis and vaccination. of tuberculosis

- **Entrepreneurship & Management**

- Co-Founder of Cylyx Biotech, a Biogeneric company.
- Founder of GeniRec a recombinant protein start up company.
- Founder of RethAb an antibody start up company.
- Co-Founder of SFIHB “The Saudi Fund for Investment in Health Biotech”

- **Consultation:**

- Consultant in Biotechnology for the Tunisian Institute of Strategic Studies
- Consultant in Biotechnology for the International Development and Research Center, Canada.

- **Experience in:**

- Molecular Laboratory Setting
- Biotech Road Mapping & Benchmarking.
- Intellectual Property strategies
- Private Placement Memorandum and Business Plan writing.
- Setting up of strategic health biotech alliances and partnerships through joint ventures [due diligence].

D. Research Support.

- 1986-1992 American national Institute of Health, American Arthritis foundation, American March of Dimes foundation: Analysis of the structure-function of leukocytes adhesion molecules and their role in inflammation.
 - 1992-1996 Tunisian association for Myopathy: Project: Investigation of the Molecular Genetic Basis of Osteopetrosis a common Genetic disease in the Arab population. M. D. Fathallah P.I.
 - 1994-1997: European Community: Avicenna Program: Project: Development of the technical tools for investigation and diagnosis of genetically transmitted diseases & investigation of the psycho-social perception and prevention approaches of genetic diseases. M. D. Fathallah P.I.
 - 1994-1998: International Centre of Genetic Engineering and Biotechnology, Trieste, Italy: Project: Development of novel molecular approaches for the development of anti inflammatory agents. M. D. Fathallah P.I.
 - 1998-2001: Institut Pasteur de Tunis Research Funds: Project: Development of novel expression systems for the production of recombinant proteins of medical interest (*Pichia pastoris* , *streptomyces lividans* and insect cells): M. D. Fathallah P.I.
 - 2000-2004: Institut Pasteur de Tunis/ Biotechnology Action: Development of a full process for the production of a pharmaceutical grade recombinant human interferon α . M. D. Fathallah P.I.
 - 2001 to date: Serono international in collaboration with Massachusetts General Hospital, Boston USA.
Project: Engineering and structure function analysis of recombinant forms an anti human CD11b monoclonal antibody. M D. Fathallah P.I.
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-2003: Serono International: Project: Assessment of anti CD11b mAb 107, anti-inflammatory therapeutic potential in a primate model [*Maccaca fascicularis*] of hemorrhagic shock [Preclinical study] M.D. Fathallah P.I.

- 2004 to date WHO/TDR: Assessment of novel antigens for the serodiagnosis of tuberculosis M.D. Fathallah Co-investigator.

- 2005 to date NIH, USA, Novel Diagnosis Methods: CFP32-based Point-of-Care Diagnosis of Tuberculosis research and development. M.D. Fathallah Co investigator

E. Other Activities & interests:

- Writing of general information articles on Biotech.
 - Organisation of international scientific meetings and Biotech workshop and courses.
 - Music (Opera), Sports (Golf, Tennis and football), Literature (History, Sociology, Poetry, philosophy)
 - Speak and write equally English, French and Arabic.
 - Long exposure to the Anglo-Saxon, European and Arabic cultures.
 - Good knowledge of South American and Asian cultures.
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