

BIOGRAPHICAL SKETCH

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NAME Barbouche, Mohamed Ridha eRA COMMONS USER NAME barbouche	POSITION TITLE Professor in Immunology
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EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Tunis, Tunisia	M.D.	1985	Medicine
Pasteur Institute, Paris	Diploma	1990	Advanced course in
University of Tunis, Tunisia	Speciality	1991	Immunology Medicine/Immunology
University of Paris VI, France	M.Sc.	1992	Biology
University of Paris VI, France	Ph.D.	1995	Biology/Immunology

A. Positions and Honors.

Positions and Employment

- 1982-1984 Internship, Department of Medicine, La Rabta Hospital, Tunis.
1986-1990 Residency, Department of Immunology, Charles Nicolle Hospital, Tunis.
1990-1992 Research Fellow, Department of Immunology, Pasteur Institute, Paris.
1993-1998 Assistant Professor in Immunology, Medical School, University of Tunis.
Staff member, Department of Immunology, Pasteur Institute, Tunis.
1996-1998 Post-doctoral Fellow, Cornell University Medical College, New York.
1999-2007 Associate Professor in Immunology, Medical School, University of Tunis.
Staff member, Department of Immunology, Pasteur Institute, Tunis.
2007-present Professor in Immunology, Medical School, University of Tunis.
Head, Department of Immunology, Pasteur Institute, Tunis.
2014-present Assistant-Dean Research, Medical School, University of Tunis.

Other Experience and Professional Memberships

- Member of the Scientific Board, Pasteur Institute, Tunis.
Member of the Scientific Board, Medical School, University of Tunis.
Member of the Scientific Council, Federation of African Immunology Societies.
Founding Member, Elected Vice-President, Société Tunisienne d'Immunologie.
Founding Member, African Society for Immunodeficiencies.
Member of the Education Committee, International Union of Immunology Societies.
Member of Editorial Board: "Journal of Clinical Immunology", "Frontiers in Immunology" and "Archives de l'Institut Pasteur de Tunis".

Honors

- Fellowship, World Health Organization, Pasteur Institute, Paris, France.
Fellowship CIES (France), Pasteur Institute, Paris, France.
Fondation pour la Recherche Médicale (France), Pasteur Institute, Paris, France.
Fogarty Training Program, Cornell University, New-York, USA.

B. Selected peer-reviewed publications.

- 1- BARBOUCHE M. R., HONG L., DELLAGI K., KOSTRIKIS L. Contrasting frequencies of CCR5 Δ 32 and CCR2-64I alleles among Tunisian natives. **Journal of Acquired Immune Deficiency Syndromes**. 2001, 26(3), 298-299.
- 2- LENNON-DUMENIL A.M.*, BARBOUCHE M.R.*, VEDRENNE J., BEJAOUI M., CHARRON D., FELLOUS M., DELLAGI K., ALCAIDE-LORIDAN C. Uncoordinated HLA-D genes expression in an RFXANK-defective patient patient with MHC class II deficiency. **Journal of Immunology**. 2001, 166(9), 5681-5687. * *Have equally contributed*.
- 3- ELLOUMI-ZGHAL H., BARBOUCHE M.R., CHEMLI J., BEJAOUI M., HARBI A., SNOUSSI N., ABDELHAK S., DELLAGI K. Clinical and genetic heterogeneity of inherited autosomal recessive susceptibility to disseminated *Mycobacterium bovis* Bacille Calmette-Guérin infection. **Journal of Infectious Diseases**. 2002, 185, 1468-1475.
- 4- TRIKI H., BARBOUCHE M.R., BAHRI O., BEJAOUI M., DELLAGI K. Poliovirus infection in immunocompromized children following national immunization days in Tunisia. **Journal of Clinical Microbiology**, 2003, 41, 1203-1211.
- 5- BEN-ALI M., BARBOUCHE M.R., BOUSNINA S., CHABBOU A., DELLAGI K. The TLR2 Arg677Trp polymorphism is associated with susceptibility to tuberculosis in Tunisian patients. **Clin. Diag. Lab. Immunol. (Clin. Vaccine Immunol.)**, 2004, 11 (3) , 625-626
- 6- SGHIRI R., FEINBERG J., THABET F., DELLAGI K., BOUKADIDA, BEN ABDELAZIZ A., CASANOVA J.L. and M.R. BARBOUCHE. Gamma interferon is dispensable for neopterin production *in vivo*. **Clin. Diag. Lab. Immunol. (Clin. Vaccine Immunol.)**, 2005 : 1437-1441.
- 7- BENABDESSELEM C., FATHALLAH D. M., HUARD R.C., ZHU H., JARBOUI M.A., DELLAGI K., HO J.L., BARBOUCHE R.M.. Enhanced patient serum immunoreactivity to recombinant *Mycobacterium tuberculosis* CFP32 produced in the yeast *Pichia pastoris*: Potential for the serodiagnosis of tuberculosis. **Journal of Clinical Microbiology**. 2006, 3086-3093.
- 8- FILIPE-SANTOS O., BUSTAMANTE J., HAVERKAMP M.H., VINOLO E., KU C.L., PUEL A., FRUCHT D.M., CRISTEL K., VON BERNUTH H., JOUANGUY E., FEINBERG J., DURANDY A., SENECHAL B., CHAPGIER A., VOGT G., DE BEAUCOUDREY L., FIESCHI C., PICARD C., GARFA M., CHEMLI J., BEJAOUI M., TSOLIA M.N., KUTUKCULER N., PLEBANI A., NOTARANGELO L., BODEMER C., GEISSMANN F., ISRAEL A., VERON M., KNACKSTEDT M., BARBOUCHE M.R., ABEL L., MAGDORF K., GENDREL D., AGOU F., HOLLAND S.M., CASANOVA J.L. X-linked susceptibility to mycobacteria is caused by mutations in NEMO impairing CD40-dependent IL-12 production. **Journal of Experimental Medicine**. 2006, 203(7):1745-59.
- 9- EL KARES R., BARBOUCHE M.R., ELLOUMI-ZGHAL H., BEJAOUI M., CHEMLI J., MELLOULI F., TEBIB N., ABDELMOULA M.S., BOUKTHIR S., FITOURI Z., M'RAD S., BOUSLAMA K., TOUIRI H., ABDELHAK S., DELLAGI M.K. Genetic and mutational heterogeneity of autosomal recessive chronic granulomatous disease in Tunisia. **Journal of Human Genetics**. 2006, 51(10) : 887-95.
- 10- BENABDESSELEM C., BARBOUCHE M.R., JARBOUI M.A., DELLAGI K., HO J.L., DAHMANI D.M. High level expression of recombinant *Mycobacterium tuberculosis* culture filtrate protein CFP32 in *Pichia pastoris*. **Molecular Biotechnology** 2007, 35(1) : 41-9.

11- BEN-ALI M, BARREIRO LB, CHABBOU A, HALTITI R, BRAHAM E, NEYROLLES O, DELLAGI K, GICQUEL B, QUINTANA-MURCI L, BARBOUCHE MR. Promoter and neck region length variation of DC-SIGN is not associated with susceptibility to tuberculosis in Tunisian patients. *Human Immunology*. 2007 : 68(11):908-912.

12- KALLEL-SELLAMI M, BLOUIN J, ABDELMALEK R, LAADHAR L, ZERZERI Y, BARBOUCHE MR, TIOUIRI H, CHAABENE T, FREMEAUX-BACCHI V, ZITOUNI M, MAKNI S. Disseminated Tuberculosis in a Patient with Hereditary C1-inhibitor Deficiency. *Infection* 2008 Apr, 36(2) : 181-3.

13- MELLOULI F, KSOURI H, BARBOUCHE R, MAAMER M, BEN HAMED L, HMIDA S, BEN HASSEN A, BEJAOUI M. Successful treatment of fusarium solani ecthyma gangrenosum with granulocytes transfusions in a patient affected by leukocyte adhesion deficiency type 1. *BMC Dermatol*. 2010 Oct 7;10(1):10.

14- L DE BEAUCCOUDREY, A SAMARINA, J BUSTAMANTE, A COBAT, S BOISSON-DUPOIS, J FEINBERG, S AL-MUHSEN, L JANNIÈRE, Y ROSE, M DE SUREMAIN, KONG XF, O FILIPE-SANTOS, A C CHAPGIER, A PICARD, FISCHER, F DOGU, A IKINCIÖGULLARI, G TANIR, S AL-HAJJAR, S AL-JUMAAH, HH FRAYHA, Z ALSUM, S AL-AJAJI, A ALANGARI, A AL-GHONAIUM, P ADIMI, D MANSOURI, I BEN-MUSTAPHA, J YANCOSKI, BZ GARTY, C RODRIGUEZ-GALLEGO, I CARAGOL, N KUTUKCULER, DS KUMARARATNE, S PATEL, R DOFFINGER, A EXLEY, O JEPPSSON, J REICHENBACH, D NADAL, Y BOYKO, B PIETRUCHA, S ANDERSON, M LEVIN, L SCHANDENÉ, K SCHEPERS, A EFIRA, F MASCART, M MATSUOKA, T SAKAI, CA SIEGRIST, K FRECEROVA, R BLÜETTERS-SAWATZKI, J BERNHÖFT, J FREIHORST, U BAUMANN, D RICHTER, F HAERYNCK, F DE BAETS, V NOVELLI, D LAMMAS, C VERMYLEN, D TUERLINCKX, C NIEUWHOF, M PAC, WH HAAS, I MÜLLER-FLECKENSTEIN, B FLECKENSTEIN, J LEVY, R RAJ, AC COHEN, DB LEWIS, SM HOLLAND, KD YANG, X WANG, X WANG, L JIANG, X YANG, C ZHU, Y XIE, PP LEE, KW CHAN, TX CHEN, G CASTRO, I NATERA, A CODOCEO, A KING, L BEZRODNIK, D DI GIOVANI, MI GAILLARD, D DE MORAES-VASCONCELOS, AS GRUMACH, AJ DA SILVA DUARTE, R ALDANA, FJ ESPINOSA-ROSALES, M BEJAOUI, AA BOUSFIHA, JE BAGHDADI, N OZBEK, G AKSU, M KESER, A SOMER, N HATIPOGLU, C AYDOGMUS, S ASILSOY, Y CAMCIOGLU, S GÜLLE, TT ÖZGÜR, M ÖZEN, M OLEASTRO, A BERNASCONI, S MAMISHI, N PARVANEH, S ROSENZWEIG, R BARBOUCHE, S PEDRAZA, YL LAU, MS EHLAYEL, C FIESCHI, L ABEL, O SANAL, JL CASANOVA. Revisiting human IL-12R β 1 deficiency: a survey of 141 patients from 30 countries. *Medicine (Baltimore)*. 2010 Nov; 89(6):381-402.

15- F. AJILI, S. BOUBAKER, A. DEROUICHE, M. BEN ALI, I. BEN MUSTAPHA, M. CHERIF, M. CHEBIL, M. MANNAI, M. R. BARBOUCHE. Relationship between Toll-Like Receptor 2 nonsynonymous single nucleotide polymorphisms and the effectiveness of bacille Calmette-Guerin immunotherapy in preventing recurrence of superficial bladder cancer : A prospective study. *Current Therapeutic Research*. 2010 Dec; 71(6):398-407.

16- BARBOUCHE M.R., GALAL N., BEN-MUSTAPHA I., JEDDANE L., MELLOULI F., AILAL F., BEJAOUI M., BOUTROS J., MARSIFY A., BOUSFIHA A.A. Primary immunodeficiencies in highly consanguineous North African populations. Review. *Annals of the New York Academy of Sciences* 2011, 1238:42-52.

17- GUIRAT-DHOUIB N, BACCAR Y, MUSTAPHA IB, OUEDERNI M, CHOUAIBI S, EL FEKIH N, BARBOUCHE MR, FEZAA B, KOUKI R, HMIDA S, MELLOULI F, BEJAOUI M. Oral HPV infection and MHC class II deficiency (A study of two cases with atypical outcome). *Clin Mol Allergy*. 2012 Apr 23;10(1):6.

18- DRISS N, BEN-MUSTAPHA I, MELLOULI F, BEN YAHIA A, TOUZI H, BEJAOUI M, BEN GHORBEL M, TRIKI H, BARBOUCHE MR. High susceptibility for enterovirus infection and virus excretion features in tunisian patients with primary immunodeficiencies. **Clin Vaccine Immunol.** 2012, 19(10):1684-9.

19- BEN-MUSTAPHA I, BEN-FARHAT K, GUIRAT-DHOUB N, DHEMAIED E, LARGUÈCHE B, BEN-ALI M, CHEMLI J, BOUGUILA J, BEN-MANSOUR L, MELLOULI F, KHEMIRI M, BÉJAOUI M, BARBOUCHE MR. Clinical, Immunological and Genetic Findings of a Large Tunisian Series of Major Histocompatibility Complex Class II Deficiency Patients. **J Clin Immunol.** 2013, 33(4):865-70.

20- PRANDO C., SAMARINA A., BUSTAMANTE J., BOISSON-DUPUIS S., COBAT A., PICARD C., ALSUM Z., AL-JUMAAH S., AL-HAJJAR S., FRAYHA H., AL-MOUSA H., BENMUSTAPHA I, ADIMI P., FEINBERG J., DE SUREMAIN M., JANNIÈRE L., FILIPE-SANTOS O., MANSOURI N., STEPHAN J.L., NALLUSAMY R, KUMARARATNE D.S., BLOORSAZ M.R., BEN-ALI M., ELLOUMI-ZGHAL H., CHEMLI J., BOUGUILA J., BEJAOUI M., ALAKI E., ALFAWAZ T.S., AL IDRISSE E., ELGHAZALI G., POLLARD A.J., MURUGASU B., BEE WAH L., HALWANI R., ZHRANI M., AL SHEHRI M.A., AL-ZHRANI M., BEN HUSSAIN I., MAHDAVIANI S.A., PARVANEH M., ABEL L., MANSOURI D., BARBOUCHE R., AL-MUHSEN S., CASANOVA J.L.. Inherited IL-12p40 deficiency: genetic, immunological, and clinical features of 49 patients from 30 kindreds. **Medicine (Baltimore)**, 2013, 92(2):109-22.

21- BEN MUSTAPHA I, BELKHOUBA K, KHEDER S, MEKKI N, BEN ROMDHANE K, HANTOUS S, BEN KHELIL J, SAIDI-SLIM L, BARBOUCHE MR, BESBES M. Acute respiratory failure caused by coinfection with mycobacterium tuberculosis and pneumocystis jirovecii in an immunocompetent young woman. **Arch Inst Pasteur Tunis**, 2013, 90(1-2) :55-60.

22- BEN-MUSTAPHA I, BEN-ALI M, MEKKI N, PATIN E, HARMANT C, BOUGUILA J, ELLOUMI-ZGHAL H, HARBI A, BÉJAOUI M, BOUGHAMMOURA L, CHEMLI J, BARBOUCHE MR. A 1,100-year-old founder effect mutation in IL12B gene is responsible for Mendelian susceptibility to mycobacterial disease in Tunisian patients. **Immunogenetics**. 2014, 66(1):67-71.

23- OUEDERNI M, SANAL O, IKINCIÖGULLARI A, TEZCAN I, DOĞU F, SOLOGUREN I, PEDRAZA-SÁNCHEZ S, KESER M, TANIR G, NIEUWHOF C, COLINO E, KUMARARATNE D, LEVY J, KUTUKCULER N, AYTEKIN C, HERRERA-RAMOS E, BHATTI M, KARACA N, BARBOUCHE R, BROIDES A, GOUDOURIS E, FRANCO JL, PARVANEH N, REISLI I, STRICKLER A, SHCHERBINA A, SOMER A, SEGAL A, ANGEL-MORENO A, LEZANA-FERNANDEZ JL, BEJAOUI M, VALLE MB, KACHBOURA S, SENTONGO T, BEN-MUSTAPHA I, BUSTAMANTE J, PICARD C, PUEL A, BOISSON-DUPUIS S, ABEL L, CASANOVA JL, RODRÍGUEZ-GALLEGO C. Clinical features of candidiasis in patients with inherited interleukin-12 receptor β 1 deficiency. **Clinical Infectious Diseases** 2014, 58(2):204-13

24- MEKKI N, BEN-MUSTAPHA I, LIU L, BOUSSOFARA L, OKADA S, CYPOWYJ S, GHARIANI N, SAIDI W, DENGUEZLI M, CASANOVA JL, PUEL A, BARBOUCHE MR. IL-17 T Cells' Defective Differentiation In Vitro Despite Normal Range Ex Vivo in Chronic Mucocutaneous Candidiasis Due to STAT1 Mutation. **Journal of Investigative Dermatology**, 2014, 134(4):1155-7.

25- SASSI A, LAZAROSKI S; GANG W, HASLAM SM, MELLOULI F, PATIROGLU T, JOUHADI Z, KHADIR K, PFEIFER D, JAKOB T, KHEMIRI M, BEN-MUSTAPHA I, ASPLUND CA, GUSTAFSSON MO, LUNDIN KE, FALK-SÖRQVIST E, MOENS LN, UNAL E, OZDEMIR

MA, GUNGOR HE, ENGELHARDT KR, DZIADZIO M, STAUSS H, FLECKENSTEIN B, FLIEGAUF M, MEIER R, KRAUS L, BEN-KHEMIS L, NADIFI S, EIBEL H, NILSSON M, BEJAOU M, SCHÄFFER AA, SMITH CIE, DELL A, BARBOUCHE MR, GRIMBACHER B. Hypomorphic, homozygous mutations in Phosphoglucomutase 3 impair immunity and increase serum IgE levels. **Journal of Allergy and Clinical Immunology**, 2014, 133(5):1410-9.

26- DRISS N, MELLOULI F, BEN YAHIA A, TOUZI H, BARBOUCHE MR, TRIKI H, BEJAOU M. Sequential Asymptomatic Enterovirus Infections in a Patient with Major Histocompatibility Complex Class II Primary Immunodeficiency. **Journal of Clinical Microbiology**, 2014, 52(9):3486-9.

27- HAOUES M, REFAI A, MALLAVIALLE A, BARBOUCHE MR, LAABIDI N, DECKERT M, ESSAFI M. Forkhead box O3 (FOXO3) transcription factor mediates apoptosis in BCG-infected macrophages. **Cell Microbiol.** 2014, 16(9):1378-90.

28- WALEED AL-HERZ, HASAN ALDHEKRI, MOHAMED-RIDHA BARBOUCHE, NIMA REZAIIE. Consanguinity and Primary Immunodeficiencies. Review. **Human Heredity**, 2014, 77:138-43.

29- ENGELHARDT KR, GERTZ ME, KELES S, SCHÄFFER AA, SIGMUND EC, GLOCKER C, SAGHAFI S, POURPAK Z, CEJA R, SASSI A, GRAHAM LE, MASSAAD MJ, MELLOULI F, BEN-MUSTAPHA I, KHEMIRI M, KILIC SS, ETZIONI A, FREEMAN AF, THIEL J, SCHULZE I, AL-HERZ W, METIN A, SANAL Ö, TEZCAN I, YEGANEH M, NIEHUES T, DUECKERS G, WEINSPACH S, PATIROGLU T, UNAL E, DASOUKI M, YILMAZ M, GENEL F, AYTEKIN C, KUTUKCULER N, SOMER A, KILIC M, REISLI I, CAMCIOGLU Y, GENNERY AR, CANT AJ, JONES A, GASPAS BH, ARKWRIGHT PD, PIETROGRANDE MC, BAZ Z, AL-TAMEMI S, LOUGARIS V, LEFRANC G, MEGARBANE A, BOUTROS J, GALAL N, BEJAOU M, BARBOUCHE MR, GEHA RS, CHATILA TA, GRIMBACHER B. The extended clinical phenotype of 64 patients with dedicator of cytokinesis 8 deficiency. **Journal of Allergy and Clinical Immunology**, 2015, 136(2):402-12.

30- REFAI A, HAOUES M, OTHMAN H, BARBOUCHE MR, MOUA P, BONDON A, MOURET L, SRAIRI-ABID N, ESSAFI M. Two distinct conformational states of Mycobacterium tuberculosis virulent factor early secreted antigenic target 6 kDa are behind the discrepancy around its biological functions. **FEBS J.** 2015 Aug 11. doi: 10.1111/febs.13408. [Epub ahead of print]

C. Research Support.

Directorate of International Cooperation, Principauté de Monaco
2015-2017

Title: Improvement of primary immunodeficiency children diagnostic and care.

Role: Principal Investigator

Tunisian/Indian joint Research grant
2015-2016

Title: Assessment of the protective effect, against tuberculosis, of a new vaccine composition

Role: Co-investigator

The Task Force for Global Health CDC/Bill & Melinda Gates Foundation, Jeffrey Modell Centers Network

Title: Poliovirus surveillance among children with primary immunodeficiency (iVDPVExcretors).

2014-2015

Role: Principal investigator (Tunisia)

Institut Pasteur de Tunis

Title: Identification of genetic and immunological markers predictive of clinical response to BCG therapy in bladder cancer patients.

2013-2015

Role: Co-investigator

Pasteur Institutes International Network (Réseau International des Instituts Pasteur/Action Concertée Inter Pasteurienne Lille, Tunis, Madagascar and Senegal (ACIP))

Title: TB-LaTAS, Assessment of a new IGRA assay for latent-TB diagnosis in Tunis, Antananarivo and Senegal.

2013-2015

Role: Co-investigator

Pasteur Institutes International Network (Réseau International des Instituts Pasteur/Action Concertée Inter Pasteurienne Tunis, Algiers, Casablanca and Hong-Kong (ACIP))

Title: Investigation of the molecular basis of agammaglobulinemia primary immunodeficiency in highly consanguineous maghrebien populations.

2012-2014

Role: Principal Investigator

WHO Re-Entry Grant Award for a post-doctoral fellow:

Title: Study of human macrophages apoptosis induced by BCG

2012-2014

Role: Co-investigator

Tunisian/Korean joint Research grant.

Title: Development of an integrated electronic polyphenols-based device to assess oxidative and inflammatory status of human macrophages.

2012-2014

Role: Co-investigator

FP7-European commission program.

Title: REGPOT2 Building Capacity in TB- EUMEDNETvsTB. France, Guadeloupe, Germany, Spain, Morocco, Algeria and Bulgaria.

2010-2012

Role: Co-Principal Investigator (Tunisia)

Pasteur Institutes International Network (Réseau International des Instituts Pasteur/Action Concertée Inter Pasteurienne Tunis and Paris (ACIP))

Title: Study of hyperIgM syndromes : biochemical and genetic approaches.

2007-2009

Role: Co-Principal Investigator (Tunisia)

Tropical Diseases Research (TDR)/ World Health Organization (WHO)

Title: CFP-32 based point-of care tuberculosis diagnosis.

2006-2008

Role: Co-investigator

Pasteur Institutes International Network (Réseau International des Instituts Pasteur/Action Concertée Inter Pasteurienne Tunis, Algiers and Paris (ACIP))

Title: Study of the role of innate immunity genes polymorphisms in resistance/susceptibility to tuberculosis.

2005-2007
Role: Co-investigator

WHO Project ID A11032
Title: Network for applications of bioinformatics and genomics in Leishmania and Mycobacteria research activities at the Institut Pasteur de Tunis.

2004-2006
Role: Co-investigator

NIH Exploratory/Development Research Grant Award (R21)
Title: Antigen Capture Assays for Rapid Tuberculosis Diagnosis.

2004-2006
Role: Co-investigator

Fogarty Support
Title: In-Country Training Program in Genetic Susceptibility to Visceral Leishmaniasis

2000-2002
Role: Tunisian Co-ordinator

SERST (Tunisian Secretariat of State for Scientific Research and Technology)
Title: Immunotherapy against scorpionic envenomation: Production of recombinant antibodies by genetic engineering.

1999-2002
Role: Co-investigator

Pasteur Institutes International Network (Réseau International des Instituts Pasteur/Action Concertée Inter Pasteurienne Tunis, Dakar and Paris (ACIP))

Title: Molecular basis of HLA Class II immunodeficiencies
1997-1999

Role: Principal Investigator

SERST (Tunisian Secretariat of State for Scientific Research and Technology)
1993-1995

Title: Study of the molecular basis of primary immunodeficiencies.

1993-1995
Role: Principal Investigator