

**Dr. Ayman Salem M Mubarak**  
**Assistant professor of Immunology**  
Department of Botany and Microbiology  
Faculty of science at King Saud University  
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### **Personal information**

Name: Dr. Ayman Salem M. Mubarak

Nationality: Saudi Arabian

Marital status: married

Date of birth: 9<sup>th</sup> August 1978

Current position: Assistant professor

Specialisation: Immunology

Field of Interests: Immune response to respiratory pathogens and vaccines. CD4 T cell and antibody response to vaccines and microbial pathogens such as pneumococcus. Also, the role of Treg and Th17 in bacterial infections, mucosal immunology and vaccine immunology.

### **Qualification**

1. **Ph.D. (Immunology)** University of Liverpool, School of medicine, Clinical infection, Microbiology and Immunology Department, UK (2015)

#### **Thesis title**

“Characterisation of Treg and Th17 Cells in Nasopharynx Associated Lymphoid Tissue and their Association with Pneumococcal Carriage in Children and Adults”

2. **M.Sc. (Human Immunity) with merit (2.1)** University of Liverpool, School of medicine, Clinical infection, Microbiology and Immunology Department, UK (2010).

### **Thesis title**

“High Activity of Mucosal T Regulatory Cells in Adenotonsillar Tissues and its association with *Streptococcus pneumoniae*”

3. **B.Sc. (Microbiology) with excellent (3.54/4)** Umm Al-Qura University, Kingdom of Saudi Arabia, (6/2001)

### **Practical Training**

1. I have been trained in hospital laboratories of both King Abdulaziz and Makkah Medical City hospitals in various departments for 3 months, including microbiology, parasitology, hematology, blood bank, biochemistry and serology.
2. I have been trained at Halawani Brothers factory in microbiology department for 4 weeks.
3. I have been trained at Quality Control Laboratories in microbiology department for 4 weeks

### **Work Experience**

1. Assistant Professor of Immunology, Botany and Microbiology Department, College of Sciences, King Saud University, Riyadh, KSA, (6/2015-present).
2. Demonstrator, Botany and Microbiology Department, College of Sciences, King Saud University, Riyadh, KSA, (7/2007-9/2008). I taught practical sessions in different subject, including bacteriology, general microbiology, sanitation and water microbiology, and ultra structure of bacteria.
3. Biology teacher, Ministry of Education, Riyadh, KSA, (2002-7/2007).
4. I had worked as Food Safety Control at Environmental Health for 4 months (2002).

### **Certificate Awarded**

1. Workshop of Introduction to Academic Leadership, London, UK (19/5/2013). Accredited from higher education of Saudi Arabia.
2. English for Academic Purpose from University of Liverpool, U.K for 2 months (from 6/7/2009 to 11/9/2009).

3. English and Academic Skills from Birmingham University in U.K for 6 months (from 9/2008 to 4/2009).
4. Training in Quality Control Laboratories, Jeddah (22/10 - 21/11/2000) with Excellent (92%).
5. Training in Microbiology Department at Halawani Brothers' Factory, Jeddah (15/7/ - 9/8/2000).
6. Workshop of Teaching materials from 29/3 - 2/4/2003, Riyadh.
7. Workshop of Teaching Methodology from 3-7/5/2003, Riyadh.
8. English Language Certificate from Southern Illinois University in the United State of America for 8 months (from 9/1996 to 5/1997).

### **Academic Awards**

Distinction Award for the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> Year of PhD, awarded by the Saudi Arabian Cultural Bureau, UK, 2012-2014.

### **Administrative role and committees membership**

- 1- Consultant of preparatory year deanship at KSU (2016-present)
- 2- Supervisor of transitional programme and diploma at KSU (2016-present)
- 3- Supervisor of students' activities (Extra curricular activities) at College of Science (2015–2016).
- 4- Member in committee of microbiology unit in our department
- 5- Member in committee of students' advisory panel in our department
- 6- Member in community service in our department.
- 7- Membership in British society of Immunology (2009-2015)

### **Technical Skills**

I have experience in immunology techniques, tissue culture as well as some molecular microbiology including:

- SDS-Page gel
- Western blotting for protein detection
- Bio-Rad protein assay for measuring protein concentration
- Nanodrop spectrophotometer

- Flow cytometric analysis
- ELISA technique for antibody and cytokines measurement
- Tissue culture and cell stimulation
- Human sample processing (blood, adenotonsillar tissue, saliva and nasopharyngeal swap)
- Cell separation and depletion
- PCR, RT-PCR
- Pad Graph prism for statistical analysis

### **General skills**

- 1- Statistical analysis using Pad Graph prism software and SPSS
- 2- Computer skills (office software)
- 3- Fluency in English language (speaking and writing)

### **Scientific papers (Publications)**

1. Zhang, Q., Leong, S.C., McNamara, P., **Mubarak, A.**, Malley, R., Finn, A. 2011. Characterisation of Regulatory T Cells in Nasal Associated Lymphoid Tissue in Children: Relationships with Pneumococcal Colonization. PLoSPathog 7(8): e1002175. doi:10.1371/journal.ppat.1002175
2. Gray, C., Ahmed, M.S., **Mubarak, A.**, Kasbekar, A. V., Derbyshire, S., McCormick, M. S., Mughal, M. K., McNamara, P. S., Mitchell, T., Zhang, Q. 2013. Activation of memory Th17 cells by domain 4 pneumolysin in human nasal-associated lymphoid tissue and its association with pneumococcal carriage. Mucosal Immunology, 7 (3). pp. 705-717.
3. Moussa I. Mohamed, Khalid S. Al- Maary, Turki M. Dawoud, **Ayman S. Mubarak**, Ashgan M. Hessain and Kh. F. Mohamed, 2016. Production and Evaluation of the Immuno-protective Efficacy of the Immunoglobulins IgY-antibodies Prepared Against Infectious Bursal Disease. International Journal of Pharmacology, 12: 749-753.

4. Khalid S. Al-Maary, Turki M. Dawoud, **Ayman S. Mubarak**, Ashgan M. Hessain, Hussein M. Galal, Saleh A. Kabli, Moussa I. Mohamed, 2016. Molecular characterization of the capsular antigens of *Pasteurella multocida* isolates using multiplex PCR. Saudi Journal of Biological Sciences. (<http://dx.doi.org/10.1016/j.sjbs.2016.06.006>)
5. **A. Mubarak**, M.S. Ahmed, N. Upile, C. Vaughan, C. Xie, R. Sharma, P. Acar, M.S. McCormick, J.C. Paton, T. Mitchell, N. Cunliffe, Q. Zhang, 2016. A dynamic relationship between mucosal T helper type 17 and regulatory T-cell populations in nasopharynx evolves with age and associates with the clearance of pneumococcal carriage in humans. Clin Microbiol Infect;22(8):736.e1-7

### **Conference papers**

1. **Mubarak, A.**, Kasbekar, A., McCormick, M., Beer, H., Cunliffe, N., McNamara, P. S., and Zhang, Q. (2012) Association of Th17/Treg in NALT with pneumococcal carriage in children and adults. Immunology, 137 (Suppl. 1), 185-772.
2. **Mubarak, A. S.**, Kasbekar, A., McCormick, M., Beer, H., Cunliffe, N., McNamara, P. S., and Zhang, Q. (2013) Induction of Th17 in nasopharynx-associated lymphoid tissue by pneumococcus and the effect of cytokines. Immunology, 140 (Suppl. 1), 39-184.
3. Rider, A., **Mubarak, A.**, Derbyshire, S., McNamara, P., Kadioglu, A., and Zhang, Q. (2013) Induction of T regulatory cells by streptococcus pneumoniae. Immunology, 140 (Suppl. 1), 39-184.
4. **Mubarak, A.**, Casey, V., Upile, C., Sharma, R., Beer, H., McCormick, M., Ahmed, M., McNamara, P., and Zhang, Q. (2014) Relationship between Th17 and Treg in nasopharynx-associated lymphoid tissue and their association with age and pneumococcal carriage in humans. Immunology, 143 (Suppl. 1), 12-42.