



Suhaila A. Al-Sheboul, Ph.D

Associate Professor of
Molecular Microbiology
and Immunology

Office Address and Contact Info.

Jordan University of
Science and Technology
(JUST)
Faculty of Applied Medical
Sciences
Department of Medical
Laboratory Sciences
E-mail Address:
sashboul@just.edu.jo
Office Phone: +962-2-
7201000 ex.23770
P.O Box: 3030. Irbid
22110, Jordan

Skills

Laboratory

- **Molecular Genetics:**
DNA: Genomic and
Plasmid DNA
extraction; Restriction
digestion and mapping
and Plasmid
transfection; Southern
Blot; PCR
(Conventional and real
time PCR); Probe
preparation and
primer designing;
Expression cloning;
Gel electrophoresis

Curriculum Vitae

Profile

As a professor at Jordan University of Science and Technology (JUST) with very long teaching and research experience in Jordan and worldwide, I have learned how to be a successful professor and how to graduate successful, resilient individuals. As a teacher, I constantly motivate my students to pursue knowledge and education. Given that I was the first Fulbright Scholar from JUST. My graduate students receive ongoing encouragement from me to engage in genuine research, problem-solving, and appreciation of the sciences without feeling under pressure. My voluntary work in 2015 resulted in "The American Medical Technologists (AMT) certification" for the Faculty of Applied Medical Sciences /Department of Medical Laboratory Sciences at JUST. This certification will assist in establishing our graduates' equivalency with US graduates. Meanwhile, my research at JUST focuses on the subject of AMR (antimicrobial resistance). Additionally, I'm interested in evaluating and finding new testing methodologies across all aspects of diagnostic and medical microbiology. In 2018, I was selected by the American Society of Microbiology (ASM) to serve as the organization's first Senior Ambassador for Jordan. Through which, I was able to perform a great deal of scientific activities that helped students to understand more about the significance of the field of microbiology. My interviews with Jordanian and foreign TV and radio stations and my published articles during the "Corona pandemic" benefitted a lot of people worldwide thanks to my expertise and my considerable education in microbiology, immunology, and clinical laboratory sciences. I consider myself to be a lady who is incredibly motivated and passionate about scientific public engagement.

Education

- **Doctor of Philosophy (Ph.D) in Biomedical Sciences**
- **Area of Specialization: Molecular Microbiology and Genetics**
- University of Wisconsin-Milwaukee / Medical College of Wisconsin, WI, USA.
- **Master of Science (M.Sc.) – Medical Laboratory Sciences/ Biomedical Sciences/ College of Health Sciences**
- University of Wisconsin-Milwaukee, WI, USA.
- **Bachelor of Science (B.Sc.) in Medical Laboratory Sciences**
- Yarmouk University, Faculty of Medicine - Irbid, Jordan.

Memberships and Achievements

- American Society for Microbiology (ASM).
- The American Society for Clinical Laboratory Sciences (ASCLS)
- 2014-2015: Amman/Jordan: Fulbright Review board
- 2014-2015: Achievement of the AMT (American Medical Technology Association) recognition. The AMT recognition of the MLS program was accomplished through my efforts.
- Representative of the Department of Medical Laboratory Sciences at "The Faculty of Applied Medical Sciences council".

(Agarose and polyacrylamide gel electrophoresis); DNA sequencing. RNA: Isolation; Northern Blot; Slot Blot.

- **Biochemistry:** Protein extraction, purification, SDS-PAGE (1-D and 2-D), Western Blot; Protein quantitation. Spectrometry: Spectrophotometric enzyme assays; familiar with Mass Spectrometry; Chromatography: ion-exchange, HPLC, affinity chromatography.
- **Immunology:** Immunoprecipitation; ELISA; other immunological and radioisotopic techniques; Immunohistochemistry; Immunoprecipitation; Immunofluorescence
- **Tissue Culture:** Primary cell harvests: Mouse spleen; Natural killer cells; Fibroblast Cell culture; Transfection of Tissue culture cells; Cytotoxicity assays- e.g. Chromium⁵¹ release assay; tissue culture.
- **Microbiology:** Conventional and Molecular tools in microbial diagnosis
- **Other special laboratory skills:** In Parasitology; Hematology; Pathology; Immunology; and Clinical Biochemistry;

- Representative of the Faculty of Applied Medical Sciences at JUST
- Member, Graduate Studies Committee.
- Member in the Scientific Research Committee in the department and in the Faculty.
- Member, Library Committee
- A member in the community services program committee
- A member in the syllabus committee
- Organizer of Department's journal club committee
- Department's mini proposals and research grants evaluation committee
- Department representative at the faculty council
- Member in department committee to accredit and review the academic standards at Aden University/ Yemen. March 2013- Feb 2014 Aden University/Jordan University of Science and Technology.

Awards and Honors

- First "Senior" Ambassador for The American Society of Microbiology in Jordan (ASM) (2018-Present)
- **Fulbright Scholarship Award** (First Fulbright Student from Jordan University of Science and Technology) /USA
- **SAHP Student Research Award** – In Clinical Lab Sciences at the University of Wisconsin-Milwaukee/USA
- The University of Wisconsin-Milwaukee Chancellor's Award/USA
- **The American Society for Microbiology (ASM) Travel Award**
- **Ruth Walker Travel Award**, University of Wisconsin-Milwaukee, Biology Department.

Press Coverage of Published Research

- Ad-Dustour daily Jordanian Governmental Newspaper:
- How do immune cells learn to distinguish friend from foe? By Dr. Suhaila Al-Sheboul (July 3, 2022).
<https://www.addustour.com/articles/1289979-%D9%83%D9%8A%D9%81-%D8%AA%D8%AA%D8%B9%D9%84%D9%85-%D8%A7%D9%84%D8%AE%D9%84%D8%A7%D9%8A%D8%A7-%D8%A7%D9%84%D9%85%D9%86%D8%A7%D8%B9%D9%8A%D8%A9-%D8%AA%D9%85%D9%8A%D9%8A%D8%B2-%D8%A7%D9%84%D8%B5%D8%AF%D9%8A%D9%82-%D9%85%D9%86-%D8%A7%D9%84%D8%B9%D8%AF%D9%88%D8%9F>
- **Radio Albalad brief:**
- The epidemiological situation is not reassuring and "Omicron" can be a mercy for humans by: Dr. Suhaila Al-Sheboul (August 12, 2021).
<https://ammannet.net/%D8%A3%D8%AE%D8%A8%D8%A7%D8%B1/%D8%B3%D9%87%D9%8A%D9%84%D8%A9-%D8%A7%D9%84%D8%B4%D8%A8%D9%88%D9%84-%D8%A7%D9%84%D9%88%D8%B6%D8%B9-%D8%A7%D9%84%D9%88%D8%A8%D8%A7%D8%A6%D9%8A-%D8%BA%D9%8A%D8%B1-%D9%85%D8%B7%D9%85%D8%A6%D9%86-%D9%88%D8%A3%D9%88%D9%85%D9%8A%D9%83%D8%B1%D9%88%D9%86-%D9%8A%D9%85%D9%83%D9%86-%D8%A3%D9%86-%D9%8A%D9%83%D9%88%D9%86-%D8%B1%D8%AD%D9%85%D8%A9-%D9%84%D9%84%D8%A8%D8%B4%D8%B1>
- **Jawharat Alarab news**
- Consumption of vitamins (C and D) and zinc in the time of Corona - by: Dr. Suhaila Al-Sheboul
<https://jawharatarabnews.net/post.php?id=44543>
- **Online Jordanian newspaper (Kul-alurdon)**
- Corona antibody tests. March 21 , 2021 By Dr. Suhaila Al-Sheboul
<http://www.allofjo.net/index.php?page=article&id=263514>
- **Roya news -Jordanian TV Appearance**
- A microbiologist calls for a delay in taking the Pfizer and Moderna vaccines for these reasons. Dr. Suhaila Al-Sheboul
<https://royanews.tv/news/232105>

Animal Dissection in Anatomy class (i.e. Human, mice, cats and fetal pigs); Handling different types of microscopes.

- Animal User Training Program/The Care and Use of the Mouse in research. University of Wisconsin-Milwaukee/USA (1990-1991).
- Radiation Safety Course. University of Wisconsin-Milwaukee/USA (1990-1991 and in 2003).

WORK

- Team work
- Organizational skills
- Problem solving
- Time management
- Leadership
- Management skills
- Risk management

PERSONAL

- Communication skills
- Self motivated
- Creative thinking
- Persistent & ambitious
- Flexibility & Creativity

Languages

- **Arabic:** Spoken and Written: Excellent
- **English:** Spoken and Written: Excellent
- **Turkish:** Spoken and Written: Excellent
- **French:** Spoken and written: fair

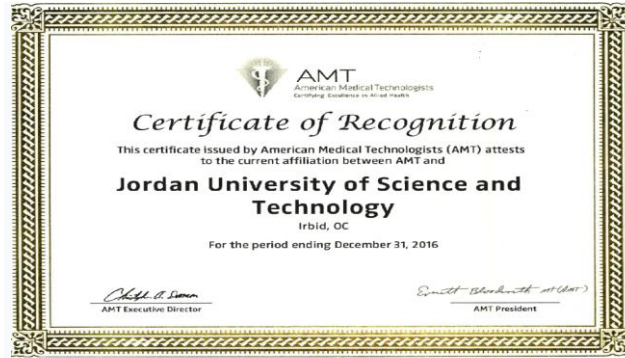
Research Interest

- Investigating Antibiotic Resistance

- **Jordanian Radio Station:**
- Suhaila Shboul, A scientist, and a talk to the Jordanian radio about Antibiotics and the Messenger RNA vaccine
<https://www.youtube.com/watch?v=yZxS6-D0dbY>
- **Jordanian Radio station (Radio al-balad):**
- The epidemiological situation is not reassuring and "Omicron" can be a mercy for humans. Dr. Suhaila Al-Sheboul
<https://soundcloud.com/user-802211363/w8eyl3x9fnfe>
- **Jordanian news agency (PETRA):**
- Excessive intake of vitamins in the time of Corona leads to vitamin poisoning
<https://enjaznews.com/%D8%A7%D9%84%D8%A7%D9%81%D8%B1%D8%A7%D8%B7-%D9%81%D9%8A-%D8%AA%D9%86%D8%A7%D9%88%D9%84-%D8%A7%D9%84%D9%81%D9%8A%D8%AA%D8%A7%D9%85%D9%8A%D9%86%D8%A7%D8%AA-%D9%81%D9%8A-%D8%B2%D9%85%D9%86-%D9%83%D9%88/>
- Smart System for Early Detection of Coronavirus (COVID-19). By Dr. Suhaila Al-Sheboul
<https://www.sparkjo.com/t-ar-jo/news/smartdetection-covid-19>
- **Sohba news (online)**
- Why do some recover from COVID-19 while others die from it? By Dr. Suhaila Al-Sheboul (June 8, 2020).
<https://www.sohbanews.com/%D9%84%D9%85%D8%A7%D8%B0%D8%A7-%D9%8A%D8%AA%D8%B9%D8%A7%D9%81%D9%89-%D8%A7%D9%84%D8%A8%D8%B9%D8%B6-%D9%85%D9%86-%D9%83%D9%88%D9%81%D9%8A%D8%AF-19-%D8%A8%D9%8A%D9%86%D9%85%D8%A7-%D8%A2%D8%AE%D8%B1/>
- **A scientific symposium at the College of Health Sciences on antibiotic resistance in Palestine.**
<https://www.iugaza.edu.ps/p13312/>
- **Facebook** (Doctor-Suhaila A AlSheboul)
- More than 1000 member including my students, physicians and community members participating in my educational site.
- **Youtube**
- In the beginning of COVID-19, an interview at Istanbul Medipol University about the pandemic. CORONAVIRUS, NEW TREATMENT!!! SYMPTOMS, VACCINE DR SUHAILA AL-SHEBOUL
<https://www.youtube.com/watch?v=cy40ff012Ig&t=167s>
<https://www.youtube.com/watch?v=yZxS6-D0dbY>
- **AMT certificate that I obtained for Our department:Department of Medical Laboratory Sciences at JUST in 2015**
<https://www.just.edu.jo/NewsCenter/Lists/JustNews/DisplayItem.aspx?ID=637>
<https://www.youtube.com/watch?v=yZxS6-D0dbY>

Genes (AMR) in Hospital-Acquired Infections.

- Commensal and pathogenic bacterial responses of innate immunity and the function of the microbiota.
- Developing new diagnostics and vaccines.
- The molecular basis of microbial pathogenesis.



Taught Courses

Undergraduate Courses:

- Field Training
- Research Project
- Clinical Microbiology (1)
- Clinical Microbiology (1) Lab
- Clinical Microbiology Hospital Laboratory Practice(1)
- Clinical Microbiology Hospital Laboratory Practice(Ii)
- Clinical Microbiology(Ii)
- Clinical Microbiology(Ii) (Lab)
- Clinical Microscopy - Hospital Laboratory Practice
- General Microbiology
- General Microbiology (Lab)
- Independent Study
- Micro Techniques
- Comprehensive Exam
- Immunology & Serology Hospital Laboratory Practice
- Biochemistry For Medical Students At Faculty Of Medicine At "Just"
- Clinical Laboratory

- **First Senior American Society of Microbiology (ASM) Ambassador for Jordan**
https://www.facebook.com/justedujo/posts/1594859457234746/?locale=ar_AR
 - **2015-2017: USUGJ- United States Graduates Club in Jordan**
<https://www.just.edu.jo/NewsCenter/Lists/JustNews/DisplayItem.aspx?ID=584>
 - **2017: Two training workshops in "Science and Technology" within the "Tamkeen of women" project**
<https://www.addustour.com/articles/954201-%D9%88%D8%B1%D8%B4%D8%AA%D8%A7-%D8%AA%D8%AF%D8%B1%D9%8A%D8%A8-%D9%81%D9%8A-%C2%AB-%D8%A7%D9%84%D8%B9%D9%84%D9%88%D9%85-%D9%88%D8%A7%D9%84%D8%AA%D9%83%D9%86%D9%88%D9%84%D9%88%D8%AC%D9%8A%D8%A7-%C2%BB-%D8%B6%D9%85%D9%86-%D9%85%D8%B4%D8%B1%D9%88%D8%B9-%D8%AA%D9%85%D9%83%D9%8A%D9%86-%D8%A7%D9%84%D8%A3%D9%83%D8%A7%D8%AF%D9%8A%D9%85%D9%8A%D8%A7%D8%AA-%D8%A7%D9%84%D8%A3%D8%B1%D8%AF%D9%86%D9%8A%D8%A7%D8%AA>
 - **2020: A scientific symposium at the College of Health Sciences on antibiotic resistance in Palestine**
 - **الدكتورة سهيلة الشبول وحديث للأذاعة الأردنية حول المضادات الحيوية ولقاحات كوفيد**
<https://www.youtube.com/watch?v=yZxS6-D0dbY>
 - **استاذة جامعية أردنية تحذر من انتشار الكوليرا**
<https://jornews.com/post/46260>
 - **Dr. Suhaila Al-Sheboul is The First Ambassador to The "American Society of Microbiology" In Jordan**
<https://www.just.edu.jo/NewsCenter/Lists/JustNews/DisplayItem.aspx?ID=1340>
 - **"انتخابات أعضاء الهيئة التدريسية في "العلوم والتكنولوجيا"**
<https://www.ammonnews.net/article/138132>
 - **ASM Ambassador**
https://www.facebook.com/justedujo/posts/1594859457234746/?locale=ar_AR
 - **2015: US Graduates Club in Jordan**
<https://www.just.edu.jo/NewsCenter/Lists/JustNews/DisplayItem.aspx?ID=584>
- ## Workshops
- **2022:** DETRA (Defense Threat Reduction Agency/USA/Amman) Scientific Writing and publishing workshop (Amman-Jordan).
 - **2019:** Organizing and managing ASM workshop at Jordan University of Science and Technology at the Academic Development Center and Quality Assurance.
 - **2018:** Online Learning Design Jordan University of Science and Technology at the Academic Development Center and Quality Assurance.

- Instrumentation
- Molecular Microbiology
- Advanced Molecular Biology
- Research Methodology
- Comprehensive Exam
- Medical Microbiology For Medical School (Istanbul and Ankara Universities/ Turkey)
- Medical Virology For Medical School(Istanbul and Ankara Universities/Turkey)
- Basic Medical Immunology For Medical School(Istanbul and Ankara Universities/Turkey)
- Anatomy, Physiology and Microbiology (USA).

Graduate Courses:

- Molecular and cellular pathogenesis
- Immunology and Serology Hospital Lab
- Research Methods
- Advanced human genetics
- Advanced Clinical Laboratory Training
- Advanced Clinical Microbiology Practical Training I
- Advanced Clinical Microbiology Practical Training II
- Research Seminar
- Advanced Clinical Microbiology
- Molecular Microbiology (Turkey)

Journal Reviews

- American Journal for Infection Control
- Jordan Journal of

- **2017:** Organizing and presenting a Scientific Writing and publishing workshop at Jordan University of Science and Technology.
- **2009:** Statistical Analysis of Examinations and Research Data. Jordan University of Science and Technology. The academic Development Center and quality Assurance.
- **2009:** Testing and Evaluation" University Examinations". Jordan University of Science and Technology. The academic Development Center and Quality Assurance.

Conferences and Scientific Meetings

- XXXIII International Congress on Microbial Ecology and Disease. September, **2010. Pireas, Greece.**
- Second International Conference on Antimicrobial Research (ICAR2012). Plasmid profiles of Extended Spectrum Beta-Lactamases (ESBL)-producing Enterobacteriaceae in North of Jordan. **Nov 2012. Lisbon, Portugal**
- The 12th Biennial Congress of the Anaerobe Society of the Americas. July **2014,Chicago,USA.**
- Molecular Epidemiology of Multidrug-Resistant *Acinetobacter baumannii* isolated at King Abdullah University Hospital. **ICAR 2016, Malaga/ Spain.**
- First Arab Parliaments Conference -Topic GMO. **2017, Amman/ Jordan.**
- Molecular Characterization of Multidrug-resistant *Acinetobacter baumannii* Isolated from patients in Intensive Care Units in Jordanian hospitals. **Microbe 2019, San Francisco, USA.**
- International Summit-Hot topics-Infection Control, Antimicrobials and Immunization. Global Academy of Health Sciences/ King Abdullah University Hospital. **May 2019, Amman/Jordan.**

Publications

1. Immunopathogenesis of Nipah Virus Infection and Associated Immune Responses. REVIEW. Brent Brown, Tanya Gravier, Ingo Fricke, **Suhaila A. Al-Sheboul**, Theodor-Nicolae Carp, Chiuan Yee Leow, Chinua Imarogbe, Javad Arabpour. *Immuno*. **2023**, 3(2), 160-181; <https://doi.org/10.3390/immuno3020011>. (This article belongs to the Special Issue Immunological Defects and Infectious Disease in Emergency).
2. A Genetic and Immunohistochemical Analysis of *Helicobacter pylori* Phenotypes and p27 expression in Adenocarcinoma Patients in Jordan. *Journal of Epidemiology and Global Health*. 2023. **Suhaila A. Al-Sheboul***, Ahmad Abdul-Razzak Mohammad, Yasemin Shboul, Brent Brown and Ismail I. Matalaka. <https://doi.org/10.1007/s44197-023-00099-z>. **Q1; Impact Factor: 5.959**
3. Prevalence of Extended-Spectrum β -Lactamases in Multidrug-Resistant *Klebsiella pneumoniae* Isolates in Jordanian Hospitals. *Journal of Epidemiology and Global Health*. 2023. **Suhaila A. Al-Sheboul***, Ghina S. Al-Madi, Brent Brown, Wail A. Hayajneh. *Health* <https://doi.org/10.1007/s44197-023-00096-2>. **Q1; Impact Factor: 5.959**
4. Innate and Adaptive Immunity during SARS-CoV-2 Infection: Biomolecular Cellular Markers and Mechanisms. REVIEW. Brent Brown B, Ojha V, Fricke I, **Al-Sheboul SA**, Imarogbe C, Gravier T, Green M, Peterson L, Koutsaroff IP, Demir A, Andrieu J, Leow CY, Leow CH. *Vaccines* (This article belongs to the Special Issue Current Understanding of Immune Response after COVID-19 Vaccination). 2023 Feb 10;11(2):408. doi: 10.3390/vaccines11020408. **Q2; Impact Factor 4.961.**

biological sciences

- Journal of Epidemiology and Global Health
- BMC Medicine

5. An Immunological Review of SARS-CoV-2 Infection and Vaccine Serology: Innate and Adaptive Responses to mRNA, Adenovirus, Inactivated and Protein Subunit Vaccines. **REVIEW. Al-Sheboul SA***, Brown B, Shboul Y, Fricke I, Imarogbe C, Alzoubi KH. *Vaccines* (This article belongs to the Special Issue Vaccine Related Immune Responses 2.0). **2022 Dec 26;11(1):51.** doi: 10.3390/vaccines11010051.PMID: 36679897. **Q2; Impact Factor: 4.961.**
6. Molecular Characterization of Carbapenem-Resistant *Acinetobacter baumannii* Isolated from Intensive Care Unit Patients in Jordanian Hospitals. **Suhaila A. Al-Sheboul ***, Salam Z. Al-Moghrabi, Yasemin Shboul, Farah Atawneh, Ahmed H. Sharie and Laila F. Nimri. *Antibiotics*. **2022**, 11, 835. <https://doi.org/10.3390/antibiotics11070835>. **Q1; Impact Factor: 5.222**
7. Biofilm and Antimicrobial Resistance of Clinical And Environmental Isolates of *Pseudomonas aeruginosa*. Abdelraouf A Elmanama, Renad I Abu-Dan, Suhaila Al-Sheboul. *IUJAS*. 2022. V(6), Issue 1,ISSN 2523-0522. <https://doi.org/10.52865/ZMQQ2426>.
8. WLB2 Antimicrobial Peptide as a Potential Therapeutic for Treatment of Resistant Bacterial Infections. Lina Elsalem , Ayat Khasawneh , **Suhaila Al Sheboul**. **REVIEW.** *Turk J Pharm Sci*. **2022** Feb 28;19(1):110-116. <https://doi.org/10.4274/tjps.galenos.2020.43078>. **Q2; Impact Factor: 1.34.**
9. Synergism between WLB2 peptide and antibiotics against methicillin-resistant *Staphylococcus aureus* and extended-spectrum beta-lactamase-producing *Enterobacter cloacae*. Lina Elsalem, **Suhaila Al Sheboul**, Ayat Khasawneh. **2021.** *J Appl Biomed*. <https://doi.org/10.32725/jab.2021.001>. **Q2;Impact Factor:1.302**
10. Antimicrobial Resistance and Biofilm Formation of *Pseudomonas aeruginosa*. Abdelraouf A Elmanama, **Suhaila Al-Sheboul**, Renad I Abu-Dan. 2020. *The International Arabic Journal of Antimicrobial Agents*.
11. Characterization of Indoor Air Bacterial Isolates from Rafidia Hospital, Nablus-Palestine. Ghaleb Adwan , Eman Abedraboo , Kamel Adwan, **Suhaila Al-Sheboul**. *Archives of Current Research International*, Page 1-11. 2016. <https://doi.org/10.9734/ACRI/2016/29066>.
12. Prevalence of β -lactamases in clinical isolates of *Enterobacter cloacae* in the West Bank-Palestine. Ghaleb Adwan , Doa'a Rabaya , Kamel Adwan and **Suhaila Al-Sheboul**. *International Journal of Medical Research & Health Sciences*, 2016, 5, 7:49-59.
13. Prevalence and Molecular Characterization of *Pseudomonas aeruginosa* Isolates in the West Bank-Palestine for ESBLs, MBLs and Integrons. *Journal of Applied Life Sciences International* 8(2): 1-11, 2016; Article no.JALSI.29259. Ghaleb Adwan*, Amani Shtayah , Kamel Adwan , **Suhaila Al-Sheboul** and Sati Othman.
14. Compliance of Jordanian registered nurses with infection control guidelines: A national population-based study. Omar M. Al-Rawajfah*, Issa M. Hweidi, Murad Alkhalaileh, Yousef Saleh Khader, **Suhaila A. Alshboul**. *American Journal of Infection Control*, 07 Aug 2013, 41(11):1065-1068. <https://doi.org/10.1016/j.ajic.2013.05.008>. **Q1;Impact Factor 4.3**
15. Identification and analysis of the *Shewanella oneidensis* major oxygen-independent

- coproporphyrinogen III oxidase gene. **Suhaila Al-Sheboul**, Daad Saffarini. *Anaerobe*. 2011 Dec;17(6):501-5. <https://doi.org/doi:10.1016/j.anaerobe.2011.06.008>. **Q1; Impact Factor 2.837.**
16. Molecular Characterization of *Mycoplasma arthritidis* Variable Surface Protein MAA2. Leigh Rice Washburn,* Keith E. Weaver, Elizabeth J. Weaver, Wendy Donelan, and **Suhaila Al-Sheboul**. *Infect Immun*. 1998 Jun; 66(6): 2576–2586.
a. <https://doi.org/10.1128/iai.66.6.2576-2586.1998>. **Q1; Impact factor 3.4.**
17. Inhibition of reovirus-stimulated murine natural killer cell cytotoxicity by cyclosporine. S al-Sheboul, D Crosley, T A Steele. *Life Sci*. 1996;59 (20):1675-82. [https://doi.org/10.1016/S0024-3205\(96\)00503-6](https://doi.org/10.1016/S0024-3205(96)00503-6). **Q1; Impact factor 6.78.**