PERSONAL INFORMATION

Elie Salem Sokhn



00-961-3-793646

e.sokhn@bau.edu.lb

Sex Male | Date of birth 21/08/1986 | Nationality Lebanese

WORK EXPERIENCE

Sept 2019-present
Associate Professor of Clinical Microbiology, Faculty of Health Sciences, Beirut Arab University (BAU)
Taught Lectures:

- Virology and Mycology (Fall 2019, Fall 2020, Fall 2021, Fall 2022, Fall 2023, Fall 2024)
- Infection Control & Management (Fall 2019, Fall 2020, Spring 2022, Fall 2022, Fall 2023, Fall 2024)
- Microbiology for Health care workers (Fall 2019, Fall 2020, Fall 2021, Fall 2022, Fall 2023, Fall 2024)
- Advanced Clinical Laboratory Microbiology (Fall 2019, Fall 2020, Fall 2021, Fall 2022, Fall 2023, Fall 2024)
- Seminars in Specialized Topics (Fall 2019, Fall 2020, Fall 2021)
- Microbiology (Spring 2020, Spring 2021, Spring 2022, Spring 2023, Spring 2024)
- Clinical Laboratory Bacteriology (Spring 2020, Spring 2021, Spring 2022, Spring 2023, Spring 2024)
- Advanced Clinical Laboratory Bacteriology (Spring 2020, Spring 2021, Spring 2022, Spring 2023, Spring 2024)
- Safe Environment and Infection Control (Spring 2020, Spring 2021, Spring 2022, Spring 2023, Spring 2024)
- Food Microbiology (Fall 2020, Fall 2021, Fall 2022, Fall 2023, Fall 2024)

June 2016 till present
Head of the Microbiology & Molecular Biology Departments
Hopital Libanais Geitaoui - Centre Hospitalier Universitaire

Spring 2015 till Spring 2019
Lecturer, Faculty of Nursing and Health Sciences, Notre Dame University (NDU)

Fall 2015 till Fall 2016
Lecturer, Faculty of Natural and Applied Sciences, Notre Dame University (NDU)

Fall 2016 till Spring 2019
Lecturer, Faculty of Health Sciences, American University of Science and Technology (AUST)

Spring 2015 till Fall 2015
Lecturer, Faculté des Sciences et des Arts, Lebanese Canadian University (LCU)

Spring 2015 till Spring 2019
Lecturer, Food Technologies Department, Al Kafaat University (AKU)

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EDUCATION

2011- 2015
PhD in Microbiology
Title of the thesis 'Antibiotic Consumption and Molecular Epidemiology of ESBL-Producing *Escherichia coli* and *Klebsiella pneumoniae* in a Lebanese Hospital'
University of Surrey, Guildford, London (Faculty of Health and Medical Sciences: Professor Roberto La Ragione)

2008- 2010
MSc of Science (Major: Clinical Laboratory Sciences)
University of Balamand, Beirut, Lebanon

2004- 2007
BSc in General Biology
Notre Dame University, Zouk Mosbeh, Lebanon

Honors

2005- 2006
Academic recognition - Dean's List - Notre Dame University

2023- 2024
An Award for being one of the Most Active Researchers – Beirut Arab University

MEMBERSHIP

Member in a scientific organization (APUA: Alliance for the Prudent Use of Antibiotics)

Member in the Lebanese Society of Infectious Diseases & Clinical Microbiology (LSIDCM)

Scientific Communications and Abstracts

Attended the 24th Annual Congress of the Lebanese Society of Infectious Diseases & Clinical Microbiology - LSIDCM
27 to 28 of September 2024- Online

Attended the 21st Annual Congress of the Lebanese Society of Infectious Diseases & Clinical Microbiology - LSIDCM
27 to 29 of February 2020- Le Royal Hotel, Beirut, Lebanon

Attended the 19th Annual Congress of the Lebanese Society of Infectious Diseases & Clinical Microbiology - LSIDCM
22 to 24 of February 2018- Le Royal Hotel, Beirut, Lebanon

Attended the 18th Annual Congress of the Lebanese Society of Infectious Diseases & Clinical Microbiology - LSIDCM
1 to 3 of March 2017- Phoenicia Hotel, Beirut, Lebanon

Attended the 17th Congress of the Lebanese Society of Infectious Diseases & 4th Annual Congress of FASCMID
18 to 20 of February 2016- Hilton Habtoor Grand Hotel, Beirut, Lebanon

Attended The American Society of Microbiology Virtual Workshop on Scientific Writing and Publishing
21 of March 2015, Beirut

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AI for AMR Across the Care–Lab–Surveillance Continuum: What Works, What Transfers, and What Remains Unevaluated
Christo El Morr, Yara Khachab, Zaara Syed, Antoine Saab, **Elie Salem Sokhn**
HSR 2026 Symposium, 7-9 December 2026, Cairo, Egypt (Poster presenter).

A Practical Approach to Evaluating Machine Learning Algorithms for Anomaly Detection in Epidemic Surveillance
A Saab, AH Dabboussi, C Abi Khalil, J Rahme, **E Salem Sokhn**, C El Morr.
Medical Informatics Europe Conference (MIE), Glasgow, Scotland, 19-21 MAY 2025.

Enhancing Epidemic Early Warning Systems With Social Media Data
Nadine Kachmar, Deniz Ozdemir, Iman Yousuf, Abdul Hamid Dabboussi, Antonie Saab, Elie Salem-Sokhn, Christo El Morr.
IC2AI25, La Sagesse University, Furn El Chebbak, Beirut (February 11-13 2025).

Identifying the Emerging Potential Infectious Diseases: A Scoping Review
Yara Khachab, Antoine Saab, Christo El Morr, Yahya El-Lahib, **Elie Salem Sokhn**
AMR symposium, The Sheraton Centre, Toronto (19-20 Nov, 2024).

Predicting Infectious Disease Outbreaks: The Power of AI in Early Warning Systems.
Ozdemir, D. H., Asdaah, Y., Saab, A., El-Lahib, Y., **Salem Sokhn, E.**, & El Morr, C.
The Conference for Undergraduate Health Research (2024, May 10), Toronto.

The Potential Harnessing AI for Epidemic and Pandemic Preparedness: A Review of Early Warning Systems
El Morr, C., Ozdemir, D. H., Asdah, Y., Saab, A., El-Lahib, Y., & **Salem Sokhn, E.**
The PEPP MENA Forum (April 23, 2024), Beirut

Prevalence of type 2 diabetes (T2D) in Lebanon: association with inflammatory and infectious clinical markers
P. Chedid and **E. Sokhn**
57th Annual Scientific Meeting – 7–9 June 2023, Prague, Czech Republic

In Vitro Assessment of Colistin-Carbapenem Activity Against *Acinetobacter* Spp Recovered from Lebanese Patients
Micheline Soudeiha, **Elie Salem Sokhn**, Ziad Daoud, Dolla Sarkis
ASM Microbe 2018 - American Society for Microbiology 118th Annual Meeting and 58th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), 7-11 June 2018, Atlanta (USA)

Phenotypic and genotypic characterization of beta-lactamases and clonality in *Acinetobacter* spp. in a Lebanese hospital
M. Hajjar Soudeiha, Z. Daoud, **E. Salem Sokhn**, D. Karam Sarkis
28th European Society of Clinical Microbiology and Infectious Diseases (ESCMID), 21–24 April 2018, Madrid, Spain

Resistance and Clonality in *Escherichia coli* and *Klebsiella* spp., and Relationship with Antibiotic Consumption in Major Lebanese Hospitals
Ziad Daoud, Maroun Bou Zerdan, Youssef Bou Ferraa, Mohamad Wahoud, Ziad Al Hassan, **Elie Salem**, Elias Dahdouh, Ghassan Matar.
LAAS Conference (Lebanese Association for the Advancement of Science), University of Balamand, Al Kurah, Lebanon, April 25-26, 2018

Multi-drug Resistant Gram-negative Bacilli In Lebanese Poultry
Iman Dandachi, Ahmad Sleiman, **Elie Salem**, Elias Dahdouh, Bassel Bazzal, Jean-Marc Rolain, Ziad Daoud
LAAS Conference (Lebanese Association for the Advancement of Science), University of Balamand, Al Kurah, Lebanon, April 25-26, 2018

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ESBL-producing *Escherichia coli* and *Klebsiella pneumoniae* in two major Lebanese hospitals: molecular epidemiology and correlation with consumption (Poster + Oral presentation)
Anas Obeid, Peter Maliha, Samah Abdallah, Estelle Akl, maria Deeb, Hassan El Moussawi, **Elie Salem-Sokhn**, Ghassan Matar, Ziad Daoud
19th Annual Congress of the Lebanese Society of Infectious Diseases & Clinical Microbiology - LSIDCM, 22-24 February 2018- Le Royal Hotel, Beirut, Lebanon

In vitro analysis of colistin-carbapenem combination activity against *Acinetobacter* spp infection
Micheline Soudeiha, **Elie Salem Sokhn**, Ziad Daoud, Dolla Sarkis
19th Annual Congress of the Lebanese Society of Infectious Diseases & Clinical Microbiology - LSIDCM, 22-24 February 2018- Le Royal Hotel, Beirut, Lebanon

Molecular epidemiology and clonality of *Acinetobacter* spp in a Lebanese hospital over a period of one year
Micheline Soudeiha, **Elie Salem Sokhn**, Ziad Daoud, Dolla Sarkis
19th Annual Congress of the Lebanese Society of Infectious Diseases & Clinical Microbiology - LSIDCM, 22-24 February 2018- Le Royal Hotel, Beirut, Lebanon

Prevalence and characterization of multidrug resistant isolates isolated from Lebanese poultry, a nationwide study
Iman Dandachi, **Elie Salem Sokhn**, Elias Dahdouh, Caren Challita, Seydina M.Diene, Jean-Marc Rolain, Ziad Daoud
27th European Congress of Clinical Microbiology and Infectious Diseases, 22–25 April 2017, Vienna, Austria

***Escherichia coli* Isolated from Urinary Tract Infections of Lebanese Patients between 2005 and 2013: Epidemiology and Profiles of Resistance**
Ziad Daoud, **Elie S. Salem**, José Kmeid, Maher Balkis, Eid Azar, Khalil Masri
115th General Meeting of the American Society for Microbiology, 30 May –2 June 2015, New Orleans, Louisiana

The Evolutionary History of Methicillin-Resistant *Staphylococcus aureus* (MRSA) between 2005 and 2009
Elie S. Salem, Antoine Asmar, Hicham Abdel Nour, Ziad Daoud
115th General Meeting of the American Society for Microbiology, 30 May –2 June 2015, New Orleans, Louisiana

Carriage of ESBL, AmpC and Carbapenemase producing Enterobacteriaceae Among Nursing Home Residents in North Lebanon
I. Dandashi, **E.S. Salem**, E. Azar, Z. Daoud
25th European Congress of Clinical Microbiology and Infectious Diseases, 25–28 April 2015, Copenhagen, Denmark

NDM-1 producing *Enterobacter cloacae* isolated from hospital wastewater in Lebanon
Z. Daoud, **E.S. Salem**, K.Kfoury, R. Abdel Massih, G. Matar
25th European Congress of Clinical Microbiology and Infectious Diseases, 25–28 April 2015, Copenhagen, Denmark

Carbapenem Resistant *Enterobacter cloacae* in the wastewater of a Lebanese Hospital
Ziad Daoud, **Elie Salem**, Khalil Kfoury, Roula M. Abdel-Massih, Ghassan Matar
LAAS Conference (Lebanese Association for the Advancement of Science), USJ, Mathaf, Beirut, Lebanon, April 15-17, 2015

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Occurrence of Multi-Drug Resistant Gram-Negative Bacilli in Nursing Home Residents of North Lebanon (Oral Presentation)
Iman Dandachi, **Elie Salem**, Eid Azar, Claude Afif, Salam Samad, Khalil Masri, Ziad Daoud
LAAS Conference (Lebanese Association for the Advancement of Science), USJ, Mathaf, Beirut, Lebanon, April 15-17, 2015

Prevalence and Molecular Epidemiology of ESBL producing *E. coli* and *K. pneumoniae* in Lebanese Medical Centers; Strong Correlation between Antibiotic Consumption and Resistance to Cephalosporins and Ciprofloxacin
Ziad Daoud, **Elie Salem-Sokhn**, Jihad Irani, Katia Cheaito, Nathaline Haidar-Ahmad, Ghassan M. Matar, Shira Doron
Infectious Diseases Society of America (IDWeek), 8-12 October 2014, Philadelphia, Pennsylvania

blaCTX-M-15 predominates in *Escherichia coli* and *Klebsiella pneumoniae* isolated from Lebanese patients
E. Salem, RM. La Ragione, A. Cottell, J. Ritchie, Z. Daoud
54th Interscience Conference on Antimicrobial Agents and Chemotherapy, 5-9 September 2014, Washington, D.C., United States of America

Impact of a Short Message Service Alert system of MDR bacteria on Antibiotic Prescription and Consumption
Ziad Daoud, Marie-Ann Abou Jaoudeh, **Elie Salem Sokhn**, Elias Dahdouh, Khalil Masri, Shira Doron
54th Interscience Conference on Antimicrobial Agents and Chemotherapy, 5-9 September 2014, Washington, D.C., United States of America

Epidemiology and resistance of *S. aureus* infections at Saint George Hospital-UMC, Beirut
Z. Daoud, **E.S. Salem**, A.Asmar, H. Abdel-Nour, C. Afif, E. Azar
24th European Congress of Clinical Microbiology and Infectious Diseases, 10–13 May 2014, Barcelona, Spain

Epidemiology and Resistance of *S. aureus* infections in Beirut
Ziad Daoud, **Elie Salem**, Antoine Asmar, Hicham Abdel-Nour, Claude Afif, Eid Azar
20th LAAS International Science Conference, Advanced Research for Better Tomorrow, Doctoral School of Sciences and Technology, Lebanese University, Hadath, Lebanon, March 27-29, 2014

Genetic and Phenotypic Diversity of ESBL-Producing *Escherichia coli* and *Klebsiella pneumoniae* in North Lebanon
Salem, S.E, Laragione, R.M, Cottell, A., Ritchie, J., Daoud, Z.
53rd Interscience Conference on Antimicrobial Agents and Chemotherapy, 10 September 2013, Denver, Colorado

Mutant Prevention Concentration of Carbapenems against *Pseudomonas* spp. and *Acinetobacter* spp.
Dahdouh, E., Shoucair, S.H, **Salem, S.E.**, Daoud, Z.
53rd Interscience Conference on Antimicrobial Agents and Chemotherapy, 10 September 2013, Denver, Colorado

Epidemiology and resistance of *Acinetobacter baumannii* in the north of Lebanon (ePoster)
Z. Daoud, K. Masri, S. Samad, **E.S Salem**, T. Sfeir
23rd European Congress of Clinical Microbiology and Infectious Diseases, 27–30 April 2013, Berlin, Germany

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Ciprofloxacin mutant prevention concentrations in urinary extended-spectrum beta-lactamases (ESBL)-producing and non-producing *Escherichia coli* and *Klebsiella pneumoniae* (Poster session)
Z. Daoud, **E.S Salem**, E. Azar, K. Masri, S. Doron
23rd European Congress of Clinical Microbiology and Infectious Diseases, 27–30 April 2013, Berlin, Germany

Faecal carriage of extended-spectrum beta-lactamases (ESBL)-organism among nursing home residents: dynamics, risk factors and clinical implications (Poster session)
E. Azar, M. Jallad, J. Irani, C. Afif, **E. Salem**, Z. Daoud
23rd European Congress of Clinical Microbiology and Infectious Diseases, 27–30 April 2013, Berlin, Germany

Multidrug-resistant Gram-negative bacilli in hospital waste water of a third world country in transition (Poster session)
K. Kfoury, R.M. Abdel-Massih, **E.S Salem**, C. Afif, Z. Daoud
23rd European Congress of Clinical Microbiology and Infectious Diseases, 27–30 April 2013, Berlin, Germany

Molecular epidemiology of ESBL-producing *Escherichia coli* and *Klebsiella pneumoniae* in North Lebanon (Oral presentation, LAAS conference)
Salem, SE, La Ragione, RM, Cottell, A, Ritchie, J, Daoud, Z
Oral presentation at the Crowne Plaza Hotel, April 5- 2013, Beirut, Lebanon

Detection and analysis of multi drug resistant Gram-negative bacilli in the waste water of a general hospital in Beirut (Oral presentation, LAAS conference)
K. Kfoury, R. Abdel Massih, **E. Salem**, Z. Daoud
Oral presentation at the Crowne Plaza Hotel, April 5- 2013, Beirut, Lebanon

Antibiotic consumption and resistance in Lebanon (Oral presentation, EGRBS conference)
Z. Daoud, S. Barakat, **E. Salem**, C. Afif
Oral presentation at the American University of Science and Technology (AUST), May 31- 2011, Achrafieh, Lebanon

Phenotypic Characterization of beta-Lactamases and Post Antibiotic Effect of Tigecycline on Gram Negative Bacilli Isolated from Lebanese Patients (Poster session)
S. Barakat, **E. Salem**, Z. Daoud
4th Annual Poster Conference in Biology & Biomedical Sciences, Lebanese American University, May 4, 2011, Jbeil, Lebanon

Phenotypic detection of ESBL and prevalence of CTX-M-15 gene among *Escherichia coli* and *Klebsiella pneumoniae* (Poster session)
E.Salem, E.Chalhoub, J.Irani, E. Azar
Lebanese and Arab Society of infectious disease, October 2010, Beirut, Lebanon

Correlation of consumption and resistance in *Staphylococcus aureus* in Lebanon (Poster session)
Z. Daoud, M. Hajjar, **E. Salem**, E. Azar, C. Afif
21st ECCMID, 27th ICC, May 7-10, Milano, Italy

PUBLICATIONS

Reclaiming Preparedness: AI, Justice, and the Futures We Choose
Christo El Morr, Antoine Saab & **Elie Salem Sokhn**

Springer Nature, 2026; Book Chapter (AI for Epidemic Preparedness)

Conception and Development of an AI-Driven Hospital-Based Early Warning System for Epidemic Surveillance: The EMERGENT Lebanon Project
Antoine Saab, **Elie Salem Sokhn** & Christo El Morr
Springer Nature, 2026; Book Chapter (AI for Epidemic Preparedness)

Advancements in Detecting Antimicrobial Resistance and Multidrug Resistance Using Artificial Intelligence: A Systematic Review
El Morr, C., Khachab, Y., Syed, Z., Saab, A., **Salem Sokhn, E**.
Springer Nature, 2026; Book Chapter (AI for Epidemic Preparedness)

AI-based epidemic early warning using social media and search engine signals: A scoping review
Amir Bayat, Ayissha Pavakopethan, Nadine Kashmar, Iman Yousuf, Antoine Saab, **Elie Salem Sokhn,** Yahya El-Lahib, and Christo El Morr
Health Informatics Journal, 2026; Volume 32, Issue 3

Exploring the Antimicrobial Efficacy of Mesenchymal Stem Cell Secretome Against *Klebsiella pneumoniae* in Urinary Tract Infections
Leen Ali, **Elie Salem Sokhn,** Charbel Khalil, Fatima A. Saleh
Clinical and Translational Science, 2026; 19:e70630

Epidemiology, Antimicrobial Resistance Patterns, Management, and Predictors of Mortality in Diabetic Foot Infections in a Lebanese Hospital: A Retrospective Observational Study
Aya Ali Ahmad, **Elie Sokhn**, Carole Dib, Patricia Shuhaiber, Mohamed Issa, Rania Itani
Journal of Infection and Public Health, 2026, 103282.

Genomic characterization of invasive disease-causing *Streptococcus pneumoniae* in Lebanon, 2003–2025
Fatima Dakroub, Alannah C. King, Fata Akl, Alissar Zaghlout, Nancy Hourani, Harry Hung, Sarah Barada, Celina F. Boutros, Ana D. S. Ferreira, Lesley McGee, Lina Reslan, Stephanie Damaj, Nada Ghosn, Ghassan M. Matar, George F. Araj, Antoine Abou Fayad, Stephen D. Bentley, Stephanie W. Lo, Ghassan S. Dbaibo, and for the Lebanese Inter-Hospital Pneumococcal Surveillance Program investigators (including **Elie Salem Sokhn**)
Microbial Genomics, 2026, 12:3.

Optimized extraction of polyphenols from rooibos tea (*Aspalathus linearis*) and their biological activities
Mayyas M. Othman, Bilal Azaki, Salma Khazaal, Maymouneh Rabie, **Elie Salem Sokhn**, Richard G. Maroun, Espérance Debs, Nicolas Louka and Nada El Darra
Frontiers in Nutrition, 2026, 13:1778749.

Association of post-transcriptional regulatory gene single nucleotide polymorphisms with Alzheimer's disease.
Nisrine Bissar, Rayan Kassir, Ferdos Missilmani, **Elie Salem-Sokhn**, Said El Shamieh
Journal of Alzheimer’s Disease, 2026

Prevalence and antimicrobial resistance of *Acinetobacter baumannii* isolates at Lebanese Hospital Geitaoui-University Medical Center: A Five-year study (2017–2021)
Ghassan Ghssein, Jana Al Ariss, Taghrid Chaaban, Zahra Hnaineh, **Elie Salem Sokhn**
International Journal of Medical Microbiology, 322, (2026), 151710.

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Valorization of Onion By-Products and Assessment of Their Biological Activities
Maymouneh Rabie, Salma Khazaal, Mayyas M. Othman, **Elie Salem Sokhn**, Espérance Debs, Suhair Sunoqrot, Bilal Azakir, Nicolas Louka and Nada El Darra
Foods 2026, 15, 637.

Infectious disease burden and surveillance challenges in Jordan and Palestine: a systematic review and meta-analysis
Eman Farouq Badran, Abdullah Rayyan, Mira Al Jaberi, Muayyed Azzam, Raghad Ramadan, Yousef Khader, Raeda Alqutob, Faris G. Bakri, Radwan Qasrawi, Taimein Yacoub, Areej Sharaqa, Nadine Fraihat, Hana Trigui, **Elie Sokhn**, Reema Tayyem, Emmanuel Musa and Jude Dzevela Kong
Frontiers in Digital Health, 2026; 7:1713089.

Prevalence and characterization of bacterial rectal colonization patterns in pediatric patients: A cross-sectional study
Aynaa Al-Khatib, Amal Naous, **Elie Salem Sokhn**
New Microbes and New Infections, Volume 70, April 2026, 101707

Digital health determinants & divide in the Arab world: A cross-sectional study
Radwan Qasrawi, Reema Tayyem, Suliman Thwib, Ghada Issa, Malak Amro, Razan AbuGhoush, Haleama Al Sabbah, Khlood Bookari, Noor Alawadhi, Sabika Allehdan, Hana Trigui, **Elie Sokhn**, Yousef Khader, Eman Badran, Iman Kamel, Atiyeh Abdallah, Mohamed Jemaà, Emmanuel Musa, Jude Dzevela Kong
PLoS One 20(12), December 31, 2025

Prevalent Fungal Pathogens and Antifungal Resistance in Lebanon: A Scoping Review
Yara Khachab, Majd Bou Ghader, Vera Tahesh, Racha Khoumassi, **Elie Salem Sokhn**
Journal of Infection and Public Health, Volume 19, Issue 2, February 2026.

Assessing the impact of digital health literacy on health management practices in Arab Middle Eastern and North African countries: insights from predictive modeling
Radwan Qasraw, Haleama Al Sabbah, Ghada Issa, Suliman Thwib, Malak Amro, Siham Atari, Reema Tayyem, Khlood Bookari, Noor Alawadhi, Sabika Allehdan, Hana Trigui, **Elie Sokhn**, Yousef Khader, Eman Badran, Iman Kamel, Atiyeh Abdallah, Mohamed Jemaà, Emmanuel Musa and Jude Dzevela Kong
Frontiers in Digital Health, 2025; 7:1555436.

Phenotypic, Targeted Genotypic, and Antimicrobial Susceptibility Profiling of Extended-Spectrum β-Lactamase Production and Exclusive bla$_{OXA-48}$ Gene Detection in *Escherichia coli* and *Klebsiella pneumoniae* Isolates From a South Lebanese Hospital
Aya Kahil, **Elie Salem Sokhn**
Journal of Clinical Laboratory Analysis, 2025; 0:e70108

A systematic review of preclinical studies on therapeutic potential of mesenchymal stem/stromal cells and their secretome in bacterial infections
Leen Ali, Fatimah Shaaban, **Elie Salem Sokhn** and Fatima A. Saleh
Stem Cell Research & Therapy, (2025) 16:456.

Evaluation of vitamin D status, vitamin D receptor expression, and innate immune mediators in COVID-19
Ferdos Missilmani, Dima Maarabouni, **Elie Salem-Sokhn**, Spyridon N. Karras, Hana M. A. Fakhoury and Said El Shamieh
Frontiers in Endocrinology, 2025.

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Therapeutic Effects of Mesenchymal Stem Cell Secretome Derived From Adipose Tissue, Umbilical Cord, and Bone Marrow Against Extended-Spectrum Beta-Lactamase-Producing and Non-Producing *Escherichia coli* Strains Isolated From Urinary Tract Infections
Leen Ali, **Elie Salem Sokhn**, Charbel Khalil, Fatima A. Saleh
The FASEB journal, 2025, 39 (13).

Methicillin-resistant *Staphylococcus aureus* (MRSA) and antimicrobial resistance in Lebanon: A scoping review
Afnan Mozhar Hamwi, **Elie Salem-Sokhn**
The Microbe, 7 (2025).

Practical Approach for Evaluating Machine Learning Anomaly Detection Algorithms for Epidemic Early Warning Systems
Antoine SAAB, Abdul Hamid DABBOUSSI, Cynthia ABI KHALIL, Jihane RAHME, **Elie SALEM SOKHN**, and Christo EL MORR
Studies in Health Technology and Informatics, 2025, 15:327:1205-1209.

The role of machine learning in infectious disease early detection and prediction in the MENA region: A systematic review
Radwan Qasrawi, Ghada Issa, Suliman Thwib, Razan AbuGhoush, Malak Amro, Raghad Ayyad, Stephanny Vicuna, Eman Badran, Yousef Khader, Raeda Al Qutob, Faris Al Bakri, Hana Trigui, **Elie Sokhn**, Emmanuel Musa, Jude Dzevela Kong
Informatics in Medicine Unlocked, 56 (2025).

The Impact of Digital Literacy and Internet Usage on Health Behaviors and Decision-Making in Arab MENA Countries
Reema Tayyema, Radwan Qasrawi, Haleama Al Sabbah, Malak Amro, Ghada Issa, Suliman Thwib, Siham Hani Atari, Khlood Bookari, Noor Alawadhi, Sabika Allehdan, Hana Trigui, **Elie Sokhn**, Yousef Khader, Eman Badran, Iman Kamel, Atiyeh Abdallah, Mohamed Jemaà, Emmanuel Musa, Jude Dzevela Kong
Technology in Society, (2025).

Prevalence and antimicrobial resistance of gram-positive pathogens in Lebanon: The need for surveillance and stewardship
Yara Khachab, Racha Khoumassi, **Elie Salem Sokhn**
New Microbes and New Infections, 65 (2025)

Prevalence and Progression of Vitamin D Deficiency in Greater Beirut and Mount Lebanon from 2013 to 2022: An Analysis of 19,452 Adults
Pia Chedid, **Elie Salem-Sokhn,** Said El Shamieh, Rajaa Fakhoury
Journal of Clinical Laboratory Analysis, 2025; 0:e70023

Understanding and addressing β-lactam resistance mechanisms in gram-negative bacteria in Lebanon: A scoping review
Yara Khachab, Mohamad Hodroj, **Elie Salem Sokhn**
Heliyon, 2025; 11(3).

Antimicrobial activity of adipose-derived mesenchymal stromal cell secretome against methicillin-resistant *Staphylococcus aureus*
Fatimah Shaaban, **Elie Salem Sokhn**, Charbel Khalil, and Fatima A. Saleh
Stem Cell Research & Therapy, (2025) 16:21

Prevalence of Urinary Tract Infections and Antibiotic Susceptibility Patterns of Uropathogens among Neonates in Maternity Hospital, Kuwait: A Six-year Retrospective Study
Moghnia OH, Al Otaibi HS, Al Haqqan AM, **Sokhn ES**, Pathan SS, Abdulaziz NE, Mohammed HY, Al-Sweih NA.
Medical Principles and Practice, 2025

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Exploring AI governance in the Middle East and North Africa (MENA) region: gaps, efforts, and initiatives
Hana Trigui, Fatma Guerfali, Emna Harigua-Souiai, Radwan Qasrawi, Chiraz Atri, **Elie Salem Sokhn**, Christo El Morr, Karima Hammami, Oussama Souiai, Jianhong Wu, Jude Dzevela Kong, Jean Jacques Rousseau and Sadri Znaidi.
Data & Policy (2024), 6: e83.

From Spent Black and Green Tea to Potential Health Boosters: Optimization of Polyphenol Extraction and Assessment of their Antioxidant and Antibacterial Activities
Ahlam Harfoush, Aseel Swaidan, Salma Khazaal, **Elie Salem Sokhn**, Nabil Grimi, Espérance Debs, Nicolas Louka, Nada El Darra.
Antioxidants, 2024, 13, 1588.

Optimized Extraction of Polyphenols from Kiwifruit Peels and Their Biological Activities
Batoul Shkeir, Nada El Darra, Bilal Azakir, Salma Khazaal, **Elie Salem Sokhn**, Mohamed Koubaa, Richard G. Maroun, Nicolas Louka, and Espérance Debs.
BioTech, 2024, 13(4).

Prevalence of bacteremia and antimicrobial resistance pattern among patients in South Lebanon
Zahra Hnaineh, **Elie Salem Sokhn**
American Journal of Infection Control, 2024.

Knowledge and prevalence of urinary tract infection among pregnant women in Lebanon
Iman Abu Aleinein, **Elie Salem Sokhn**
Heliyon Journal, 2024;10 (2024).

Gram-negative bacterial colonization in the gut: Isolation, characterization, and identification of resistance mechanisms
Yara Khachab, Said El Shamieh, **Elie Salem Sokhn**
Journal of Infection and Public Health, 2024;17(2024).

AI-based epidemic and pandemic early warning systems: A systematic scoping review
Christo El Morr, Deniz Ozdemir*, Yasmeen Asdaah*, Antoine Saab, Yahya El-Lahib, **Elie Salem Sokhn**
Health Informatics Journal, 2024;30(3).

Identifying the panorama of potential pandemic pathogens and their key characteristics: a systematic scoping review
Yara Khachab, Antoine Saab, Christo El Morr, Yahya El-Lahib & **Elie Salem Sokhn**
Critical Reviews in Microbiology, 20 Jun 2024.

Evaluation of synergistic/antagonistic antibacterial activities of fatty oils from apricot, date, grape, and black seeds
Farah M. Joujou, Nada El Darra, Hiba N. Rajha, **Elie Salem Sokhn** & Nisreen Alwan
Scientific Reports, (2024), 14:6532.

Knowledge, Attitude, and Practice of Hepatitis B Vaccination among Dentists in Lebanon
Ghassan Yared, **Elie S Sokhn**, Aynaa Al-Khatib, Cynthia Kassis, Ronald Younes
The Journal of Contemporary Dental Practice, Volume 25 (2), 2024.

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Evaluation of the Phenolic Composition and Biological Activities of Six Aqueous Date (*Phoenix dactylifera* L.) Seed Extracts Originating from Different Countries: A Comparative Analysis
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Grants

Received a research grant as PI in collaboration with the Lebanese Hospital Geitaoui-UMC and York University-Canada for the following project entitled: **Strengthening Lebanon's pandemic surveillance system through AI-driven automation of laboratory data**: 01/07/2023-31/07/2027, amount: up to $267,500

Received a research grant as PI in collaboration with the Lebanese Hospital Geitaoui-UMC and York University-Canada for the following project entitled: **AI Solutions for One Health Approaches to Epidemic and Pandemic Prevention and Response: Scale, Inclusion**

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and Impact: 01/09/2024-31/07/2028, amount: up to $34,400