

## Department of Public Health

-Research priorities for Public health department

Research areas	Research activities (topics)
Biogenes / Biogenomics	<ul style="list-style-type: none"> <li>▪ Identify some genes related to the spread of diseases in the Hail region.</li> </ul>
Pollution and infectious diseases in the community and hospitals.	<ul style="list-style-type: none"> <li>• Pollution of water and food and the impact on the health of the human being in hail area</li> <li>• B. Drug toxicity and resistance to pathogens.</li> </ul>
Chronic diseases in hail community	<ul style="list-style-type: none"> <li>• Study of chronic diseases (diabetes, obesity, impaired kidney function---etc.).</li> <li>• Study the relationship between diabetes/obesity/hypertension and lifestyles of community members.</li> <li>• Descriptive studies of the most important emerging diseases in the local community.</li> </ul>
Climate change and desertification problems	<ul style="list-style-type: none"> <li>▪ Study the impact of climate change on the local environment and public health.               <ul style="list-style-type: none"> <li>▪ Study the relationship between climate change and the spread of epidemic diseases.</li> <li>▪ health-education and awareness creation in this regards.</li> </ul> </li> </ul>
Air pollution effects and management	Study the Impact of the air pollution on population health
Biodiversity and sustainability	<i>Biodiversity</i> and the built environment Environmental degradation and biodiversity loss.

## • Research achievements

### Publications 2021-2022

Examples of Published Researches:

- During the year 2020-2021 Public health department exerted a huge efforts to published more than 20 scientific papers, the lion share of research project was related to COVID-19. Examples of these research projects are:
- Effectiveness of Human Mobility Change in Reducing the Spread of COVID-19: Ecological Study of Kingdom of Saudi Arabia. Sustainability 2022, ” published on 13/6/2022 in International Journal of environment Research and public health International”
- Time-Series Analysis and Healthcare Implications of COVID-19 Pandemic in Saudi Arabia. Healthcare 2022, ” published on 20/1/2022 in International Journal of environment Research and public health International”
- Analysis and Modeling of COVID-19 Epidemic Dynamics in Saudi Arabia Using SIR-PSO and Machine Learning Approaches”.. 01, Jan. 2022, published on 01/01/2022 in The Journal of Infection in Developing Countries, Vol. 16”
- Acceptability of COVID-19 vaccination in Saudi Arabia: A cross-sectional study using a web-based survey. Human Vaccines & Immunotherapeutics” published on December 2021 in systematic reviews in Pharmacy.
- The Initiative ”Establishment of sorting points belonging to precautionary measure committee at the University of Hail” achieved the required target.

- Repurposing of anisomycin and oleandomycin as a potential anti-(SARS-CoV-2) virus targeting key enzymes using virtual computational approaches. *Cellular and Molecular Biology*, 67(5), 387-398. published on (2021).

### **Publications 2022-2023**

- Tuning Silver@ Gold core@ shell incorporated in poly (vinyl alcohol) via laser ablation: Antibacterial activity and cell viability behavior for wound healing
- Development of ternary nanocomposites based on hydroxyapatite/silver oxide for biomedical applications: morphology, structure and antibacterial activity
- Using spiritual connections to cope with stress and anxiety during the COVID-19 pandemic
- Potential of Natural Phenolic Compounds as Antimicrobial Agents against Multidrug-Resistant Staphylococcus aureus in Chicken Meat
- Risk of depression, anxiety, and stress among the Saudi general population during the COVID-19 pandemic
- The decline in hepatitis B and C in women: A 5-year retrospective case study in Ha'il, Saudi Arabia
- Time-Series Analysis and Healthcare Implications of COVID-19 Pandemic in Saudi Arabia
- Predictability of COVID-19 Infections Based on Deep Learning and Historical Data.
- Improvement of mechanical and antibacterial features of hydroxyapatite/chromium oxide/graphene oxide nanocomposite for biomedical utilizations
- Frequency of Hepatitis C Infection in Hospital Patients in Ha'il, KSA: A Retrospective Analysis.
- Inconsistencies in Pregnant Mothers' Attitudes and Willingness to Donate Umbilical Cord Stem Cells: A Cross-Sectional Analysis from Saudi Arabia.

- A mixed-method analysis to identify the current focus, trends, and gaps in health science research in Saudi Arabia
- Medical Professionals' Knowledge, Sensitivity, and Attitudes Towards Social and Ethical Aspects of Stem-Cell Donation, Therapy, and Research: Implications for Healthcare Risk Management
- Knowledge about stem cell sources and obstacles in donation of bone marrow and peripheral blood stem cells: a cross-sectional survey from Ha'il city to track the prospects of regenerative medicine in Saudi Arabia
- Effect of physical activity and sedentary sitting time on psychological quality of life of people with and without disabilities; A survey from Saudi Arabia
- Evaluation of hepatitis B knowledge, practices, and beliefs among the Jordanian population: A cross-sectional study
- The antimicrobial activity of vitamin D 3 and omega-3 combination against pathogenic microorganisms
- Psychometric Properties of Suboptimal Health Status Instruments: A Systematic Review
- Surface modification of praseodymium oxide/hematite doped into Polycaprolactone for enhanced wound management demands
- Blood meal analysis and molecular detection of mammalian Leishmania DNA in wild-caught Sergentomyia spp. from Tunisia and Saudi Arabia
- Analysis of the Clinical Characteristics of COVID-19 Patient Severity Amongst Saudi Hospital Admission in 2020. J. Umm Al-Qura Univ
- Using spiritual connections to cope with stress and anxiety during the COVID-19 pandemic
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- RETRACTED ARTICLE: Empowering Saudi Arabian women through the Internet of Things (IoT) for management technologies' companies
- Using spiritual connections to cope with stress and anxiety during the COVID-19 pandemic

- Clinical Characteristics of Men with Sexual Dysfunction Visiting an Andrology Clinic: A Single-Center Study in Saudi Arabia [HTML] from mdpi.com
- Types and Sources of Social Support Accessible to University Students with Disabilities in Saudi Arabia during the COVID-19 Pandemic
- Physical and biological changes of copper oxide and hydroxyapatite filled in polycaprolactone scaffolds: Cellular growth behavior and antibacterial activity
- Exploring the Interactive Effects of Thymol and Thymoquinone: Moving towards an Enhanced Performance, Gross Margin, Immunity and *Aeromonas sobria* Resistance of Nile ...
- Patient knowledge about diabetes: Illness symptoms, complications and preventive personal lifestyle factors
- Mixed systems of hydroxyapatite Gallium oxide (Ga<sub>2</sub>O<sub>3</sub>)/Graphene oxide for medical applications: antibacterial, mechanical and morphology
- Fundamentals, antibacterial, and photocatalysis properties of Ag@ Se@ PVDF nanocomposite membrane synthesized via laser ablation technique
- Physicochemical characterization tungsten oxide modified hydroxyapatite embedded into polylactic acid nanocomposite for biomedical applications
- Impact of resveratrol-loaded liposomal nanocarriers on heat-stressed broiler chickens: Effects on performance, sirtuin expression, oxidative stress regulators, and muscle building factors
- Suboptimal Health Status Measurement Instruments: A Systematic Review Protocol
- Prevalence and determinants of underweight, overweight, and obesity among adolescent secondary school students in Dongola City, Northern Sudan in 2019