## Anas Abu-Humaidan M.D. Ph.D.

**Short bio:** Interested in research and education involving medical microbiology and immunology, particularly host-pathogen interactions. Special interest in the complement system and its role in health and disease.

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Work Experience	09/2018 - Present Assistant Professor, School of Medicine, University of Jordan
	<ul> <li>Responsibilities:</li> <li>Coordinating and teaching a 5-credit hours course titled "Introduction to Microbiology and Immunology" for 2<sup>nd</sup>-year medical students.</li> <li>Teaching Microbiology and Immunology topics for 3<sup>rd</sup>-year medical students.</li> <li>Coordinating and teaching the course "Diagnostic molecular biology" for master's students.</li> <li>Supervision of master's students.</li> <li>Serving on several committees at the School of Medicine.</li> </ul>
	2/2012-9/2012 Teaching assistant, School of Medicine, University of Jordan
	9/2010 – 9/2011 Medical intern, King Hussein hospital, Al Salt, Jordan
Education	<ul> <li>12/2012 – 08/2018</li> <li>Ph.D. program at The Faculty of Medicine, Lund University</li> <li>Researcher at the (Infection Medicine) department at the biomedical center in Lund, Sweden.</li> <li>Thesis: <i>Rules of engagement - Regulation of complement response in tissue</i>. 2018</li> <li>Hyperlink to Thesis on Lund University website</li> <li>9/2004 – 06/2010</li> <li>Doctor of Medicine (M.D.), Faculty of Medicine, University of Jordan</li> <li>The Doctor of Medicine curriculum is a six-year undergraduate degree. It is an interdisciplinary program, integrating biomedical sciences and clinical skills training</li> </ul>
	Hyperlink to <u>Doctor of Medicine (M.D) / Program overview</u>

## **Additional Skills**

- **Teaching**; Experience in designing course material and teaching large classes, for both bachelor's and master's levels. Used blended learning, flipped classroom, and problem-based learning. Took courses in course design, delivery, and teaching presence.
- **Molecular techniques**; Experience in a variety of molecular techniques including Immunofluorescence microscopy, ELISA, Western blotting, flow cytometry, RNA and DNA purification, PCR and qPCR, protein mass spectrometry, and recombinant protein purification.
- **Microbiology techniques**; Experience in a variety of microbiology lab techniques including bacterial culture and killing assays, intracellular survival assays, and assays for virulence factors.
- **Data and image analysis**: Competent in programs involving data analysis and image processing (e.g. Excel, GraphPad, Tableau, ImageJ, and Photoshop).

## **Publications**

- Abu-Humaidan, Anas HA; Ananthoju, Nageshwar; Mohanty, Tirthankar; Sonesson, Andreas; Alberius, Per; Schmidtchen, Artur; Garred, Peter; Sørensen, Ole E; The epidermal growth factor receptor is a regulator of epidermal complement component expression and complement activation *The Journal of Immunology* 192 7 3355-3364 2014 American Association of Immunologists
- Mohanty, Tirthankar; Sjögren, Jonathan; Kahn, Fredrik; Abu-Humaidan, Anas HA; Fisker, Niels; Assing, Kristian; Mörgelin, Matthias; Bengtsson, Anders A; Borregaard, Niels; Sørensen, Ole E; A novel mechanism for NETosis provides antimicrobial defense at the oral mucosa *Blood, The Journal of the American Society of Hematology* 126 18 2128-2137 2015 American Society of Hematology Washington, DC
- Abu-Humaidan, Anas H; Elvén, Malin; Sonesson, Andreas; Garred, Peter; Sørensen, Ole E; Persistent intracellular Staphylococcus aureus in keratinocytes lead to activation of the complement system with subsequent reduction in the intracellular bacterial load *Frontiers in immunology* 9 396 2018 Frontiers
- 4. Abu-Humaidan, Anas Haider; Rules of Engagement-Regulation of complement response in tissue 2018 *Lund University*
- Abu-Humaidan, Anas HA; Ekblad, Lars; Wennerberg, Johan; Sørensen, Ole E; EGFR modulates complement activation in head and neck squamous cell carcinoma *BMC cancer* 20 1 01-Dec 2020 BioMed Central

- Khasawneh, Ashraf I; Humeidan, Anas Abu; Alsulaiman, Jomana W; Bloukh, Sarah; Ramadan, Mohannad; Al-Shatanawi, Tariq N; Awad, Hasan H; Hijazi, Waleed Y; Al-Kammash, Kinda R; Obeidat, Nail; Medical students and COVID-19: knowledge, attitudes, and precautionary measures. A descriptive study from Jordan Frontiers in public health 8 253 2020 Frontiers
- Fisher, Jane; Sørensen, Ole E; Abu-Humaidan, Anas HA; Using chemiluminescence imaging of cells (CLIC) for relative protein quantification *Scientific reports* 10 1 01-Nov 2020 Nature Publishing Group
- Abu-Humaidan, Anas HA; Alrawabdeh, Jawad A; Theeb, Laith S; Hamadneh, Yazan I; Omari, Mohammad B; Evaluating Knowledge of Human Microbiota among University Students in Jordan, an Online Cross-Sectional Survey International Journal of Environmental Research and Public Health 18 24 13324 2021 Multidisciplinary Digital Publishing Institute
- Abu-Humaidan, Anas HA; Ahmad, Fatima M; Al-Binni, Maysaa'A; Bani Hani, Amjad; Abu Abeeleh, Mahmoud; Characteristics of Adult Sepsis Patients in the Intensive Care Units in a Tertiary Hospital in Jordan: An Observational Study Critical care research and practice 2021 2021 Hindawi
- Ahmad, Fatima M; Maysaa'A, Al-Binni; Hani, Amjad Bani; Abeeleh, Mahmoud Abu; Abu-Humaidan, Anas HA; Complement Terminal Pathway Activation is Associated with Organ Failure in Sepsis Patients. *Journal of Inflammation Research* 15 153-162 2022 Dove Press
- 11. Anas H. A. Abu-Humaidan, Fatima M. Ahmad, Dima Awajan, Raba'a F. Jarrar, Nader Alaridah. Anti-SARS-Cov-2 S-RBD IgG formed after BNT162b2 vaccination can bind C1q and activate complement. *Journal of Immunology Research*. 2022
- 12. Abu-Humaidan A.H.A., Tarazi A., Hamadneh Y., Al-leimon A., Al-leimon O., Aljahalin M., Ahmad F., Awajan D., Alaridah N. Knowledge, attitudes, and practices toward tuberculosis among Jordanian university students. *Frontiers in public health* 10 2022

Publications (continued)

Community service and volunteer experience	•	Volunteered at <i>home away from home-</i> Omaha, Nebraska 2021 Participated in workshops aimed at introducing students to research in medicine. Amman, Jordan 2019, 2020. <i>Refugee integration workshop, Malmö, Sweden 2017</i> Translator (Arabic-English) <i>Symbiose 2017, Lund, Sweden</i> Volunteer organizer Biology and sustainability conference
Grants and professional honors	1.	<ul> <li><i>"Fulbright Junior Faculty development program award"</i>. (2021)</li> <li>a. The award involved faculty development seminars, capacity building, volunteer work, pedagogical training among other activities. The program took place at the University of Nebraska Medical center, Omaha, Nebraska, US, in the period June-September 2021. The award covered travel, lodging, and all program activities.</li> </ul>
	2.	<ul> <li>Received funding from <i>The Deanship of Scientific Research at the University of Jordan</i> to study the complement system in COVID-19 pathogenesis. (2021)</li> <li>a. The funding will go to understanding how complement activation is involved in the severity of COVID-19, and the role of complement in vaccine efficacy. The award amount was 8500 JD (≈12000 USD). The work is currently in progress. An article from the project is already under review, with another article in the works.</li> </ul>
	3.	Received funding from <i>The Deanship of Scientific Research at the University of Jordan</i> to study the role of intracellular H. pylori in antibiotic resistance, and how the immune system responds to intracellular H. pylori. The award amount was 13484 JD (≈19000 USD). The work is currently in progress.
	4.	<ul> <li>Recipient of a research grant financed by <i>Endowments for the Natural Sciences, Medicine and Technolgy Fund "Kungliga Fysiografiska Sällskapet"</i>. (2015)</li> <li>a. The funding went to understanding the role of the epidermal growth factor receptor (EGFR) in regulating complement in various solid cancers. The award amount was 50000 SEK (≈5000 USD). The work was published in <i>BMC cancer</i> and the project was concluded.</li> </ul>
	5.	<ul> <li>Recipient of a scholarship for a fully funded graduate education abroad (2012) Faculty of Medicine - University of Jordan.</li> <li>a. The scholarship provided a monthly stipend as well as travel expenses during the length of the PhD program at Lund University- Sweden in the period 2013-2017.</li> </ul>