



## DR. AYA KHAMIS HASSAN

Clinical Scientist - Oral Pathologist - Scientific Coordinator

### Work Experience

04/2022 – Current

#### Dentist - Clinical Scientist - Scientific Coordinator

*Univ.-Prof. Dr. Dr. B.Al-Nawas*

*Clinic for Oral and Maxillofacial Surgery, Plastic Surgery  
University Medicine of the Johannes Gutenberg University, Mainz, Germany*

- Coordination of the clinical studies and Oral Implantology Master Program.
- Ensuring compliance with legal and ethical guidelines.
- Protocol management, data collection, and monitoring visits.
- Communication with sponsors, ethics committees, and stakeholders.
- Patient recruitment, participation in treatment, and patient tracking.
- Carry out dental examinations and treatments

04/2019 – 10/2023

#### TransMed Fellow – Doctoral Scientific Researcher

*Univ.-Prof. Dr. R. Stauber*

*Molecular and Cellular Oncology, Department of Otolaryngology,  
University Medicine of the Johannes Gutenberg University, Mainz, Germany*

- Intensive research in the field of molecular oncology and cancer.
- Carrying out laboratory experiments for cancer research.
- Data analysis for scientific study projects.
- Scientific publications, conference presentations.
- Teaching Master and Doctorate Students.

02/2012 – 04/2019

#### Oral Pathologist and Lecturer

*Oral Pathology, Faculty of Dentistry Alexandria University (Egypt)*

- Teaching oral pathology to undergraduate and master's students.
- Expertise in oral pathology and oral mucosal diseases.
- Clinical and histopathological diagnosis of head and neck lesions and tumors.
- Diagnosis of biopsies from different specialties and writing reports.
- Oral Cancer Research

11/2011 – 11/2018

#### Dentist and Clinic Manager

*Dr. Nadia Sobhy Dental Clinic, Alexandria (Egypt)*

- Clinic management and business management.
- Diagnosis and treatment of oral and maxillofacial diseases.
- Ensure compliance with quality standards and regulations.

11/2010 – 11/2011

#### Dental Internship

*Alexandria University (Egypt)*

- Diagnosis and treatment of oral and maxillofacial diseases.
- Cooperation with colleagues and superiors at the university.
- Ensuring compliance with treatment standards and protocols.

07/2006 – 10/2010

#### Dental Assistant

*Prof. Dr. Zaazou, Alexandria (Egypt)*

- Assistance with dental examinations and treatments.
- Patient care and clinic Management.

## Education

<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">04/2019 – 10/2023</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Title</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">10/2021</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">06/2021</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">09/2015 – 07/2018</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">09/2012 – 07/2015</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Title</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">09/2005 – 07/2010</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Grade Ranking</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">09/2002 – 06/2005</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Grade</div>	<ul style="list-style-type: none"> <li>● <b>Ph.D. studies - Summa cum laude (Note 1.0)</b> <i>Molecular and Cellular Oncology, Department of Otolaryngology University Medical Center of the Johannes Gutenberg in Mainz</i> » <b>The Role of Vitamin D and Vitamin D Receptor in Head and Neck Cancer</b></li> <li>● <b>Radiation Protection Diploma (24 Credit hours)</b> <i>House of Technology, Essen, Germany</i></li> <li>● <b>German Dental Board</b> <i>State Office for Social Affairs, Youth and Supply, Koblenz, Germany</i></li> <li>● <b>Doctor of Philosophy (Ph.D. dent) Courses in Oral Pathology (GPA 3.905)</b> <i>Oral Pathology Department, Faculty of Dentistry, Alexandria University, Egypt</i></li> <li>● <b>Master of Science in Oral Pathology (GPA 3.736)</b> <i>Oral Pathology Department, Faculty of Dentistry, Alexandria University, Egypt</i> » Diagnostic and prognostic value of cancer stem cell marker cd44 and soluble cd44 in the peripheral blood of patients with oral squamous cell carcinoma.</li> <li>● <b>Bachelor of Science in Dental Medicine and Oral Surgery (84.8 %)</b> <i>Faculty of Dentistry, Alexandria University, Alexandria, Egypt</i> » Very good with honor degree » <b>(12)</b> out of <b>(308)</b> Graduate</li> <li>● <b>American Diploma</b> <i>Pioneer American School, Alexandria, Egypt</i> » SAT I: 1320/1600      » SAT II: 1480/1600</li> </ul>
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## Selected Training

<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Scientific</div>	<ul style="list-style-type: none"> <li>● <b>Mainzer Entrepreneurship Program</b> <i>JGU, Mainz /Unternehmer TUM, München</i></li> <li>● <b>Investigator course for clinical trials with medical devices</b> <i>Medical University Heidelberg, Heidelberg</i></li> <li>● <b>Projektmanagement (IPMA) Basic certificate</b> <i>Johannes Gutenberg-University, Mainz, Germany</i></li> <li>● <b>Medical Devices legalities (MPG und MPDG) (5 Credit Points)</b> <i>Interdisciplinary Center for Clinical Studies (IZKS), Mainz, Germany</i></li> <li>● <b>From career choice to career goal (TransMed)</b> <i>Johannes Gutenberg-University, Mainz, Germany</i></li> <li>● <b>Strategic Career Crafting (TransMed)</b> <i>Johannes Gutenberg-University, Mainz, Germany</i></li> <li>● <b>Writing and Publishing Research Articles (TransMed)</b> <i>Johannes Gutenberg-University, Mainz, Germany</i></li> <li>● <b>Leadership and Communications (TransMed)</b> <i>Johannes Gutenberg-Universität, Mainz</i></li> <li>● <b>Profiling and Positioning in Networks (TransMed)</b> <i>Johannes Gutenberg-University, Mainz, Germany</i></li> <li>● <b>Introduction to Mass Spectrometry-based Proteomics</b> <i>Johannes Gutenberg-University, Mainz, Germany</i></li> <li>● <b>Good Scientific Practice (TransMed)</b> <i>Johannes Gutenberg-University, Mainz, Germany</i></li> <li>● <b>Scientific Writing (TransMed)</b> <i>Johannes Gutenberg-University, Mainz, Germany</i></li> <li>● <b>How to build, develop, and use a professional network</b> <i>Institute for Molecular Biology, Mainz, Germany</i></li> </ul>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Dental</div>	<ul style="list-style-type: none"> <li>● <b>Radiological advanced training - 2 Days</b></li> </ul>

*Alexandria University, Alexandria, Egypt*

- **Tissue Engineering Course - Prof Dr. Mona Marie - 4 Days**  
*Alexandria University, Alexandria, Egypt*
- **Transmissions- and Electron Microscopy - 3 Days**  
*Faculty of Science, Alexandria University, Alexandria, Egypt*
- **Evidence-based Dentistry Kurs - 4 Days**  
*Alexandria University, Alexandria, Egypt*
- **Aspects of Oral Surgery -2 Weeks**  
*Alexandria University, Alexandria, Egypt*
- **Operative treatment with Composite - 30 Credit Hours**  
*Alexandria Dental Syndicate, Alexandria, Egypt*
- **Endodontics Course - 30 Credit Hours**  
*Alexandria Dental Syndicate, Alexandria, Egypt*
- **Prosthesis Course " Ideal Preparation" - 6 Credit Hours**  
*Alexandria Dental Syndicate, Alexandria, Egypt*

## Qualifications

### Languages

- Arabic (*Mother tongue*)
- English (*fluent*)
- German (*fluent*)

### Software

- Microsoft Office (*expert*)
- GraphPad Prism (*expert*)
- EndNote, Mendley (*expert*)
- Biorender, Canvas (*expert*)
- SAP Business Client (*very good Knowledge*)

### Laboratory Skills

- 2D & 3D Cell Culture, Cell Transfection (*expert*)
- Western Blot, Transfection, Single Cell analysis (*expert*)
- Immunohistochemistry, H&E, Fluorescence Staining (*expert*)
- Cell Sorting, Fluorescence Microscopy (*expert*)
- FACS, PCR, RNA & DNA extraction (*competent*)

**Publication:**

The Magic Triangle in Oral Potentially Malignant Disorders: Vitamin D, Vitamin D Receptor, and Malignancy. **Aya Khamis \***, Lara Salzer, Eik Schiegnitz, Roland H. Stauber, Désirée Gül \*. **IJMS (2023)**

Exploiting Vitamin D Receptor and Its Ligands to Target Squamous Cell Carcinomas of the Head and Neck. Laura Koll <sup>1,†</sup>, Désirée Gül <sup>1,†</sup>, Manal I. Elnouaem <sup>2</sup>, Hanaa Raslan <sup>2</sup>, Omneya R. Ramadan <sup>2</sup>, Shirley K. Knauer <sup>3</sup>, Sebastian Strieth <sup>4</sup>, Jan Hagemann <sup>1</sup>, Roland H. Stauber <sup>1,\*</sup> and **Aya Khamis <sup>1,2,\*</sup>**. **IJMS (2023)**

The Vitamin D Receptor–BIM Axis Overcomes Cisplatin Resistance in Head and Neck Cancer. **Aya Khamis\***, Désirée Gül, MaditaWandrey, Qiang Lu, Shirley K. Knauer, Christoph Reinhardt, Sebastian Strieth, Jan Hagemann and Roland H. Stauber\*. **Cancers (2022)**

Impact of osteoblast-specific factor 2 in promoting metastatic progression of head and neck cancer Désirée Gül \*, Andrea Schweitzer, **Aya Khamis**, Shirley K. Knauer, Guo-Bin Ding, Laura Freudelsperger, Ioannis Karampinis, Sebastian Strieth, Jan Hagemann, Roland H. Stauber\*. **Cancers (2022)**

Profiling Cisplatin Resistance in Head and Neck Cancer: A Critical Role of the VRAC Ion Channel for Chemoresistance. Siemer, S., Fauth, T., Scholz, P., Al-Zamel, Y., **Khamis, A.**, Gül, D., Freudelsperger, L., Wollenberg, B., Becker, S., Stauber, R.H., et al. **Cancers (2021)**.

Identification of cytokeratin24 as a tumor suppressor for the management of head and neck cancer. Gül, D., Habtemichael, N., Dietrich, D., Dietrich, J., Gößwein, D., **Khamis, A.**, Deuss, E., Künzel, J., Schneider, G., Strieth S., Stauber RH\*. **Biological chemistry (2021)**.

Nano Meets Micro-Translational Nanotechnology in Medicine: Nano-Based Applications for Early Tumor Detection and Therapy S. Siemer, D. Wunsch, **A. Khamis**, Q. Lu, A. Scherberich, M. Filippi, M. Krafft, J. Hagemann, C. Weiss, Guo-Bin Ding, R.Stauber, A. Gribko\*. **Nanomaterials (2020)**

Clinical Management Protocol for Dental Implants Inserted in Patients with Active Lichen Planus. Part II 4-Year Follow-Up. **AK Khamis\***, MN Aboushelib, MH Helal. **Journal of Prosthodontics (2018)**

The influence of local delivery of bisphosphonate on osseointegration of dental implants **AK Khamis\***, S Elsharkawy. **Evidence-based dentistry - Nature (2018)**

Diagnostic and prognostic value of cancer stem cell marker CD44 and soluble CD44 in the peripheral blood of patients with oral Squamous cell carcinoma **AK Khamis\***, HA Fouad, HS Raslan, MM Fata, Al Fayad. **Open Science Journal (2017)**

Aya Khamis Hassan,

