**Faculty Profile**

# Ammar Ahmed Mohammed Alghadeer

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| **Position** | Demonstrator |
| **College** | College of Dentistry |
| **Department** | |
| **Phone** | 013- |

## الاسم: عمار أحمد محمد الغدير

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| الوظيفه | **معيد** |
| الكلية | **طب الأسنان** |
| القسم | **علوم الأسنان الطبية والحيوية** |
| الهاتف | |
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| **Google Scholar Link** | https://scholar.google.com/citations?hl=en&user=MAhG6a8AAAAJ |
| **Research Gate Link** | https://www.researchgate.net/profile/Ammar-Alghadeer |
| **Researcher ID (Web of Science)** | F-2617-2019 |
| **Scopus Author ID** | 57206474720 |
| **ORCID #** | 0000-0002-2999-899X |
| **Research Areas of Interest** | **Stem cell biology & tissue engineering, Tooth regeneration, Bioinformatics, Tooth development, Salivary gland regeneration, Cancer stem cell.** |

جامعة الإمام عبدالرحمن بن فيصل
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

# IAUDent Biosketch


**Dr. Ammar Ahmed Alghadeer**

Demonstrator


## Personal Data

Nationality | Saudi

Department | Biomedical Dental Science

Official Email | aaalghadeer@iau.edu.sa

Office Phone No. |

Mobile:

## Language Proficiency

| Language | Read | Write | Speak |
|---|---|---|---|
| Arabic | Excellent | Excellent | Excellent |
| English | Excellent | Excellent | Excellent |

## Academic Qualifications (Beginning with most recent)

| Date | Academic Degree | Specialty | Place of Issue | Address |
|---|---|---|---|---|
| Sep, 2022 | Doctor of Philosophy | Oral Health Sciences | University of Washington | Seattle, WA, USA |
| Nov 2014 | Master of Science | Regenerative Dentistry | King's College London. | London United Kingdom |
| April 2011 | Bachelor degree of Dental Surgery | Dentistry | University of Dammam | Dammam Saudi Arabia |

## PhD, Master or Fellowship Research Title (Academic Honors or Distinction)

| | |
|---|---|
| Doctorate | Human iPSC Derived Ameloblast Organoid Guided by Single-Cell Atlas of Human Tooth Development |
| Master | Development of Tooth Replacement: Formation of Competent Successional Lamina in Diphyodont |
| Fellowship | A human tooth organoid model from iPSCs by utilizing designed proteins |

## Professional Record: (Beginning with most recent)

| Job Rank | Specialty/Department | Place and Address of Work | Date |
|---|---|---|---|
| Assistant Professor | Oral Biology | Abdulrahman bin Faisal University, College of Dentistry, Dammam, Saudi Arabia | |
| Postdoctoral Fellow | Department of Biochemistry | University of Washington, Seattle, WA 98109, USA | Sept 2022 – June 2023 |
| PhD Student | Department of Oral Health | University of Washington, | Sept 2016 – Aug 2022 |

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|---|---|---|---|
| | Sciences | School of Dentistry, Seattle, WA 98109, USA | |
| MSc Student | Department of Craniofacial Development & Stem Cell Biology | King's College London. London, United Kingdom | Sept 2013 – Nov 2014 |
| Demonstrator | Oral Biology, Biomedical Dental Science Department | Imam Abdul Rahman Bin Faisal University, College of Dentistry / P.O.Box 1982, Dammam 31441, Saudi Arabia. | Dec 2011 – Present |
| G.P Dentist | General Practitioner | Al-Khaiam Dento-Facial Aesthetic private center in Al-Hassa, Saudi Arabia. | May 2011 – Sept 2011 |
| Intern | Department of Dentistry | Dammam Central Hospital, Dammam, Saudi Arabia | Jan 2011 – Mar 2011 |
| Intern | Department of Dentistry | Dhahran Airbase Hospital, Dhahran, Saudi Arabia. | Oct 2010 – Dec 2010 |
| Intern | College of Dentistry | University of Dammam, Dammam, Saudi Arabia | April 2010 – Sept 2010 |
| Dental Student | College of Dentistry | University of Dammam (Formerly known as King Faisal University) | Sept 2003 – April 2010 |

Administrative Positions Held: (Beginning with most recent)

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| Administrative Position | Office | Date |
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**SCIENTIFIC ACHIEVEMENTS**

**PUBLISHED WORKS (For the most recent five years, list articles in which you were the principal author that appeared in refereed journals or textbooks, by author(s), title, publication, and date)**

| Author(s) | Title | Publication | Dapresste |
|---|---|---|---|
| **Ammar Alghadeer**, Sesha Hanson-Drury, A P Patni, Devon D Ehnes, Yan Ting Zhao, Zi Li, Ashish Phal, Thomas Vincent, Yen C Lin Diana O'Day, Cailyn H Spurrell, Aishwarya Gogate, Hai Zhang, Arikketh Devi, Yuliang Wang, Lea Starita, Dan Doherty, Ian A Glas Shendure, Benjamin S Freedman, David Ba Mary C Regier, Julie Mathieu, Hannele Ruo Baker | **Single-Cell Census of Human T Development Enables Genera of Human Enamel** | **Developmental cell** | **In Press** |
| Dannie Macrin*, **Ammar Alghadeer***, Yan Zhao, Jason W. Miklas, Abdiasis M. Hussei Damien Detraux, Aaron M. Robitaille, Anu Madan, Randall T. Moon, Yuliang Wang, D Arikketh, Julie Mathieu, and Hannele Ruoh Baker.<br><br>***first co-authors** | **Metabolism as an early predictor of DPSCs aging** | **Scientific Reports** | **18th Feb 2019** |

**Other Published Papers**

| Author(s) | Title | Publication | Date |
|---|---|---|---|
| Sesha Hanson Drury, Anjali P Patr Deborah L Lee, **Ammar Alghadee** Ting Zhao, Devon Duron Ehnes, V N Vo, Sydney Y Kim, Druthi Jithen Ashish Phal, David Baker, Jessica Young, Julie Mathieu, Hannele Ruohola-Baker | **Single Cell RNA Sequencing Reveal Human Tooth Type Identity and Gu In Vitro hiPSC Derived Odontoblast** | **Frontiers in Dental Medicine** | **July 2023** |
| Devon Duron Ehnes, **Ammar Alghadeer**, Sesha Hanson-Drury, Ting Zhao, Gwen Tilmes, Julie Ma Hannele Ruohola-Bake | **Sci-Seq of Human Fetal Salivary Tis Introduces Human Transcriptional Paradigms and a Novel Cell Popula** | **Frontiers in dental medicine** | **Sep 2022** |
| Shiri Levy , Logeshwaran Somasundaram , Infencia Xavier I Diego Ic-Mex, Ashish Phal, Sven Schmidt, Weng I Ng, Daniel Mar, Decarreau, Nicholas Moss, **Amma Alghadeer**, Henrik Honkanen , Jav Sarthy , Nicholas Vitanza, R David Hawkins, Julie Mathieu, Yuliang V | **dCas9 fusion to computer-designe PRC2 inhibitor reveals functional T box in distal promoter region** | **Cell Reports** | **Mar 2022** |

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|---|---|---|---|
| David Baker, Karol Bomsztyk, Har Ruohola-Baker | | | |
| Elena Popa, **Ammar Alghadeer**, N Anthwal, Marcia Gaete, Abigail Tu | **A Histological and Molecular Analy Tooth Regeneration in *Monodelph domestica*** | **The FASEB Journal** | **April 2015** |
| Emad O. AlShwaimi, Usama A. Badawi, **Ammar Alghadeer**, Ahmad AlMajed, Aiman A. Ali. | **Computer Knowledge: A Comparative Study among Dental and Non Dental Students at the University of Dammam.** | **Al-Azhar Dental Journal** | **Accepted for public in May 2013** |

**Accepted Research Projects**

| Name of Investigator(s) | Title | Publisher | Date of Publication |
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**Current Researches**

| Name of Investigator(s) | Title |
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**Books/Chapters**

| Name of Investigator(s) | Book Title | Report Date |
|---|---|---|
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**Scientific Research Papers Presented to Refereed Specialized Scientific Conferences**

| Name of Investigator(s) | Title | Publisher | Date of Publication |
|---|---|---|---|
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Contribution to Scientific Conferences and Symposia (CE Course taken for the last 5 years)

| # | Title | Place and Date of the Conference | Extent of Contribution |
|---|---|---|---|
| **1** | ISCRM's 16th Symposium | Sept 25, 2023. Institute for Stem Cell and Regenerative Medicine, University of Washington | **Poster Presentation** |
| **2** | 2022 IADR/APR General Session & Exhibition Virtual Experience. | June 22, 2022, China | **Live Presentation** |
| **3** | ISCRM's Stem Cell Symposium | Sept 8, 2021. Institute for Stem Cell and Regenerative Medicine, University of Washington | **ATTENDEE** |
| **4** | ISCRM's Stem Cell Symposium | April 8, 2021. Institute for Stem Cell and Regenerative Medicine, University of Washington | **ATTENDEE** |
| **5** | IADR/AADR/CADR General | 18-21th March 2020, | **Selected for Oral Pres** |

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| | Session & Exhibition | Washington, D.C., USA | **Selected as a finalist for the Craniofacial Biology Group Sarnat Poster Competition.** |
| **6** | ISCRM's Stem Cell Symposium | April 25, 2019. Institute for Stem Cell and Regenerative Medicine, University of Washington | **Poster Presentation** |
| **7** | ISCRM's Stem Cell Symposium | March 30, 2018. Institute for Stem Cell and Regenerative Medicine, University of Washington | **Poster Presentation** |
| **8** | King Saud University 16th International Dental Conference The 27th for the Saudi Dental Society. (Regenerative Dentistry) | 5-7th Jan 2016, Riyadh International Convention & Exhibition Center | **ATTENDEE** |
| **9** | Continuing education course on the topic of "How to use and work with stem cells?" - by Prof. George Huang | 5th Jan 2016. Riyadh International Convention & Exhibition Center | **CE Course ATTENDEE** |
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| Teaching Activities | |
|---|---|
| Undergraduate | Oral Diagnosis; Clinical Instructor; University of Dammam; |
| | Oral Radiology; Clinical Instructor; University of Dammam; |
| | Oral Biology & Oral Histology; Lab Instructor; University of Dammam; |
| | Oral Pathology; Lab Instructor; University of Dammam; |
| | Dental Anatomy; Lab Instructor; University of Dammam; |
| | Research supervision for undergraduate students; Ruohola-baker Lab; University of Washington |
| | Supervising the KGDP Summer Enrichment Program for gifted Saudi student coming from KAUST to USA. |
| Post-Graduate | Research supervision for graduate students (and undergraduate); Ruohola-baker Lab; University of Washington |

| # | Course/Rotation Title | No./Code | Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics) |
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CURRENT TEACHING RESPONSIBILITIES

| Name of Institution, City, State | Course Title | Discipline and Level of Students | Total Contact hour per Year Didactic | Clinic/ Laboratory |
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Membership of Scientific and Professional Societies and Organizations, Or Appointments Held In Local, State Or National Dental Or Allied Dental Organizations, Including Appointments To State Boards Of Dentistry And Coda

| Name of Organization | Title | From (Year) | To (Year) |
|---|---|---|---|
| International Association for Dental Research | Member | Sept, 2019 | **2022** |
| Saudi Dental Society | Member | Nov, 2010 | **2016** |
| Saudi Commission for Health Specialties | Member | May, 2011 | **2013** |

| Editorial Commitments | |
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Volunteer Work

| # | From | To | Type of Volunteer | Organization |
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| 1 | | | Participated in the Annual World Autism Awareness Day held in Rashid mall in Khobar, Saudi Arabia, under the slogan "I'm with you". | University of Dammam |

Honors and Awards

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| 1 | Dean's Appreciation Certificate for Outstanding Contribution in College Achievement for Academic Year 2011-2012 | 2012 |
| 2 | Patent application:<br>"TITLE: HUMAN IPSC DERIVED AMELOBLASTS AND USES THEREOF" | (PCT/US2022/053517 file 12/20/2022).<br>Published: 2023-07-06 |
| 3 | Patent application:<br>"System and Method to Direct Human Induced Pluripotent Stem Cells Derived Odontoblasts" | [IP: 49611.03WO2] \|\|NP 034186-000104WOPT |
| 4 | Patent application:<br>"Protocol for rapid sci-Seq-guided iPSC-derived salivary gland organoids" | [IP:49724.01US1] (NP: 034186-000101USPL) |