

CURRICULUM VITAE

Personal Detail:

Name: **Dr. Jawad Alzeer**
Citizenship: Swiss
Marital Status: Married
E-mail: zeerj@yahoo.com



Education: Competence in Organic Chemistry, auditing, consulting and reviewing halal products

1990-1995: **Ph.D. in Organic Chemistry** Swiss Federal Institute of Technology (ETH), Zurich, Switzerland
1987-1989: **M.Sc. in Organic Chemistry** University of Karachi, Pakistan
1983-1987: **B. Sc. (Hons) in Chemistry**, Physiology and Microbiology as minor subjects
University of Karachi, Pakistan
1985-1986: **Maths Certificate in Mathematics** University of Karachi, Pakistan

Doctoral Dissertation

Title: Towards oligosaccharide analogues of cellulose, ETH Zurich, 1995.
Advisor: Prof. A. Vasella; Co-examiner: Prof. F. Diederich

Professional Experience: Academic & Industrial; Lecturing, training, Organic synthesis, Drug design, Halal research

April 2016-Now: **Lecturer & Senior researcher**, Department of Chemistry, Zürich University, Switzerland “Medical Student Coordinator at Chemistry Department”

January 2014-Now: **Managing Director**, Swiss Scientific Society for Developing Countries, Zürich, Switzerland

January 2010-Now: **Head of scientific board**, Halal Certification Services, Rheinfelden, Switzerland. “Audit food products that meet Halal requirements”

June 2012-March 2016: **Senior Scientist**, Department of Chemistry, Zürich University, Switzerland

‘Investigate medicinal plant as potential therapy for cancer’
‘Design, synthesis and evaluation of anticancer compounds that interact with Different G-quadruplexes structures’.

September 2010-2012: **Assistant Professor**, Palestine Polytechnic University, Applied science department, Hebron, Palestine.

“Design and development of novel, mild and efficient extraction method for natural products”
“Teaching General Chemistry, Organic Chemistry & Biochemistry”

October 2009-August 2010: **Senior Scientist**, Lipomed AG, Arlesheim, Switzerland

‘Design of new anti-cancer drugs, Synthesis of drug reference standards, Management of pre-clinical and clinical research, Supervising and leading staff in drug manufacture, Presenting scientific lectures, Scientific consultant’

October 2006-September 2009: Senior Research Associate, Institute of Organic Chemistry, Zürich University, Switzerland

‘Design, synthesis and evaluation of potential anticancer compounds that interact with human telomeric G-quadruplexes DNA and inhibit telomerase enzyme’

March 2001-September 2006: Research Associate, Institute of Molecular Cancer Research (IMCR), Zürich University, Switzerland

‘Development of a simple and concise approach for the synthesis of well-defined bridged interstrand cross-link DNA’

‘Design of chemical approach for targeted mutagenesis by exploiting the base excision repair pathway’

Feb 2000-Feb 2001: Assistant Professor, Palestine Polytechnic University, Hebron, Palestine

‘Teaching introductory, general chemistry, supervising chemistry laboratories, design and engineering laboratory course’

November 1998-February 2000: Postdoctoral Fellow, University of Michigan, Ann Arbor, USA

‘Synthesis of nucleoside and non-nucleoside inhibitors of human immunodeficiency virus reverse transcriptase’

March 1996-September 1998: Postdoctoral Fellow, Hoffmann La Roche, Basel, Switzerland

‘Identification and optimisation of a new antimalarial pharmacophore: phenyl β -methoxyacrylates, linked to an aromatic ring via olefinic bridge, have been identified as novel, potentially inexpensive, antimalarial agents’

March 1993-December 1995: Research Fellow, Swiss Federal Institute of Technology, (ETH), Zurich, Switzerland

‘A new approach towards polysaccharide analogues: Preparation of mono- and oligomeric acetylenosaccharides up to a fully deprotected octamer’

October 1990-March 1993: Research Fellow, Institute of Organic Chemistry, Zürich University, Switzerland

‘Synthesis of Acetyleno-Oligosaccharides: Stereoselective introduction of alkynyl groups into glucose’

October 1989-October 1990: Research Fellow, H.E.J. Research Institute of Chemistry, Karachi, Pakistan

‘Synthesis of biologically active compounds from readily available carbohydrates’

April 1988-June 1989: Research Assistant, Department of Chemistry, Karachi University, Pakistan

‘Synthesis of C-disaccharides by a carbon Ferrier rearrangement’

‘Teaching general and organic chemistry’

Patent & Publications:

- 1- [Jawad Alzeer](#), Khaled Abou Hadeed; “**Ethanol and its halal status in food industries**”. Trends in Food Science & Technology 58 (2016) 14-20
- 2- [Jawad Alzeer](#): “**Swiss Scientific Society for Developing Countries: A Concept of Relationship**”; World Academy of Science, Engineering and Technology, International Science Index, Humanities and Social Sciences Vol:10, No:1, 2016, P. 374-377
- 3- Martin S. Seyfried, [Jawad Alzeer](#), Nathan W. Luedtke; “**Molecular Design and Synthesis of a Planar Telomestatin Analogue**”. Eur. J. Org. Chem. 2015.
- 4- Zahra Aljabari, [Jawad Alzeer](#), Rami Arafeh; “**Catechin detection in callus and in vitro cultures of the eastern strawberry tree, Arbutus Andrachne L., an endangered medicinal tree in Palestine**”, Global J Res. Med. Plants & Indigen. Med. | Volume 3, Issue 5 | May 2014 | 196–205
- 5- [Jawad Alzeer](#), Bala Vummidi, Rami Arafeh, Waleed Rimawi, Hatem Saleem, Nathan Luedtke; “**The influence of extraction solvents on the anticancer activities of Palestinian medicinal plants**”, J. Med. Plant Res. 2014, Vol. 8, P. 408-415
- 6- Bala Vummidi, F. Noreen, [Jawad Alzeer](#), K. Moelling Nathan Luedtke; “**Photodynamic agents with anti-metastatic activities**”, ACS Chem. Biol., 2013, 8, 1737.
- 7- Bala Vummidi, [Jawad Alzeer](#), Nathan Luedtke; “**Fluorescent probes for G-quadruplex structures**”, 2013, ChemBioChem. 2013, 14 (5): 540-58.
- 8- Sarah. Hentschel, [Jawad Alzeer](#), Todor. Angelov, Orlando. D. Schaerer, Nathan. W. Luedtke; “**Synthesis of DNA interstrand crosslinks using a photocaged nucleobase**”, Angew. Chemie Intl. Ed., 2012, 51, 3466. (English)
Sarah. Hentschel, [Jawad Alzeer](#), Todor. Angelov, Orlando. D. Schaerer, Nathan. W. Luedtke; “**Synthese von DNA-Interstrang-Crosslinks unter Verwendung einer photoaktivierbaren Nucleobase**”. Angewandte Chemie, 2012, 124, 14, 3523–3526. (German)
- 9- [Jawad Alzeer](#), Nathan Luedtke: “**pH-Mediated Fluorescence and G-Quadruplex Binding of Amido Phthalocyanines**”, Biochemistry, 2010; 49 (20), pp 4339-4348.
- 10- Manikandan Paramasivam, Alexandro Membrino, Susanna Cogoi, [Jawad Alzeer](#), Nathan W. Luedtke, and Luigi E. Xodo: “**Cellular uptake and G-4 DNA promoter binding of guanidine-modified phthalocyanines to KRAS/HRAS G-quadruplexes**” Chem. Commun, 2010; 46 (4): 625.
- 11- [Jawad Alzeer](#), Bala Vummidi, Phillippe J C Roth and Nathan Luedtke; “**Guanidinium-Modified Phthalocyanines as High-Affinity G-Quadruplex Fluorescent Probes and Transcriptional Regulator**” Angew. Chem., 2009; 48 (49): 9362. (English).
[Jawad Alzeer](#), Dr, Balayeshwanth R Vummidi, Phillippe J C Roth, Nathan W Luedtke (2009); “**Guanidinium-modifizierte Phthalocyanine als Fluoreszenzsonden mit hoher G-Quadruplex-Affinität und als Transkriptionsregulatoren**” Angewandte Chemie, 2009; 121: 49. 9526 (German)
- 12- [Jawad Alzeer](#), Phillippe Roth, and Nathan Luedtke; “**An efficient two-step synthesis of metal-free phthalocyanines using a Zn (II) template**” Chem. Commun, 2009; 15, 1970-1971.
- 13- Nathan. W. Luedtke, [Jawad Alzeer](#), Bala Vummidi; “**Preparation and uses of guanidinium-modified porphyrins and phthalocyanines**”, 2008, European Patent Patent No. 2010028780.

- 14- [Jawad Alzeer](#), Orlando Schärer; “**A modified thymine for the synthesis of site-specific thymine-guanine DNA interstrands crosslinks**” *Nucleic Acid Research*. 2006; 34 (16); 4458-4466
- 15- Ludovic Gillet, [Jawad Alzeer](#), Orlando Schärer; “**Site-specific incorporation of N-(deoxyguanosin-8-yl)-2-acetylaminofluorene (dG-AAF) into oligonucleotides using modified "ultra-mild" DNA synthesis crosslinks**” *Nucleic Acid Research*. 2005; 33(6); 1961-1969.
- 16- [Jawad Alzeer](#), Jacques Chollet, Ingrid Heinze-Krauss, Christian Hubschwerlen, Hugues Matile, and Robert Ridley; “**Phenyl Methoxyacrylates: A New Antimalarial Pharmacophore**” *J. Med. Chem.* 2000; 43 (4); 560-568.
- 17- [Jawad Alzeer](#), Jacques Chollet, Christian Hubschwerlen, Hugues Matile, and Robert Ridley; “ **β -Alkoxyacrylates Against Malaria**” *European Patent Application No. 97111607.4, PCT/EP1998/004162, 1999 (WO/1999/002150)*.
- 18- [Jawad Alzeer](#), Raffaello Masciadri, Nadine Nock, and Guy Wassner; “**MOM-protected 3-Hydroxy-5-phenyl-isoxazole: Regioselective Preparation and Synthetic Application**” *Tetrahedron Lett.*, 1996, 37, 6857-6860.
- 19- [Jawad Alzeer](#), and Andrea Vasella; “**Oligosaccharide Analogues of Polysaccharides Part 4. Synthesis of a Monosaccharide-Derived Octamer**” *Helv. Chem. Acta.*, 1995, 78, 1219-1237.
- 20- [Jawad Alzeer](#), and Andrea Vasella; “**Oligosaccharide Analogues of Polysaccharides Part 2. Regioselective Deprotection of Monosaccharide-Derived Monomers and Dimers**” *Helv. Chem. Acta.*, 1995, a78, 177-193.
- 21- [Jawad Alzeer](#), Chengzhi Cai, and Andrea Vasella; “**Oligosaccharide Analogues of Polysaccharides Part 1. Concept and Synthesis of Monosaccharides-Derived Monomers**” *Helv. Chem. Acta.*, 1995, 78, 242-264.
- 22- M. S. Shekhani, K. M. Khan, [Jawad \(Al\) Zeer](#) and W. Voelter; “**Useful Chiral Intermediates from Readily Available Carbohydrates**” *200th National Meeting of the American Chemical Society*, Washington, D. C., September 1990 ORGN 197.
- 23- [Jawad Alzeer](#), Balayeshwanth R. Vummidi, and Nathan W. Luedtke; “**Cell-Permeable Fluorescent Probes with High Affinity for G-Quadruplex DNA and RNA**” *Second Second International Meeting on Quadruplex DNA April 18-21, 2009 Camberley-Brown Hotel, Louisville, KY, USA*
- 24- [Jawad Alzeer](#) Balayeshwanth R. Vummidi, Phillipe J. C. Roth, and Nathan W. Luedtke; “**G-Quadruplex Fluorescent Probes as Transcriptional Regulator**”, *2nd Swiss-Japan Biomolecular Chemistry Symposium, 2009–SJBCS2009*
- 25- [Jawad Alzeer](#), Bala Vummidi, Phillipe Roth, and Nathan Luedtke, “**Structure-Selective Fluorescent Probes for G-Quadruplex DNA**” *Swiss chemical Society, fall meeting Zurich (Switzerland), 09.2008*.
- 26- [Jawad Alzeer](#), Orlando Schärer; “**Synthesis and characterization of site-specific thymine-guanine DNA interstrand crosslinks**” *International roundtable on nucleosides, nucleotides and nucleic acids*. 2006; XVII; PO030.
- 27- [Jawad Alzeer](#), Jacques Chollet, Ingrid Heinze-Krauss, Christian Hubschwerlen, Hugues Matile, and Robert Ridley, Anne Schmitt Hoffmann; “ **β -methoxyacrylates, a novel class of antimalarial agents**” *Hoffmann La Roche, B-169710; 1999*.

Manuscripts, Poster & Book citation

- 1- Oligonucleotide synthesis using phosphoramidite chemistry, produced by Link Technologies Ltd., UK, Section 2.1, [Ultramild Deprotection](#), Page 66
- 2- Theodora W. Greene, Peter G. Wuts "Protective groups in organic chemistry" third edition, John Wiley & Sons, Inc. NJ; 1999; [Protection for the hydroxyl group-benzylether](#); P. 83, [Protection for the alkyne-CH](#); P. 655.
- 3- F. Diederich, P. J. Stang, R. R. Tykwinski "Acetylene Chemistry: Chemistry, biology, and material science" 2005; Wiley-VCH Verlag GmbH & Co. KGaA. [Acetylenosaccharides](#), Page 196.

Master Thesis

- 1- Zahra Yasser Al-jabary, **In Vitro Propagation of Arbutus andrachne L. and the Detection of Catechin**, 2011.
- 2- Ghada M. Haroon Abu Khalaf, **Capparis spinosa L. "Caper": In Vitro Cultures and Bioassay**, 2011.
- 3- Wala' Manasrah, **In Vitro Propagation of Crataegus aronia and secondary metabolites detection**, 2012.
- 4- Ali Essa Abu Allan, **Ziziphus spina-christi "Christ's Thorn": In Vitro Callus and Cell Culture, Qualitative Analysis of Secondary Metabolites and Bioassay**, 2012.

HONORS: [First Class with Distinction](#)

- Offered Merit Certificate from University of Karachi
- Stood Fourth Position in the Faculty of Science.
- Stood Second Position in the Chemistry Department
- M.Sc. and B.Sc. with Distinction
- Secured "A" Grade in all Chemistry Courses

Halal Lecturing:

- **Current Scientific Innovations and their Halal suitability**, Thailand Halal Assembly December 2015, Bangkok-Thailand
- **Tackling current and upcoming halal issues with scientific methodology and reasoning**, Thailand Halal Assembly December 2014, Bangkok-Thailand
- **Certification by Halal Certification Service**, Foodexpo 2014 Athens Greece.
- World halal Food Council Europe, March, 2014 Rome-Italy
- World halal Food Council Europe, March, 2013, Milan-Italy

Collect unique pens, reading history books, playing basketball, combine imagination with reality