

Prof. KEMAL SOLAKYILDIRIM

Personal Information

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International Researcher IDs

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Education Information

Post Doctorate, University of California, Riverside, Department Of Chemistry And Chemical Biology, United States Of America 2013 - 2014

Doctorate, Rensselaer Polytechnic Institute, Department Of Chemistry And Chemical Biology, United States Of America 2009 - 2012

Postgraduate, Rensselaer Polytechnic Institute, Department Of Chemistry And Chemical Biology, United States Of America 2008 - 2009

Undergraduate, Cukurova University, Fen Edebiyat, Kimya, Turkey 2001 - 2005

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Advanced Analytical Techniques in Glycosaminoglycan Analysis, Rensselaer Polytechnic Institute, Department Of Chemistry And Chemical Biology, Chemistry, 2012

Postgraduate, Ultraperformance Liquid Chromatography with Electrospray Ion Trap Mass Spectrometry for Chondroitin Sulfate Analysis, Rensselaer Polytechnic Institute, Department Of Chemistry And Chemical Biology, Chemistry, 2009

Research Areas

Chemistry, Analytical Chemistry, Bioanalytical Methods, Chromatographic Analysis, Mass Spectroscopy, Magnetic Resonance Spectroscopy, Spectroscopical Methods, Natural Sciences

Academic Titles / Tasks

Professor, Erzincan Binali Yildirim University, Fen-Edebiyat Fakültesi, Kimya Bölümü, 2021 - Continues

Courses

Bilimsel İngilizce 2, Undergraduate, 2023 - 2024
 Enstrumantal Analiz 2, Undergraduate, 2023 - 2024
 Bilimsel İngilizce 1, Undergraduate, 2023 - 2024
 Mesleki İngilizce 1, Undergraduate, 2023 - 2024
 Enstrumantal Analiz 1, Undergraduate, 2023 - 2024
 Is hayatında İngilizce 1, Undergraduate, 2023 - 2024
 Analitik Kimya Laboratuvarı 2, Undergraduate, 2022 - 2023
 Mesleki İngilizce 2, Undergraduate, 2022 - 2023
 Analitik Kimya 2, Undergraduate, 2022 - 2023
 Enstrumantal Analiz Laboratuvarı 1, Undergraduate, 2023 - 2024
 Is hayatında İngilizce 2, Undergraduate, 2022 - 2023
 Kariyer Planlama, Undergraduate, 2023 - 2024

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Multi-Glycomic analysis of spheroid glycocalyx differentiates 2- and 3-dimensional cell models.**
 Zhou Q., Alvarez M. R. S., Solakyildirim K., Tena J., Serrano L. M. N., Lam M., Nguyen C., Tobias F., Hummon A. B., Nacario R. C., et al.
 Glycobiology, vol.33, pp.2-16, 2023 (SCI-Expanded)
- II. **Maternal Microbiota Modulate a Fragile X-like Syndrome in Offspring Mice**
 Varian B. J., Weber K. T., Kim L. J., Chavarria T. E., Carrasco S. E., Muthupalani S., Poutahidis T., Zafarullah M., Al Olaby R. R., Barboza M., et al.
 Genes, vol.13, no.8, 2022 (SCI-Expanded)
- III. **Origins of glycan selectivity in streptococcal Siglec-like adhesins suggest mechanisms of receptor adaptation.**
 Bensing B. A., Stubbs H. E., Agarwal R., Yamakawa I., Luong K., Solakyildirim K., Yu H., Hadadianpour A., Castro M. A., Fialkowski K. P., et al.
 Nature communications, vol.13, no.1, pp.2753, 2022 (SCI-Expanded)
- IV. **Proteoglycan 4 (lubricin) is a highly sialylated glycoprotein associated with cardiac valve damage in animal models of infective endocarditis**
 Solakyildirim K.
 GLYCOBIOLOGY, vol.10, no.10, pp.1200-1210, 2021 (SCI-Expanded)
- V. **Glycan-protein cross-linking mass spectrometry reveals sialic acid-mediated protein networks on cell surfaces**
 Xie Y., Chen S., Li Q., Sheng Y., Alvarez M. R., Reyes J., Xu G., Solakyildirim K., Lebrilla C. B.
 CHEMICAL SCIENCE, 2021 (SCI-Expanded)
- VI. **Region-Specific Cell Membrane N-Glycome of Functional Mouse Brain Areas Revealed by nanoLC-MS Analysis**
 Barboza M., Solakyildirim K., Knotts T. A., Luke J., Gareau M. G., Raybould H. E., Lebrilla C. B.
 MOLECULAR & CELLULAR PROTEOMICS, vol.20, 2021 (SCI-Expanded)
- VII. **Recent advances in glycosaminoglycan analysis by various mass spectrometry techniques**
 Solakyildirim K.
 ANALYTICAL AND BIOANALYTICAL CHEMISTRY, vol.411, no.17, pp.3731-3741, 2019 (SCI-Expanded)
- VIII. **Affinity capillary electrophoresis for the determination of binding affinities for low molecular weight heparins and antithrombin-III**
 Dinges M. M., Solakyildirim K., Larive C. K.
 Electrophoresis, vol.35, no.10, pp.1469-1477, 2014 (SCI-Expanded)
- IX. **¹H and ¹³C NMR spectral assignments of halogenated transformation products of pharmaceuticals and related environmental contaminants**
 Solakyildirim K., Bulloch D. N., Larive C. K.

Magnetic Resonance in Chemistry, vol.52, no.6, pp.310-317, 2014 (SCI-Expanded)

- X. **Isolation of bovine corneal keratan sulfate and its growth factor and morphogen binding**
Weyers A., Yang B., Solakyildirim K., Yee V., Li L., Zhang F., Linhardt R. J.
FEBS Journal, vol.280, no.10, pp.2285-2293, 2013 (SCI-Expanded)
- XI. **Sequence Analysis and Domain Motifs in the Porcine Skin Decorin Glycosaminoglycan Chain**
Zhao X., Yang B., Solakyildirim K., Joo E. J., Toida T., Higashi K., Linhardt R. J., Li L.
JOURNAL OF BIOLOGICAL CHEMISTRY, vol.288, no.13, pp.9226-9237, 2013 (SCI-Expanded)
- XII. **Signal amplification by glyco-qPCR for ultrasensitive detection of carbohydrates: Applications in glycobiology**
Kwon S. J., Lee K. B., Solakyildirim K., Masuko S., Ly M., Zhang F., Li L., Dordick J. S., Linhardt R. J.
Angewandte Chemie - International Edition, vol.51, no.47, pp.11800-11804, 2012 (SCI-Expanded)
- XIII. **Semi-synthesis of chondroitin sulfate-E from chondroitin sulfate-A**
Cai C., Solakyildirim K., Yang B., Beaudet J. M., Weyers A., Linhardt R. J., Zhang F.
Carbohydrate Polymers, vol.87, no.1, pp.822-829, 2012 (SCI-Expanded)
- XIV. **Structural characterization of heparins from different commercial sources**
Zhang F., Yang B., Ly M., Solakyildirim K., Xiao Z., Wang Z., Beaudet J. M., Torelli A. Y., Dordick J. S., Linhardt R. J.
Analytical and Bioanalytical Chemistry, vol.401, no.9, pp.2793-2803, 2011 (SCI-Expanded)
- XV. **Comamonas testosteroni synthase, a bifunctional glycosyltransferase that produces a unique heparosan polysaccharide analog**
Otto N. J., Solakyildirim K., Linhardt R. J., Deangelis P. L.
Glycobiology, vol.21, no.10, pp.1331-1340, 2011 (SCI-Expanded)
- XVI. **Hyphenated techniques for the analysis of heparin and heparan sulfate**
Yang B., Solakyildirim K., Chang Y., Linhardt R. J.
Analytical and Bioanalytical Chemistry, vol.399, no.2, pp.541-557, 2011 (SCI-Expanded)
- XVII. **Impact of autoclave sterilization on the activity and structure of formulated heparin**
Beaudet J. M., Weyers A., Solakyildirim K., Yang B., Takeddin M., Mousa S., Zhang F., Linhardt R. J.
Journal of Pharmaceutical Sciences, vol.100, no.8, pp.3396-3404, 2011 (SCI-Expanded)
- XVIII. **Glycosaminoglycans of the porcine central nervous system**
Liu Z., Masuko S., Solakyildirim K., Pu D., Linhardt R. J., Zhang F.
Biochemistry, vol.49, no.45, pp.9839-9847, 2010 (SCI-Expanded)
- XIX. **Domain structure elucidation of human decorin glycosaminoglycans**
Laremore T. N., Ly M., Zhang Z., Solakyildirim K., McCallum S. A., Owens R. T., Linhardt R. J.
Biochemical Journal, vol.431, no.2, pp.199-205, 2010 (SCI-Expanded)
- XX. **Study on the stability of supercritical fluid extracted rosemary (Rosmarinus Officinalis L.) essential oil**
Irmak S., Solakyildirim K., Hesenov A., Erbatur O.
Journal of Analytical Chemistry, vol.65, no.9, pp.899-906, 2010 (SCI-Expanded)
- XXI. **Ultraperformance liquid chromatography with electrospray ionization ion trap mass spectrometry for chondroitin disaccharide analysis**
Solakyildirim K., Zhang Z., Linhardt R. J.
Analytical Biochemistry, vol.397, no.1, pp.24-28, 2010 (SCI-Expanded)
- XXII. **Cell-bound IL-8 increases in bronchial epithelial cells after arylsulfatase B silencing due to sequestration with chondroitin-4-sulfate**
Bhattacharyya S., Solakyildirim K., Zhang Z., Chen M. L., Linhardt R. J., Tobacman J. K.
American Journal of Respiratory Cell and Molecular Biology, vol.42, no.1, pp.51-61, 2010 (SCI-Expanded)
- XXIII. **High-resolution preparative separation of glycosaminoglycan oligosaccharides by polyacrylamide gel electrophoresis**
Laremore T. N., Ly M., Solakyildirim K., Zagorevski D. V., Linhardt R. J.
Analytical Biochemistry, vol.401, no.2, pp.236-241, 2010 (SCI-Expanded)
- XXIV. **Chloroquine reduces arylsulphatase B activity and increases chondroitin-4-sulphate: Implications for mechanisms of action and resistance**

Articles Published in Other Journals

- I. **Fast Punicalagin Content Analysis of Various Brands of Pomegranate (*Punica granatum* L.) Juices by UPLC-MS**
Solakyıldırım K.
Hacettepe Journal of Biology and Chemistry, vol.47, pp.267-275, 2019 (Peer-Reviewed Journal)
- II. **One and Two-dimensional Nuclear Magnetic Resonance Spectroscopy Analysis of Enoxaparin Samples**
Solakyıldırım K.
EURASIAN JOURNAL OF ANALYTICAL CHEMISTRY, vol.14, no.2, pp.112-118, 2019 (Peer-Reviewed Journal)
- III. **Mass spectrometry in the determination of glycosylation site and N-glycan structures of human placental alkaline phosphatase**
Solakyıldırım K., Li L., Linhardt R. J.
Mass Spectrometry Letters, vol.9, no.3, pp.67-72, 2018 (ESCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **N-GLYCOME ANALYSIS OF MOUSE BRAIN REGIONS BY NANO LC-MS ANALYSIS**
Solakyıldırım K.
11th International Drug Chemistry Conference, Antalya, Turkey, 9 - 12 March 2023, pp.104
- II. **Rapid Analysis of Punicalagin from Various Brands of Pomegranate (*Punica granatum* L.) Juices by UPLC-MS**
SOLAKYILDIRIM K.
18th International Chromatography Congress, 15 - 18 November 2018
- III. **"Quantitative Analysis of Enoxaparin by Two-dimensional Nuclear Magnetic Resonance Spectroscopy**
SOLAKYILDIRIM K.
International Symposium on Multidisciplinary Studies, 27 - 28 April 2018
- IV. **Fraction Collection in Capillary Electrophoresis for Ultra-sensitive Analysis of Chondroitin Sulfate Disaccharides**
SOLAKYILDIRIM K.
International Symposium on Multidisciplinary Studies, 27 - 28 April 2018
- V. **Ekleme İmalat Yöntemine Uygun Elektronikler için Büyük Ölçekte Metal Nanopartikül Üretimi**
SOLAKYILDIRIM K., Sarac M. F.
Antalya Ar-Ge ve İnovasyon Proje Pazarı, Turkey, 29 - 30 March 2018
- VI. **SIVI ZİRH İÇİN KESME İLE KALINLAŞAN AKIŞKAN ESASLI KARBON FİBER TAKVİYELİ POLİMER KOMPOZİTLER**
SARAÇ M. F., SOLAKYILDIRIM K., YAPICI K.
X. International RD Brokerage Event, 8 - 09 March 2018
- VII. **N Glycan Analysis of Human placental alkaline phosphatase PLAP by HILIC ESI MS**
SOLAKYILDIRIM K., LİNHARDT R. J.
10TH AEGEAN ANALYTICAL CHEMISTRY DAYS AACD, 29 September - 02 October 2016

Activities in Scientific Journals

Current Analytical Chemistry, Committee Member, 2019 - Continues

Memberships / Tasks in Scientific Organizations

Türkiye İlaç ve Tıbbi Cihaz Kurumu, Member, 2022 - 2023, Turkey

Scientific Refereeing

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, November 2023

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, August 2023

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, April 2023

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, January 2023

TURKISH JOURNAL OF CHEMISTRY, National Scientific Refreed Journal, November 2021

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, March 2021

TUBITAK Project, 1002 - Quick Support Program, TUBITAK, Turkey, January 2021

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, December 2020

Project Supported by Higher Education Institutions, BAP Research Project, Ege University, Turkey, November 2020

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, September 2020

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, August 2020

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, July 2020

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, June 2020

JOURNAL OF PHARMACEUTICAL AND BIOMEDICAL ANALYSIS, SCI Journal, June 2019

CURRENT ANALYTICAL CHEMISTRY, SCI Journal, June 2019

TUBITAK Project, 1002 - Quick Support Program, TUBITAK, Turkey, March 2019

Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, National Scientific Refreed Journal, June 2018

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, TUBITAK, Turkey, November 2017

Metrics

Publication: 35

Citation (WoS): 214

Citation (Scopus): 546

H-Index (WoS): 10

H-Index (Scopus): 16

Scholarships

TUBITAK 2219, TUBITAK, 2020 - 2021

FULBRIGHT Akademik Arastırma Bursu, Fulbright Program, 2019 - 2020

Non Academic Experience

University of California-Davis

University of California - Davis

University of California Riverside