

Doç. Dr. SERCAN KARAV

Kişisel Bilgiler

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Yoksis Araştırmacı ID: 256454

Eğitim Bilgileri

Post Doktora, University of California, Davis, Food Science And Technology , Amerika Birleşik Devletleri 2015 - 2016

Doktora, University of California, Davis, Food Science And Technology, Amerika Birleşik Devletleri 2010 - 2015

Yüksek Lisans, Ankara Üniversitesi, Food Engineering, Türkiye 2007 - 2009

Lisans, Ankara Üniversitesi, Food Engineering, Türkiye 2003 - 2007

Yabancı Diller

İngilizce, C1 İleri

Yaptığı Tezler

Doktora, Selective Prebiotic Activity of N-glycans Released From Milk Glycoproteins by Novel Endo- β -N-acetylglucosaminidase, University of California, Davis, Food Science And Technology, Molecular Biology-Microbiology, 2014

Yüksek Lisans, Farklı türden meyve sularının doğal sorbitol içeriği, Ankara Üniversitesi, Food Engineering, Food Chemistry, 2009

Araştırma Alanları

Yaşam Bilimleri, Moleküler Biyoloji ve Genetik , Mikrobiyal Genetik, Temel Bilimler

Akademik Unvanlar / Görevler

Doç. Dr., Çanakkale Onsekiz Mart Üniversitesi, Fen Fakültesi, Moleküler Biyoloji ve Genetik, 2020 - Devam Ediyor

Diğer, University of California, Davis, Food Science And Technology, Molecular Biology, 2015 - 2016

Yönetilen Tezler

Karav S., Characterization of Pitaya N-Linked Glycans and In-vitro Identification of Potential Prebiotic Effect, Yüksek Lisans, M.KARYELİOĞLU(Öğrenci), 2023

Karav S., Determination of Bioactive Milk N-Glycans in Different Cattle Breeds, Yüksek Lisans, E.NTELITZE(Öğrenci),

2022

Karav S., A Novel In-Vitro Digestion Model Designed by Integration of Microbiome Associated Enzymes, Yüksek Lisans, M.KAPLAN(Öğrenci), 2022

Karav S., Recombinant production and characterization of a novel n-glycosidase (EndoBI-2) from *Bifidobacterium longum* subsp. *infantis* 157F, Yüksek Lisans, H.DUMAN(Öğrenci), 2022

Karav S., Determining therapeutic proteins and prebiotic N-glycan concentrations in bovine colostrum, Yüksek Lisans, A.ARSLAN(Öğrenci), 2022

Karav S., Recombinant production and characterization of new bifidobacterial glycosidases, Yüksek Lisans, B.SUCU(Öğrenci), 2021

Karav S., Investigation of the glycosidase activity and recombinant production of different *Bacteroides* species, Yüksek Lisans, A.BAYRAKTAR(Öğrenci), 2021

Karav S., Recombinant production of a glycosidase by using an in-vivo cloning system and its immobilization via different strategies, Yüksek Lisans, B.PEKDEMİR(Öğrenci), 2020

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **BCM-7: Opioid-like Peptide with Potential Role in Disease Mechanisms.**
Bolat E., Eker F., Yılmaz S., Karav S., Oz E., Brennan C., Proestos C., Zeng M., Oz F.
Molecules (Basel, Switzerland), cilt.29, sa.9, 2024 (SCI-Expanded)
- II. **Exploring the diverse biological significance and roles of fucosylated oligosaccharides**
Pekdemir B., KARAV S.
FRONTIERS IN MOLECULAR BIOSCIENCES, 2024 (SCI-Expanded)
- III. **Exploring the impact of colostrum supplementation on athletes: a comprehensive analysis of clinical trials and diverse properties**
Yalçıntaş Y. M., Baydemir B., Duman H., Eker F., Bayraktar Biçen A., Ertürk M., Karav S.
FRONTIERS IN IMMUNOLOGY, 2024 (SCI-Expanded)
- IV. **Antimicrobial Properties of Colostrum and Milk**
Eker F., Akdaşçı E., Duman H., Yalçıntaş Y. M., Canbolat A. A., Kalkan A. E., KARAV S., Šamec D.
Antibiotics, cilt.13, sa.3, 2024 (SCI-Expanded)
- V. **Distinguishing Turkish pine honey from multi-floral honey through MALDI-MS-based N-glycomics and machine learning**
Masri S., Aksoy S., DUMAN H., KARAV S., Kayili H. M., SALİH B.
Journal of Food Measurement and Characterization, 2024 (SCI-Expanded)
- VI. **Bovine colostrum and its potential contributions for treatment and prevention of COVID-19.**
Duman H., Karav S.
Frontiers in immunology, cilt.14, ss.1214514, 2023 (SCI-Expanded)
- VII. **Lactoferrin: neuroprotection against Parkinson's disease and secondary molecule for potential treatment.**
Eker F., Bolat E., Pekdemir B., Duman H., Karav S.
Frontiers in aging neuroscience, cilt.15, ss.1204149, 2023 (SCI-Expanded)
- VIII. **Phage-encoded carbohydrate-interacting proteins in the human gut**
Rothschild-Rodriguez D., Hedges M., KAPLAN M., KARAV S., Nobrega F. L.
Frontiers in Microbiology, cilt.13, 2023 (SCI-Expanded)
- IX. **Release of bifidogenic N-glycans from native bovine colostrum proteins by an endo- β -N-acetylglucosaminidase**
Bunyatratchata A., Parc A. L., de Moura Bell J. M. L. N., Cohen J. L., Duman H., Arslan A., KAPLAN M., Barile D., KARAV S.
Enzyme and Microbial Technology, cilt.162, 2023 (SCI-Expanded)
- X. **A toolbox of machine learning software to support microbiome analysis**
Marcos-Zambrano L. J., López-Molina V. M., GÜNGÖR B., Frohme M., Karadzovic-Hadziabdic K., Klammsteiner T.,

Ibrahimi E, Lahti L, Loncar-Turukalo T, Dharmo X, et al.

Frontiers in Microbiology, cilt.14, 2023 (SCI-Expanded)

- XI. **Lactoferrin for COVID-19 prevention, treatment, and recovery**
Bolat E, Eker F, KAPLAN M., Duman H., Arslan A., Saritas S., ŞAHUTOĞLU A. S., KARAV S.
FRONTIERS IN NUTRITION, cilt.9, 2022 (SCI-Expanded)
- XII. **Role of milk glycome in prevention, treatment, and recovery of COVID-19**
KAPLAN M., ŞAHUTOĞLU A. S., Saritas S., Duman H., Arslan A., Pekdemir B., KARAV S.
FRONTIERS IN NUTRITION, cilt.9, 2022 (SCI-Expanded)
- XIII. **Benefits of A2 Milk for Sports Nutrition, Health and Performance**
KAPLAN M., BAYDEMİR B., GÜNAR B. B., Arslan A., Duman H., KARAV S.
FRONTIERS IN NUTRITION, cilt.9, 2022 (SCI-Expanded)
- XIV. **Immobilization of a Bifidobacterial Endo-ss-N-Acetylglucosaminidase to Generate Bioactive Compounds for Food Industry**
Pekdemir B., Duman H., Arslan A., KAPLAN M., Karyelioglu M., ozer T., Kayili H. M., SALİH B., Henrick B. M., Duar R. M., et al.
FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY, cilt.10, 2022 (SCI-Expanded)
- XV. **Biofortified Whey/Deglycosylated Whey and Chickpea Protein Matrices: Functional Enrichment by Black Mulberry Polyphenols**
Ozleyen A., Cinar Z. O., KARAV S., Bayraktar A., Arslan A., Kayili H. M., SALİH B., TÜMER T.
PLANT FOODS FOR HUMAN NUTRITION, cilt.77, sa.1, ss.51-61, 2022 (SCI-Expanded)
- XVI. **Production of Bovine Colostrum for Human Consumption to Improve Health**
KAPLAN M., Arslan A., Duman H., Karyelioglu M., BAYDEMİR B., Guenar B. B., Alkan M., Bayraktar A., Tosun H. I., Ertuerk M., et al.
FRONTIERS IN PHARMACOLOGY, cilt.12, 2022 (SCI-Expanded)
- XVII. **Determining Total Protein and Bioactive Protein Concentrations in Bovine Colostrum**
Arslan A., Duman H., Kaplan M., Uzkuç H., Bayraktar A., Ertürk M., Alkan M., Frese S. A., Duar R. M., Henrick B. M., et al.
Journal of Visualized Experiments, cilt.2021, sa.178, 2021 (SCI-Expanded)
- XVIII. **Recombinant Production of Bifidobacterial Endoglycosidases for N-glycan Release**
Sucu B., Bayraktar A., Duman H., Arslan A., KAPLAN M., Karyelioglu M., Ntelitze E., Tastekin T., Yetkin S., Erturk M., et al.
JOVE-JOURNAL OF VISUALIZED EXPERIMENTS, cilt.2021, sa.173, 2021 (SCI-Expanded)
- XIX. **Bovine Colostrum and Its Potential for Human Health and Nutrition**
Arslan A., KAPLAN M., Duman H., Bayraktar A., Erturk M., Henrick B. M., Frese S. A., KARAV S.
FRONTIERS IN NUTRITION, cilt.8, 2021 (SCI-Expanded)
- XX. **Potential Applications of Endo-beta-N-Acetylglucosaminidases From Bifidobacterium longum Subspecies infantis in Designing Value-Added, Next-Generation Infant Formulas**
Duman H., KAPLAN M., Arslan A., ŞAHUTOĞLU A. S., Kayili H. M., Frese S. A., KARAV S.
FRONTIERS IN NUTRITION, cilt.8, 2021 (SCI-Expanded)
- XXI. **Structural insights of two novel N-acetyl-glucosaminidase enzymes through in silico methods**
ŞAHUTOĞLU A. S., Duman H., Frese S. A., KARAV S.
TURKISH JOURNAL OF CHEMISTRY, cilt.44, sa.6, ss.1703-1715, 2020 (SCI-Expanded)
- XXII. **N-glycans from human milk glycoproteins are selectively released by an infant gut symbiont in vivo**
KARAV S., Casaburi G., Arslan A., KAPLAN M., Sucu B., Frese S.
JOURNAL OF FUNCTIONAL FOODS, cilt.61, 2019 (SCI-Expanded)
- XXIII. **Reduced colonic mucin degradation in breastfed infants colonized by *Bifidobacterium longum* subsp. *infantis* EVC001.**
Karav S., Casaburi G., FRESE S.
FEBS open bio, cilt.8, ss.1649-1657, 2018 (SCI-Expanded)
- XXIV. **Thoroughbred mare's milk exhibits a unique and diverse free oligosaccharide profile**
KARAV S., Salcedo J., Frese S. A., Barile D.

- FEBS OPEN BIO, cilt.8, sa.8, ss.1219-1229, 2018 (SCI-Expanded)
- XXV. **Immobilization of an Endo-beta-N-acetylglucosaminidase for the Release of Bioactive N-glycans**
Cohen J. L., KARAV S., Barile D., Bell J. M. L. N. d. M.
CATALYSTS, cilt.8, sa.7, 2018 (SCI-Expanded)
- XXVI. **Selective deglycosylation of lactoferrin to understand glycans' contribution to antimicrobial activity of lactoferrin.**
Karav S.
Cellular and molecular biology (Noisy-le-Grand, France), cilt.64, ss.52-57, 2018 (SCI-Expanded)
- XXVII. **Studying Lactoferrin N-Glycosylation**
KARAV S., German J. B., Rouquie C., Le Parc A., Barile D.
INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, cilt.18, sa.4, 2017 (SCI-Expanded)
- XXVIII. **Characterization of recombinant human lactoferrin N-glycans expressed in the milk of transgenic cows.**
PARC A., Karav S., ROUQUIÉ C., MAGA E., BUNYATRATCHATA A., BARILE D.
PloS one, cilt.12, 2017 (SCI-Expanded)
- XXIX. **Recent advances in immobilization strategies for glycosidases.**
Karav S., COHEN J., BARILE D., de M.
Biotechnology progress, cilt.33, ss.104-112, 2017 (SCI-Expanded)
- XXX. **Oligosaccharides Released from Milk Glycoproteins Are Selective Growth Substrates for Infant-Associated Bifidobacteria.**
Karav S., Le P., Leite N., FRESE S., KIRMIZ N., BLOCK D., BARILE D., MILLS D.
Applied and environmental microbiology, cilt.82, ss.3622-3630, 2016 (SCI-Expanded)
- XXXI. **Characterizing the release of bioactive N-glycans from dairy products by a novel endo-β-N-acetylglucosaminidase.**
Karav S., BELL J., Le P., LIU Y., MILLS D., BLOCK D., BARILE D.
Biotechnology progress, cilt.31, ss.1331-9, 2015 (SCI-Expanded)
- XXXII. **A novel endo-β-N-acetylglucosaminidase releases specific N-glycans depending on different reaction conditions.**
Parc A., Karav S., De M., FRESE S., LIU Y., MILLS D., BLOCK D., BARILE D.
Biotechnology progress, cilt.31, ss.1323-1330, 2015 (SCI-Expanded)
- XXXIII. **Kinetic characterization of a novel endo-β-N-acetylglucosaminidase on concentrated bovine colostrum whey to release bioactive glycans.**
Karav S., PARC A., de M., ROUQUIÉ C., MILLS D., BARILE D., BLOCK D.
Enzyme and microbial technology, cilt.77, ss.46-53, 2015 (SCI-Expanded)
- XXXIV. **Effect of Cold Storage of Various Pomegranate Cultivars Fruit Juices on Health Promoting Compounds and Their Activities**
KARAV S.
JOURNAL OF FOOD AND NUTRITION RESEARCH, cilt.3, sa.9, ss.593-598, 2015 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

- I. **Understanding of the Contribution of Fetuin O-glycans for the Release of New Bioactive Compounds by a Novel Endo-β-N-acetylglucosaminidase**
KARAV S.
KAHRAMANMARAS SUTCU IMAM UNIVERSITY JOURNAL OF NATURAL SCIENCES, cilt.21, sa.3, ss.286-291, 2018 (Hakemli Dergi)
- II. **Understanding of the Contribution of Fetuin O-glycans for the Release of New Bioactive Compounds by a Novel Endo-beta-N-acetylglucosaminidase**
Karav S.
KSU TARIM VE DOGA DERGISI-KSU JOURNAL OF AGRICULTURE AND NATURE, cilt.21, sa.3, ss.286-291, 2018

(ESCI)

- III. **Application of industrial treatments to donor human milk: influence of pasteurization treatments, storage temperature, and time on human milk gangliosides**
Salcedo J., Karav S., Parc A. L., Cohen J. L., Bell J. M. L. N. d. M., Sun A., Lange M. C., Barile D.
npj Science of Food, cilt.2, sa.1, 2018 (Scopus)
- IV. **Antioxidant Capacity and Total Phenolic Contents of Peach and Apricot Cultivars Harvested from Different Regions of Turkey**
KARAV S.
INTERNATIONAL JOURNAL OF FOOD AND NUTRITION SCIENCE, cilt.1, sa.4, ss.13-17, 2012 (Hakemli Dergi)

Kitap & Kitap Bölümleri

- I. **Application of a Novel Endo- β -N-Acetylglucosaminidase to Isolate an Entirely New Class of Bioactive Compounds: N-Glycans**
KARAV S.
Enzymes in Food Biotechnology Production, Applications, and Future Prospects, , Editör, Elsevier, ss.389-404, 2018

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Bifidobacterium longum subsp. infantis 157F kökenli özgün N-glikosidaz (ENDOBI-2) enziminin rekombinant üretimi ve karakterizasyonu**
Duman H., Karav S.
5th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem), 2022, 23 Kasım 2022, ss.293
- II. **PROTEIN ISOLATION AND N- GLYCAN CHARACTERIZATION OF DIFFERENT MUSHROOM SPECIES BY USING PNGase F ENZYME**
Çağırtekin T., Karav S.
IV-INTERNATIONAL CONFERENCE OF FOOD, AGRICULTURE, AND VETERINARY SCIENCES, Van, Türkiye, 27 - 28 Mayıs 2022, ss.426-427
- III. **DETERMINATION OF BIOACTIVE MILK COMPONENTS IN VARIOUS CATTLE BREEDS**
Ntelitze E., Karav S.
4th International Conference of Food, Agriculture, and Veterinary Sciences, Van, Türkiye, 27 - 28 Mayıs 2022, ss.41-42
- IV. **DETECTION OF PREBIOTIC EFFECT OF PITAYA N-GLYCANS BY USING AN IN-VITRO DIGESTION SYSTEM**
Karyelioğlu M., Karav S.
The Sixth International Symposium on Pharmaceutical and Biomedical Sciences, Gaziantep, Türkiye, 26 - 28 Mayıs 2022, ss.47
- V. **Novel In-Vitro Digestion Model Designed by Integration of Microbiome Associated Enzymes**
Kaplan M., KARAV S.
4th International Eurasian Conference on Biological and Chemical Sciences, Türkiye, 24 - 26 Kasım 2021
- VI. **Selective Deglycosylation of Therapeutic Proteins via Novel Bifidobacterial Glycosidases**
Sucu B., Bayraktar A., Kaplan M., Arslan A., Duman H., Karyelioğlu M., Ntelitze E., Yetkin S., Karav S.
3rd International Eurasian Conference on Biological and Chemical Sciences, İstanbul, Türkiye, 19 - 20 Mart 2020
- VII. **Investigation of the Glycosidase Activity and recombinant Production of Different Bacteroides Species**
Bayraktar A., Sucu B., Kaplan M., Arslan A., KARAV S.
3rd International Eurasian Conference on Biological and Chemical Sciences, Türkiye, 19 - 20 Mart 2020
- VIII. **Comparison of two Novel Endo- β -N-aceylglucosaminidase Enzymes of Bifidobacterium longum**

subsp. infantis

Duman H., Karav S., Şahutoğlu A. S.

7th International BAU Drug Design Congress, İstanbul, Türkiye, 19 - 21 Aralık 2019

- IX. **Prebiotic Activity of Dragon Fruit Glycans Released by a Novel Enzyme Endo- β -N-acetylglucosaminidase**
Karyelioğlu M., Ntelitze E., KARAV S.
V. International Congress on Natural and Health Sciences, Türkiye, 13 - 15 Aralık 2019
- X. **Use of Human Associated Novel Enzymes to Understand How Lactoferrin Shapes Our Gut Microbiome**
Karav S., Sucu B., Bayraktar A., Pekdemir B., Duman H., Arslan A., Kaplan M.
3rd International Human Microbiome Congress, İstanbul, Türkiye, 7 - 09 Kasım 2019
- XI. **Rapid In-vivo Cloning and Expression of Glycosyl Hydrolases by pRhamTM-N-His Vector**
Pekdemir B., KARAV S.
International Congress on Agriculture and Forestry Research, Türkiye, 8 - 10 Nisan 2019
- XII. **Immunoglobulin Glikanlarının, Farklı Füzyon Etiketlerle Aktivitesi Değiştirilmiş Glikosidazlarla Ayrımı**
KARAV S.
12. Ulusal Afinite Teknikleri Kongresi, Türkiye, 5 - 07 Eylül 2018
- XIII. **In-Vivo Determination of Colonic Mucin Degradation in Breastfed Infants with Altered Gut Microbiome**
KARAV S., Casaburi G., Frese S. A.
6th International Congress of the Molecular Biology and Association of Turkey, Türkiye, 5 - 08 Eylül 2018
- XIV. **N-glycan Release Manipulation of a novel endo- β -Nacetylglucosaminidase by Using Genetically Attached Tags**
KARAV S.
6th International MOLECULAR BIOLOGY and BIOTECHNOLOGY CONGRESS, 22 - 25 Aralık 2017

Desteklenen Projeler

KARAV S., Yükseköğretim Kurumları Destekli Proje, Farklı Formül Sütlerin N-glikan İçeriğinin Belirlenmesi ve Prebiyotik Özelliğinin İncelenmesi, 2022 - Devam Ediyor

Kılıç D. D., Erginal A. E., Bil E., Yüreğilli Göksu D., Satmaz İ., Çam A., Karav S., Öz Aydın S., Yalçınkaya Önder E., Bulut A., et al., TÜBİTAK Projesi, Lisans Öğrencileri Proje Hazırlama ve Yazma Eğitimi, 2023 - 2024

Karav S., TÜBİTAK Projesi, Farklı Alternatif Protein Kaynaklarından Biyoaktif Glikan Üretimi, 2023 - 2024

Karav S., TÜBİTAK Projesi, Mikrobiyom Kaynaklı Yeni Enzimler ile Tasarlanmış Sindirim Sistemi Modeli ile Glikanların Bağırsak Mikrobiyotası Üzerine Etkilerinin Belirlenmesi, 2021 - 2024

KARAV S., Çağırtekin T., Yükseköğretim Kurumları Destekli Proje, Farklı Mantar Türlerinin Protein İzolasyonu ve PNGase F enzimi Kullanılarak N-Glikan Karakterizasyonunun Yapılması, 2022 - 2023

KARAV S., Karyelioğlu M., Yükseköğretim Kurumları Destekli Proje, Pitaya N- Bağlı Glikanlarının Karakterizasyonu ve Potansiyel Prebiyotik Etkisinin in-vitro Koşullarda Belirlenmesi, 2021 - 2023

Karav S., TÜBİTAK Projesi, Farklı Tekniklerle Aktivitesi Manipüle Edilmiş Yeni Bacteroides ve Bifidobakteri Glikosidazları Yardımıyla Glikanların Glikoproteinlerin Biyolojik Özelliklerine Olan Katkılarının Belirlenmesi, 2019 - 2023

KARAV S., Ntelitze E., Yükseköğretim Kurumları Destekli Proje, Çeşitli Sığır Irklarının Biyoaktif Süt N-Glikanlarının Belirlenmesi, 2022 - 2022

Karav S., Duman H., TÜBİTAK Projesi, A1 Ve A2 Sığır Kolostrum Örneklerinin İn-Vitro Sindirimlerinin Gerçekleştirilmesi Ve Karşılaştırılması, 2021 - 2022

Karav S., Duman H., TÜBİTAK Projesi, Farklı Pastörizasyon Uygulamalarının (Uht, Ltl, Htst) A2 Süt Glikan, Laktoferrin Ve Igg Miktarına Etkisinin Araştırılması, 2021 - 2022

Karav S., Duman H., TÜBİTAK Projesi, A1 Ve A2 Sütleri β -Kazein Proteinlerinin Sindirimi Sonucu Elde Edilen Peptitlerin Antimikrobiyal Özelliklerinin Araştırılması, 2021 - 2022

KARAV S., Karyeliođlu M., Sucu B., Yksekđretim Kurumları Destekli Proje, N-glikozidaz Enzimi ile Spirulina Proteinlerinden Glikanların Ayrımı, Saflařtırılması ve Kantifikasyonu, 2020 - 2021

KARAV S., Ntelitze E., Karyeliođlu M., Yksekđretim Kurumları Destekli Proje, Peptidil N-Glikosidaz F (PNGaz F) Enziminin Rekombinant Olarak retilmesi ve Karakterizasyonu, 2020 - 2021

Karav S., TBTAK Projesi, Yeni Endo-β-N-asetilglukozaminidaz enzimi kullanarak retilen ilk seici prebiyotik kaynađı glikanlar, 2017 - 2021

Karav S., TBTAK Projesi, Yeni Endo-β-N-Asetilglukozaminidaz Enzimi Kullanarak retilen İlk Seici Prebiyotik Kaynađı; Glikanlar, 2017 - 2020

TMER T., KARAV S., Kulabař S., Yksekđretim Kurumları Destekli Proje, Antiinflamatuvar biyoaktif fenolik bileřiklerin dođal kaynaklardan absorpsiyonunda yeniliki protein matriks teknolojilerinin geliřtirilmesi ve karakterizasyonu, 2017 - 2019

Karav S., Diđer Uluslararası Fon Programları, Application of EVC001 to Reduce Mucin Degradation, 2017 - 2018

Metrikler

Yayın: 56

Atıf (WoS): 568

Atıf (Scopus): 605

H-İndeks (WoS): 13

H-İndeks (Scopus): 14