

## **Prof. Dr. HASAN ONGUN ONARAN**

### **Kişisel Bilgiler**

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**Publons / Web Of Science ResearcherID:** AAI-5348-2020

**ScopusID:** 6701835178

**Yoksis Araştırmacı ID:** 29348

### **Eğitim Bilgileri**

Tıpta Uzmanlık, Ankara Üniversitesi, Ankara Tıp Fakültesi, Türkiye 1986 - 1990

Lisans, Ankara Üniversitesi, Tıp Fakültesi, Tıp Pr., Türkiye 1980 - 1986

### **Yabancı Diller**

İspanyolca, A1 Başlangıç

İngilizce, C1 İleri

Fransızca, A1 Başlangıç

### **Araştırma Alanları**

Farmakoloji ve Klinik Farmakoloji

### **Akademik Unvanlar / Görevler**

Prof. Dr., Ankara Üniversitesi, Tıp Fakültesi, Dahili Tıp Bilimleri Bölümü, 2000 - Devam Ediyor

Doç. Dr., Ankara Üniversitesi, Tıp Fakültesi, Dahili Tıp Bilimleri Bölümü, 1993 - 2000

Yrd. Doç. Dr., Ankara Üniversitesi, Tıp Fakültesi, Dahili Tıp Bilimleri Bölümü, 1990 - 1993

Öğretim Görevlisi Dr., Ankara Üniversitesi, Tıp Fakültesi, Dahili Tıp Bilimleri Bölümü, 1990 - 1990

Araştırma Görevlisi, Ankara Üniversitesi, Tıp Fakültesi, Dahili Tıp Bilimleri Bölümü, 1986 - 1990

### **Akademik İdari Deneyim**

Ankara Üniversitesi, 2013 - 2016

### **Verdiği Dersler**

Diüretik İlaçlar, Lisans, 2023 - 2024

Solunum sistemi farmakolojisi, Lisans, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010, 2008 - 2009

Genel Farmakoloji, Lisans, 2017 - 2018

GENEL FARMAKOLOJİ (FARMAKODİNAMİK-FARMAKOKİNETİK), Lisans, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010, 2008 - 2009, 2007 - 2008, 2006 - 2007, 2005 - 2006

ÖZEL DENEYSEL FARMAKOLOJİ, Doktora, 2015 - 2016, 2014 - 2015, 2013 - 2014

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## **Yönetilen Tezler**

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## **SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler**

### **I. Community guidelines for GPCR ligand bias: IUPHAR review 32**

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### **II. Biased agonism at G protein-coupled receptors**

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### **III. Conceptual and experimental issues in biased agonism**

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### **IV. Vasopressin receptor 2 mutations in the nephrogenic syndrome of inappropriate antidiuresis show different mechanisms of constitutive activation for G protein coupled receptors**

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### **VI. A Unifying Approach to the Duality of "Energetic" Versus "Conformational" Formulations of Allosteric Coupling: Mechanistic Implications for GPCR Allostery**

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- VII. **What is biased efficacy? Defining the relationship between intrinsic efficacy and free energy coupling**  
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- VIII. **Ligands Raise the Constraint That Limits Constitutive Activation in G Protein-coupled Opioid Receptors**  
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- IX. **Where have all the active receptor states gone?**  
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- X. **Cell Contact-dependent Functional Selectivity of beta(2)-Adrenergic Receptor Ligands in Stimulating cAMP Accumulation and Extracellular Signal-regulated Kinase Phosphorylation**  
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- XI. **Long and short distance movements of beta(2)-adrenoceptor in cell membrane assessed by photoconvertible fluorescent protein dendra2-beta(2)-adrenoceptor fusion**  
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- XII. **beta(2)-Adrenoceptor, Gs and adenylate cyclase coupling in purified detergent-resistant, low density membrane fractions**  
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- XIII. **Coupling of beta 2-Adrenoceptors to XL alpha(s) and G alpha(s): A New Insight into Ligand-Induced G Protein Activation**  
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- XIV. **Allosteric Coupling and Conformational Fluctuations in Proteins**  
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- XVII. **Exploring allosteric coupling in the alpha-subunit of Heterotrimeric G proteins using evolutionary and ensemble-based approaches**  
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- XVIII. **Guanine nucleotide exchange-independent activation of G(s) protein by beta(2)-adrenoceptor**  
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- XIX. **Gs in the caveola is coupled to adenylyl cyclase but not to beta 2-adrenergic receptor**  
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- XX. **Intramolecular network of allosteric connectivity in GPCR: an improved evolutionary method combined with molecular dynamic simulations**  
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- XXI. **GDP-dependent activation of adenylate cyclase by beta(2)-adrenoceptor and Gs protein**  
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- XXIII. **Correlation between affinity and efficacy - Response from Kenakin and Onaran**  
Kenakin T., ONARAN H. O.  
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- XXIV. **The ligand paradox between affinity and efficacy: can you be there and not make a difference?**  
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- XXV. **Agonist-directed trafficking explaining the difference between response pattern of naratriptan and sumatriptan in rabbit common carotid artery**  
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- XXVI. **Quasi-irreversible binding of agonist to beta-adrenoceptors and formation of non-dissociating receptor-G(s) complex in the absence of guanine nucleotides**  
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- XXVII. **Dietary selenium and vitamin E intakes alter beta-adrenergic response of L-type Ca-current and beta-adrenoceptor-adenylate cyclase coupling in rat heart**  
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- XXVIII. **Receptor dimerization and Hill coefficients - Reply**  
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- XXIX. **Ligand efficacy and affinity in an interacting 7TM receptor model**  
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- XXX. **Pharmacokinetics of phenprobamate after oral administration to healthy subjects**  
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- XXXI. **Opioid receptor ligands in human hepatic encephalopathy**  
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- XXXII. **Ca<sup>2+</sup>-induced inhibition of adenylyl cyclase in turkey erythrocyte membranes**  
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- XXXIII. **Decrease in apparent alpha(1)-adrenoceptor G protein coupling during maturation in rat aorta**  
GÜRDAL H., Friedman E., Johnson M., ONARAN H. O.  
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- XXXIV. **The effects of verapamil and nimodipine on bupivacaine-induced cardiotoxicity in rats: An in vivo and in vitro study**  
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- XXXVI. **Contribution of spontaneous beta-adrenoceptor activity in forskolin stimulated adenylyl cyclase activity in rat heart membranes.**  
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- XXXVIII. **An efficacy-dependent effect of cardiac overexpression of beta(2)-adrenoceptor on ligand affinity in transgenic mice**  
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- XXXIX. **Allosteric equilibrium model explains steady-state coupling of beta-adrenergic receptors to adenylate cyclase in turkey erythrocyte membranes**  
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- XL. **Pharmacokinetics of recombinant human erythropoietin in children with chronic renal failure**  
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- XLI. **Agonist efficacy and allosteric models of receptor action**  
ONARAN H. O., Costa T.  
RECEPTOR CLASSIFICATION, cilt.812, ss.98-115, 1997 (SCI-Expanded)
- XLII. **An efficacy-dependent effect of cardiac overexpression of  $\beta$ 2- adrenoceptor on ligand affinity in transgenic mice**  
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- XLIII. **Opioid ligands in human hepatic encephalopathy.**  
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- XLV. **LYSOLIPIDS REVERSIBLY INHIBIT CA-2+-DEPENDENT, GTP-DEPENDENT AND PH-DEPENDENT FUSION OF BIOLOGICAL-MEMBRANES**  
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- XLVI. **BETA-GAMMA SUBUNITS OF GUANINE NUCLEOTIDE-BINDING PROTEINS AND REGULATION OF SPONTANEOUS RECEPTOR ACTIVITY - THERMODYNAMIC MODEL FOR THE INTERACTION BETWEEN RECEPTORS AND GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNITS**  
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- XLVII.  **$\beta\gamma$  Subunits of guanine nucleotide-binding proteins and regulation of spontaneous receptor activity: Thermodynamic model for the interaction between receptors and guanine nucleotide-binding protein subunits**  
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- XLVIII. ACIDIC PH INDUCES FUSION OF CELLS INFECTED WITH BACULOVIRUS TO FORM SYNCYTIA**  
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- XLIX. DRUG EFFICACY AT GUANINE NUCLEOTIDE-BINDING REGULATORY PROTEIN-LINKED RECEPTORS - THERMODYNAMIC INTERPRETATION OF NEGATIVE ANTAGONISM AND OF RECEPTOR ACTIVITY IN THE ABSENCE OF LIGAND**  
COSTA T., OGINO Y., MUNSON P., ONARAN H. O., RODBARD D.  
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- L. ROLE OF ALPHA-ADRENOCEPTORS IN THE EFFECTS OF BUSPIRONE AND 5-CARBOXYAMIDOTRYPTAMINE IN RABBIT ISOLATED THORACIC AORTA**  
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- LI. ATYPICAL SCHILD PLOTS WITH HISTAMINE H-1 RECEPTOR AGONISTS AND ANTAGONISTS IN THE RABBIT AORTA**  
BOKESOY T., ONARAN H. O.  
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- LII. REGIONAL HISTAMINERGIC POTENCIES IN RABBIT SYSTEMIC CIRCULATION**  
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- LIII. KINETICS OF ANTAGONISM AT HISTAMINE-H1 RECEPTORS IN ISOLATED RABBIT ARTERIES**  
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- LIV. HETEROGENEITY OF HISTAMINE H-2-RECEPTOR MEDIATED RESPONSES IN THE RABBIT AORTA**  
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- LV. A SEMI-ITERATIVE METHOD FOR DERIVATION OF CONCENTRATION-RESPONSE PARAMETERS**  
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## Kitap & Kitap Bölümleri

- I. **A Unifying Approach to the Duality of "Energetic" Versus "Conformational" Formulations of Allosteric Coupling: Mechanistic Implications for GPCR Allostery**  
Onaran H. O., Costa T.  
Allostery in Drug Discovery, Dario Doller, Editör, Royal Society of Chemistry, Londrina, ss.131-155, 2017
- II. **Intramolecular dynamics and ligand-induced conformational changes: a stochastic model of receptor action**  
ONARAN H. O., costa t.  
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- III. **A look into receptor efficacy. From the signalling network of the cell to the intramolecular motion of the receptor.**  
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## Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. Cerrahi servislerdeki asansörlerden elde edilen bakterilerin tanımlanması ve antimikrobiyal duyarlılıkları

ÖCAL D., KOZAN G., OKLAZ A., KÖSE M. N., KIRCA İ., KILIÇ Ş., BAKIRARAR B., ONARAN H. O.

İnfeksiyon Dünyası Çalıştayı 2022, Ankara, Türkiye, 23 - 27 Mart 2022, ss.122-123

## Desteklenen Projeler

Kandilci H. B., Şimşek G., Çelebier M., Kaplan O., Onaran H. O., TÜBİTAK Projesi, Beta-arrestinlerin Hücre İçi pH Homeostazındaki Yeni Rolü: Normoksi ve Hipoksiden Na<sup>+</sup>/H<sup>+</sup> Değiş-tokuşucusu-1'in Regülasyon Mekanizmasındaki Rollerinin Beta-arrestin-1/2 Overeksprese Hek-293 Hücre Hattında Araştırılması, 2023 - 2026  
Onaran H. O., TÜBİTAK Projesi, Bias agonizmanın temelleri ve b2 adrenoseptörlerde ligand aracılı sinyal trafiğinin doğrudan ölçülmesi, 2014 - 2017

## Bilimsel Dergilerdeki Faaliyetler

CELLULAR SIGNALLING, Özel Sayı Editörü, 2021 - 2021

## Bilimsel Hakemlikler

NAUNYN-SCHMIEDEBERG'S ARCHIVES OF PHARMACOLOGY, SCI Kapsamındaki Dergi, Ekim 2023

## Metrikler

Yayın: 59

Atıf (WoS): 1151

Atıf (Scopus): 1173

H-İndeks (WoS): 16

H-İndeks (Scopus): 16