**Prof. Dr. İzzettin HATİP (Izaldin Al-KHATİB)**

 **Pharmacology**

**Curriculum Vitae**

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**Has been integrating, for >40-year education and research experience, Neuropharmacology, Neurodegenerative diseases, Psychopharmacology, Behavioral-pharmacology, Depression models, Biochemical-Analytical pharmacology, Phyto- and Ethnopharmacology, Drug development, Cardiovascular system pharmacology, and Toxicology into contemporary theoretical and applied pharmacological education; Emphasizing the molecular mechanisms of action and Pharmacokinetics of drugs.**

**❖PERSONAL INFO Birth Date : 01-07—1955**

 **Birth place: Kerkük**

 **Nationality: Turkish**

**❖HİGHEST EDUCATİON Pharmacology-PhD-Faculty of Pharmaceutical Sciences-Kyushu University (1987)- Fukuoka-Japan**

**❖LANGUAGES 1. Arabic : Excellent**

**2. English : Very good**

**3. Japanese: Fair**

**4. Kurdish : Fair**

**5. Turkish : Excellent**

**❖SKILLS 1. Educational capacity, Department&Laboratories establishment**

**2. Research in the field of Behavioral-Molecular-Nervous and Cardiovascular System Pharmacology,**

**3. Stereotaxic Surgery**

**4. HPLC Chromatography**

**❖COMMUNICATION Address: Department of Medical Pharmacology, Faculty of Medicine, Pamukkale University, TURKEY;**

**Phone: Mobil:90-533-573 1500; Univ. 90-258-296 1682**

**email:** **ihatip@pau.edu.tr**

**❖ORCID 0000-0002-9127-6779**

**❖*h* index 14**

**❖MEMBERSHIPS 1. The Japanese Pharmacologists Association (1983)**

**2. The Japanese Neuropharmacologists Association (1984)**

**3. New York Academy of Science 1995**

**4. International Brain Research Organization (1996)**

**5. American Association for Advancement of Science (1996)**

**6. Society for Neuroscience (1997)**

**7. International Stroke Society (2006)**

**8. International Society for Ethnopharmacology (2017)**

**9. European Behavioral Pharmacology (2017)**

**10. The Japanese Pharmacological Society (2017)**

**❖EXPERIENCE**

1. **Academician, Instructor- Department of Physiology and Pharmacology, Baghdad University (1980 - 1982)**
2. **Research Student-Department of Pharmacology, Faculty of Pharmaceutical Sciences Kyushu University, Fukuoka-Japan (1982-1983)**
3. **Doctor Course Student Department of Pharmacology, Faculty of Pharmaceutical Sciences –Kyushu University, Fukuoka-Japan (1983-1987**
4. **Assist. Prof. -Department of Pharmacology, Faculty of Medicine, Erbil University Erbil (1987 – 1989)**
5. **Vice Dean, Faculty of Medicine, Erbil University, Erbil, (1989 – 1991)**
6. **Dean, Faculty of Medicine, Erbil University, Erbil, (April 1991 - August 1991)**
7. **Contractual Faculty Member (Associate Prof)–Trakya University, Edirne 1991-1995)**
8. **Associate Prof.-Tenure Track – Dept. Pharmacology (Founder & Chairman) Faculty**
9. **of Medicine - Pamukkale University- Denizli (1996–Present)**
10. **Board Member-Pamukkale University Health Sciences Institute, (1996–Present)**
11. **Member -Pamukkale University Hospital Drug Committee Member, (1996-1999)**
12. **Member-Pamukkale University Medical Ethics Committee, (1997-2002)**
13. **Visiting Researcher -Akita Brain and Blood Vessels Research Institute - Akita Stroke, Akita Japan (May 1998-August 1998)**
14. **Visiting Researcher-Department of Physiology & Pharmacology, Faculty of Pharmaceutical Sciences Fukuoka Japan (Aug 1998-Oct 1998)**
15. **Pamukkale University, Faculty of Medicine, 3rd Year Coordinator (1999-2002)**
16. **Moderator - Pamukkale University, Faculty of Medicine, 2nd and 3rd Year-Various Modules within the Active Learning Education System (1999-present)**
17. **Board Member-Pamukkale University, Faculty of Medicine, Board of Directors 2001-2002**
18. **Board Member-Pamukkale University, Faculty of Medicine, Faculty Board, (2001-2002)**
19. **Visiting Academic Staff -Fukuoka University-Advanced Material Institute, (2002-2003), Fukuoka Japan**
20. **Head-Pamukkale University, Faculty of Medicine–Self Evaluation and Development Group. (2008-2009)**
21. **Head -Pamukkale University Medical Ethics Committee, (2008-2009)**
22. **Head-Pamukkale University, Strategic Plan Commission, (2009-2013)**
23. **Member -Pamukkale University, Faculty of Medicine Subcommission for Evaluating Scientific Research Projects (2009-2012)**
24. **Head -Pamukkale University, Coordinator of Academic Journals, (2010-2011)**
25. **Scientific Ambassador -Scientific Ambassador of Pamukkale University to Fukuoka University Japan (2010-2011)**
26. **Head -Pamukkale University Faculty of Medicine, Medical Experimental Research Unit Executive Council (2010-2011)**
27. **Visiting Researcher -Fukuoka University, Faculty of Pharmaceutical Sciences. Department of Neuropharmacology, Fukuoka-Japan (2016-2016)**
28. **Head-Pamukkale University Hospital Pharmacovigilance Liaison Office, (2016-present)**
29. **Member - Pamukkale University Hospital, Antibiotic Control Subcommittee (2019-present)**

**❖EDUCATION-TEACHING EXPERIENCE**

**Teaching Activities**

**I have been engaged in teaching pharmacology (theoretical and practical) since 1980. The teaching experience is paralleled with carrying out researchs mainly in the fields of neuropharmacology, psychopharmacology and cardiovascular pharmacology.**

**Since 1999, the Medical Faculty at Pamukkale University in Turkey has been implementing a problem-based active education system that combines module- and task-based learning. Pharmacology is mainly taught during the third year, within 20 modules distributed over four blocks. I am mainly engaged in cardiovascular modules and responsible for a block including mainly toxicological, neuropharmacological and psychopharmacological topics composed of five different modules. In addition to the undergraduates, I am also teaching pharmacology to postgraduate both at MSc and PhD levels.**

**I consider and apply building a bridge among the molecular bases of cellular functions, disease pathophysiology and drug activity.**

**A. Topics I teach to undergraduate medical faculty students:**

 **I. Pharmacology. Basics and Concepts**

 **II. Pharmacodynamics**

 **III. Pharmacokinetics**

 **1 Drug Absorption**

 **2 Drug Distribution**

 **3 Drug Metabolism**

 **4 Drug Clearance**

 **5 Drug-Dose Adjustment.**

 **IV. Cardiovascular Pharmacology**

 **1 Heart Failure and Positive Inotropic Drugs**

 **2 Cardiac Ischemia and Antianginals**

 **3 Antiarrhythmics**

 **V. Pharmacology of Central nervous System**

 **1 Alcohol-addiction Neurobiology/Pharmacology**

 **2 Anxiolytics**

 **3 Antiepileptics**

 **4 Antidepressants**

 **5 Antipsychotics**

 **6 Dementia and Alzheimer’s Disease Drugs**

 **VI. Toxicology:**

 **1 Basic Toxicology and Antidotes**

 **2 Heavy metal poisoning**

 **3 Toxic gases**

 **4 Organophosphates and Nerve Gases**

 **5 Biotoxins**

 **6 Toxic Plants and Mycetism**

**B. Topics I teach to postgraduate master degree (MSc) students-Pamukkale University, Institute of Health Sciences’ 14-week program:**

 **1. Pharmacokinetics: weekly lecture hours (theoretical): 3 h.**

 **Weeks Lectures / Contents**

 **1 Pharmacokinetic Concepts; Compartment concepts; Kinetic Orders**

 **2 t1/2; Distribution; Clearance; Steady State**

 **3 Clinical Cases; AUC; Dose-response Relationship**

 **4 Bioavailability; Dose Types**

 **5 Absorption Kinetics**

 **6 Distribution Kinetics**

 **7 Clearance and Elimination Kinetics**

 **8 Examination**

 **9 Oxidative Metabolism and Non-Oxidative Metabolism**

 **10 Kinetic Variability: Pharmacogenetics, Age, Body weight, Pregnancy, Breastfeeding**

 **11 Kinetic Variability: Diseases, Renal Dialysis**

 **12 Chronopharmacokinetics / Dose Individualization 1**

 **13 Dose Individualization 2**

 **14 Examination**

 **2. Pharmacology of Nervous System: weekly lecture hours (theoretical): 3 h.**

 **Weeks Lectures/ Contents**

 **1 Autonomic and Somatic Motor Nervous System: Introduction**

 **2 Autonomic Nervous System: Cholinergic**

 **3 Autonomic Nervous System: Adrenergic**

 **4 Central Nervous System: Antidepressants I**

 **5 Central Nervous System: Antidepressants II**

 **6 Central Nervous System: Antipsychotics I**

 **7 Central Nervous System: Antipsychotics II**

 **8 Examination**

 **9 Central Nervous System: Anxiolytics**

**10 Central Nervous System: Antiepileptics**

**11 Central Nervous System: Aging, Dementia, Neurodegenerative Diseases and Memory Impairment: AD, PD, HD**

**12 Cerebral Ischemia and Motor Disorders, TBI**

**13 Pharmacology of Addiction: Alcohol, Nicotine, Cocaine, Amphetamines and Cannabinoids**

**14 Examination**

**3. Pharmacology of Cardiovascular System: weekly lecture hours (theoretical): 3 h.**

 **Weeks Lectures/ Contents**

 **1 Introduction to Cardiovascular Pharmacology**

 **2 Electrolyte Acid-Base Equilibrium**

 **3 Heart Failure I: Cardiac Glycosides**

 **4 Heart Failure II: Other Drug Groups**

 **5 Myocardial Ischemia: Organic Nitrates and Other Drugs**

 **6 Antiarrhythmics I :Na+ channel blockers, K+ channel activators**

 **7 Examination**

 **8 Antiarrhythmics II: Other Drugs**

 **9 Antihyperlipidemics I: HMG CoA reductase inhibitors**

**10 Antihyperlipidemics II: Other Drugs**

**11 Antihypertensives I: Diuretics**

**12 Antihypertensives II: Sympatholytics, Vasodilators**

**13 Drugs acting on Renin-Angiotensin System**

**14 Examination**

**4. Experimentation on Laboratory Animals: weekly lecture hours theoretical 2 h and practical 2 h.**

 **Weeks Lectures/ Contents**

 **1 Ethics in Animal Experiments**

 **2 Biology of Rat**

 **3 Dissection Procedures, Internal Organs**

 **4 Skeletal Muscles**

 **5 Brain and Spinal cord: nuclei and regions**

 **6 Handling and Control , Administration Methods,**

 **7 Examination**

 **8 Anesthesia, Drug Solution, Calculation of ED50/LD50 in Pharmacological Experiments**

 **9 Vascular Catheterization**

**10 Stress and Gastric Ulcer Induction Methods**

**11 Ovariectomy, Hysterectomy and Hormones**

**12 Isolated Organs: Intestine or Uterus**

**13 Isolated organs: Heart or Aorta**

**14 Examination**

**5. Research methods and scientific article preparation** **weekly lecture hours**

**theoretical 1 h,**

**a. Literature review, using available web sites and indices for collection of information. Collection and arrangement of research results relevant to the performed research and help discussing and interpreting the results obtained**

**b. Preparation of the scientific article contents**

**Summary/Abstract: should cover aim, applied method(s), obtained results and conclusion**

**Introduction: A prelude to the subject containing works that help understanding the research outline, justification and aim of the work to be done.**

**Materials and Methods: Elaboration of the details of the work in a way could be applied by other researchers.**

**Results: arrange the outcome of the work supported by expressive figures and proper statistical methods.**

**Discussion: Interpretation of the results using other agree- or disagreeing works, in such a way help understanding the mechanism(s) underlying the results and their possible applicability**

**References: Cited with the related information in different parts, and listed at the end of the article.**

**c. Preparation of research projects with emphasis on the ability to design and carry out multidisciplinary**

**Researches.**

**Weeks Lectures/ contents**

**1 Literature Review I**

**2 Literature Review II**

**3 Knowledge Access and Abstracting I**

**4 Knowledge Access and Abstracting II**

**5 Literature Access Resources I**

**6 Literature Access Resources II**

**7 Literature Resource Referring**

**8 Acquaintance of Basic Knowledge about Research Methods I**

**9 Acquaintance of Basic Knowledge about Research Methods II**

**10 Acquaintance of Basic Knowledge about Research Methods III**

**11 Comprehension of Article Edition/Writing Rules**

**12 Comprehension of Thesis Writing Rules**

**13 Poster Preparation Accuracy and Perfection**

**14 Verbal presentation Accuracy and Perfection**

**6. Field of Study Course Weekly Lecture Hours Theoretical 6 h,**

**The course objective is to prepare master's thesis project, to review relevant literature, to carry out experimental part of the thesis, to evaluate and discuss all results in relation to the current state of knowledge in the field**

**Weeks Lectures/ contents**

**1 How a research topic is defined?**

**2 How a research topic is defined?**

**3 How a literature review is carried out?**

**4 How a literature review is carried out?**

**5 Research facilities definition**

**6 Research facilities definition**

**7 Preparing project and projects infrastructure**

**8 Preparing project projects infrastructure**

**9 Interpretation of the results**

**10 Interpretation of the results**

**11 Evaluation of research results**

**12 Evaluation of research results**

**13 Presentation of the results**

**14 Presentation of the results**

**C. Topics I teach to postgraduate Neuroscience (Ph.D.) students-Pamukkale University, Institute of Health Sciences’ 14-week program.**

**1.Neuropharmacology Theoretical 2h, Practical 2h.**

**Weeks Lectures/ contents**

**1 Distribution of Receptors and Ion Channels In The Neural System; Blood Brain Barrier**

**2 Involvement of Various Pathways In Pathophysiology Of Neural System Diseases And Drug Effects**

**3 Receptors And Ion Channel Diseases**

**4 Dementia and Aging**

**5 Pharmacological Approach to Ischemia/Traumatic Brain Injury**

**6 Memory and Its Impairment**

**7 Neurodegenerative Diseases: Amino Acids and Amyloid Peptides**

**Alzheimer’s Disease: Cause and Therapeutic Approach**

**8 Treatment of Parkinson’s Disease**

**9 Other Degenerative Diseases: Huntington’s Disease, Amyotrophic Lateral Sclerosis.**

**10 Central Pain/Analgesics**

**11 Epilepsy and Antiepileptics**

**12 Pharmacology of Autonomic Nervous System/Motor Neuron Diseases**

**13 Suppressants and Stimulants of Central Nervous System**

**14 Poisons and Neurotoxins Affecting Neuronal System**

**D. Topics I teach to postgraduate Doctorate (Ph.D.) students-Pamukkale University, Institute of Health Sciences’ 14-week program.**

**Weeks Lectures/ Contents**

**1 Psychosis: Antipsychotics**

**2. Anxiety:Anxiolytics**

**3. Depression: Antidepressants I**

**4. Antidepressants II; models of depression**

**5. Bipolars: Antimanics**

**6. Halucinogens**

**7. Substance abuse I: Addiction mechanisms; Rewarding pathways**

**8. Substance abuse II: mechanisms of sensitization and tolerance**

**9. Nicotine addiction**

**10. Alcohols/solvents/ volatile substance addiction**

**11. Opioid addiction**

**12. Stimulants/depressants/Amphetamines, Caffeine**

**13. Cocaine**

**14. Cannabis-Cannabinoids**

**❖THESES SUPERVISED\*:**

**1. Effects of second generation tetracyclines on hippocampal neuron number and motor coordination in penicillin-induce epilepsy in rats. 2004.**

**2. Behavioral and biochemical effects of minocycline and nilvadipine in rats repeated 4-vessel occlusion ischemia. 2006.**

**3. Behavioral and biochemical investigation of the neuroprotective effects of erythropoietin in rats repeated 4-vessel occlusion ischemia. 2006.**

**4. Effect of Varenicline on-hydroxydopamine-induced rat model of Parkinson’s disease. 2015.**

**5. Effect of Angiotensin 1-7 on expression of nicotinic and glutamatergic receptors expression in rat model of Alzheimer’s disease induced by Beta-amyloid 1-42. 2016.**

**6. Investigation of quinolinic acid, NMDA hypofunction and behavioral phenotypes at different developmental stages in Maternal lipopolysaccharide-induced rat model of Schizophrenia. 2018.**

 **\*In addition to acting as consultant for several other theses.**

 **❖PROJECTS:**

**1.” Synthesis of Cholinergic Ligands and Autoradiographic Study of Effects of 18F-DG in Brain”: 1.Cholinergic modification of cerebral glucose metabolic rate using 18F -Fluoro-deoxy-D-glucose (FDG) tracer in 24 hour-fasted rats. Submitted to Akita Brain Research Institute-Japan (With Dr. Iwao Kanno). Proje no. JISTEC, JAPAN-497103-98.1998.**

**2. The effect of lesioning different aminergic systems on the behavioural-pharmacological and biochemical effects of the non-competitive glutamate**

**receptor antagonist using brain microdialyses and HPLC-1998-Fukuoka**

**University, Japan.**

**3. Behavioral and molecular pharmacological studies in the neuronal cell death and memory disturbances in animal model of Alzheimer’s disease, (with Prof. Michihiro Fujiwara).  Membusho-Japan-13672407-002 and Fukuoka University-Advanced Material Institute-Japan, 991001,“. 2002-2003.**

**4. Behavioral and biochemical investigation of the neuroprotective effects of highly lipophilic tetracyclines in rats penicillin-induce epilepsy model. 2003.**

**5. Comparative effects of anandamid on isolated organs activity in both male and female rats. 2004TPF007, 2004.**

**6. Behavioral and biochemical effects of minocycline and nilvadipine on memory of rats with repeated 4-vessel occlusion ischemia. 2005.**

**7. Behavioral and biochemical investigation of the effects of erythropoietin on memory of rat’ repeated 4-vessel occlusion ischemia model. 2005.**

**8. Effectiveness of Conformational Altered Aβ1-40 and Breaker Peptides In vivo Rats Model of Alzheimer’s Disease and In vitro Microglial Cells-** **The Scientific and Technological Research Council of Turkey TÜBİTAK- SBAG-K-50-104S262, 2005-2009,**

**9. Infrastructure of Applied Pharmacology Laboratory. 2010KRM007, 2010.**

**10. Improvement of Applied Pharmacology Laboratory. 2010KRM015, 2010.**

**11. Effect of grape seeds extract on learning, memory and histological structure of hippocampus in newborn rats’ hypoxia-ischemic brain injury model. The Scientific and Technological Research Council of Turkey TÜBİTAK SBAG 108S157, 2008-2014.**

**12. Effect of Mas receptor agonist Angiotensin-(1-7) on isolated thoracic aorta responses and blood RAGE (Receptor for Advanced Glycation End products) in rats with Adjuvant- arthritis model. 2012SBE009, 2012.**

**13. Effect of Varenicline in Rat Parkinson’s Disease Induced by Unilateral 6-Hydroxydopamine injection into substantia nigra. 2012SBE017, 2012.**

**14. In vitro and in vivo effects of beta sheet breaker peptide 15-22 on sporadic Alzheimer’s disease model. 201SBE008, 2012**

**15. Memory Improving and Neuroprotective Effects of Angiotensin 1-7 in Alzheimer’s Disease Rat Model. 2014SBE002, 2014.**

**16. Infrastructure of Pamukkale University Clinical Toxicology and Pharmacokinetic Center. 2015KRM012, 2015.**

**17. Kampo medicine in neuropharmacology. July-August- Fukuoka University-Japan, 2016.**

**18. Effect of Angiotensin 1-7 on expression of nicotinic and glutamatergic receptors expression in rat model of Alzheimer’s disease induced by Beta-amyloid 1-42. 2017SABE008, 2017.**

**19. Effect of Angiotensin 1-7 on Beta-amyloid 1-42-induced expression of nicotinic and glutamatergic receptors in SH-SY5Y cells. 2017SABE009, 2017**

**20. The possible role of aminopeptidase A inhibition on Angiotensin 1-7 expression in Aβ(1-42)-induced SH-SY5Y cells. 2017SABE010, 2017**

**21. Investigation of gender- dependent glutamatergic receptors, kynurenine pathway enzymes and behavioral changes at various developmental stages in rat schizophrenia model induced by  maternal polysaccharide and juvenile stress application. 2018SABE037, 2018**

**22.** **Molecular and behavioral effects of kynurenic acid synthesis inhibition in stress-exposed juvenil rats in maternal immune-schizophrenia model. TÜBİTAK-319S021**

**❖ACHIEVEMENTS**

* + **Establishment of the Department of Pharmacology,**
	+ **Foundation of Three Laboratories: General Pharmacology - Molecular Pharmacology and Behavioral / Nervous System Laboratories,**
	+ **Establishment of Pharmacokinetics and Toxicology center**
	+ **Establishment of the Experimental Surgery Research and Application Center**
	+ **First Self Evaluation Report of Pamukkale University**

 **❖ CERTIFICATIONS & COURSES**

* **Education Methods**
* **Problem-Oriented Medical Educations**
* **Chromatography Methods**
* **Clinical Research Ethics**
* **Animal Experimentation and Ethics**
* **Biostatistics in Medical Research**
* **GCP and GLP Training**

 **❖ HONORS & AWARDS**

**Pamukkale University-Faculty of Medicine Award of Science-Year 2019**

 **❖ LIST OF PUBLICATIONS**

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Authors** | **Journal** | **Title** |
| **1** | Hiromu Ogura, Izzettin Hatip-Al-Khatib, Midori Suenaga, Funda Bolukbasi Hatip, Takayasu Mishima, Shinsuke Fujioka, Shinji Ouma, Yoichi Matsunaga, Yoshio Tsuboi | eNeurologicalSci, 2021; 25:100369. https://doi.org/10.1016/j.ensci.2021.100369 | Circulatory 25(OH)D and 1,25(OH)2D as differential biomarkers between Multiple system atrophy and Parkinson’s disease patients. |
| **2** | **Izzettin Hatip-Al-Khatib,** Funda Bölükbaşı Hatip | Preprint. Res. Gate. 2020 ScienceOpen 2020Doi:10.14293/s2199-1006.1.sor-.pp0j7ng.v1 | Pharmacotherapy of COVID-19: confine to existential drugs or search for new ones?  |
| **3** | **Izzettin Hatip-Al-Khatib** | J Mol Cell Biol Forecast 2020; 3:1-13; Article 1021 | SARS-CoV-2 molecular peculiarities are armaments employed by the virus but could be potential targets for drugs |
| **4** | **Izzettin Hatip** | Türkiye Klinikleri Medical Journal 2020 | Brain Renin Angiotensin System: Homoestasis and Molecular Mechanisms in Diseases |
| **5** | Ai Nogami-Hara, Kaori Kubota, Kotaro Takasaki, Takuya Watanabe, Hikari Iba, Risako Fujikawa, Shutaro Katsurabayashi, Funda Bolukbasi Hatip, **Izzettin Hatip-Al-Khatib**, Katsunori Iwasaki | J Trad Chinese Med. 2019; 39:50-58 (2019).  | [Extract of Yokukansan improves anxiety-like behavior and increases serum brain-derived neurotrophic factor in rats with cerebral ischemia combined with amyloid-β42 peptide](http://www.cnki.com.cn/Article/CJFDTotal-ZYYW201901006.htm). |
| **6** | **Izzettin Hatip-Al-Khatib**, Funda Bölükbaşı Hatip. | Ann Pharmacol Pharmacy 3: Article 1161 (2018). LETTER | Tackling the amyloid beta-sheet peptide with autochthonous epitopes: beta-sheet breaker peptides. Annals Pharmacol Pharmacy |
| **7** | **Izzettin Hatip-Al-Khatib**, Funda Bölükbaşı Hatip. | Am J Pharmacol Review 2018 | Volume 1 |Issue 1 | Article 1001. REVIEW  | The protective tributary angiotensin members of renin-angiotensin system display beneficial effects in the central nervous system disorders. |
| **8** | Junichi Matsumoto; Shinya Dohgu; Fuyuko Takata; Takashi Machida.; Funda F Bölükbaşi Hatip; **Izzettin Hatip-Al-Khatib**, Atsushi Yamauchi.; Yasufumi Kataoka. | Brain Res. 1692:34-44 (2018). | TNF-α-sensitive brain pericytes activate microglia by releasing IL-6 through cooperation between IκB-NFκB and JAK-STAT3 pathways. |
| **9** | Egashira N, Akiyoshi Y, Iba H, Arai T, **Hatip-Al-Khatib I**, Mishima K, Iwasaki K | Journal of J Pharmacol Sci. 136:149-154 (2018) | Tokishakuyakusan ameliorates spatial memory deficits induced by ovariectomy combined with β-amyloid in rats.  |
| **10** | Shinji Ouma, Midori Suenaga, Funda F. Bolukbasi Hatip, **Izzettin Hatip-Al-Khatib**, Yoshio Tsuboi, Yoichi Matsunaga | Brain Behav 8:e00936 (2018) | Serum Vitamin D in patients with mild cognitive impairment and Alzheimer’s disease. |
| **11** | Ai Nogami-Hara, Masaki Nagao, Kotaro Takasaki, Nobuaki Egashira, Risako Fujikawa, Kaori Kubota, Takuya Watanabe,Shutaro Katsurabayashi, Funda Bolukbasi Hatip, **Izzettin Hatip-Al-Khatib**,  Katsunori Iwasaki | J Ethno-pharmacology 214:190-196 (2018). | The Japanese Angelica acutiloba root and yokukansan increase hippocampal acetylcholine level, prevent apoptosis and improve memory in a rat model of repeated cerebral ischemia. |
| **12** | Tan R, Bölükbaşi Hatip F, Açikalin Ö, Yamauchi A, Kataoka Y, **Hatip-Al-Khatib** I | Behav Pharmacol 29:327-335 (2018). | Effect of Varenicline on behavioral deficits in a rat model of Parkinson's disease induced by unilateral 6-hydroxydopamine lesion of substantia nigra. |
| **13** | Açikalin Ö, Bölükbaşi Hatip FF, Tan RF, **Hatip-Al-Khatib** I | Pharmacology. 97:207-17 (2016). | Effect of Angiotensin-(1-7) on Aortic Response, TNF-α, IL-1β and Receptor for Advanced Glycation Endproduct in Rat's Adjuvant-Induced Arthritis |
| **14** | Ertuğrul KAYA, Funda Bölükbaşı-Hatip, İsmail YILMAZ, **İzzettin Hatip-Al-Khatib** | Duzce medical Journal. 15:27-32 (2013). | Effect of nilvadipine on memory impairment and hippocampal malondialdehyde in rats with 4-vessel occlusion ischemia |
| **15** | Bölükbaşı Hatip Funda F,  **Hatip-Al-Khatib Izzettin** | Life Sci 92:228-36 (2013). | Effects of β-sheet breaker peptides on altered responses of thoracic aorta in rats’ Alzheimer’s disease model induced by intraamygdaloid Aβ40 |
| **16** | Hatip BF, **Hatip-Al-Khatib** I, Matsunaga Y, Suenaga M, Sen N | Curr Alzheimer Res; 7: 602-614 (2010). | Effects of 8-Residue Beta Sheet Breaker Peptides on Aged Aβ40-Induced Memory Impairment and Aβ40 Expression in Rat Brain and Serum Following Intraamygdaloid Injection |
| **17** | **İzzettin Hatip** | Turkey Clinics J Neurol-Special Topics 3:204-218 (2010). | Experimental models and studies in the field of Neuropharmacology |
| **18** | Funda F. Bölükbaşı Hatip, **İzzettin Hatip-Al-khatib**, Sibel Ülker, İsmet Dökmeci | Pamukkale Medicine Journal. 2:107-117 (2009). | Reactive responses and effect of allopurinol on relaxation responses of isolated aortic preparations in rat’s Adjuvant arthritis model |
| **19** | Katsunori Iwasaki, Nobuaki Egashira, Yuki Takagaki, Yoshitaka Yoshimitsu, **Izzettin Hatip-Al-Khatib**, Kenichi Mishima, Michihiro Fujiwara | Biol. Pharm. Bull. 30: 698-701 (2007). | Nilvadipinee prevents the impairment of spatial memory induced by cerebral ischemia combined with β–amyloid in rats |
| **20** | **Izzettin Hatip-Al-Khatib**, Katsunori Iwasaki, Nobuaki Egashira, Daisuke Ishibashi, Kenichi Mishima and Michihiro Fujiwara. | J Pharmacol Sci 103: 83-91 (2007).  | Comparison of single- and repeated ischemia-induced changes in expression of flip and flop splice variants of AMPA receptor subtypes GluR1 and GluR2 in the rats hippocampus CA1 subregion. |
| **21** | **Izzettin Hatip-Al-Khatib**, Funda Bölukbaşı Hatip, Yoshitaka Yoshimitsu, Katsunori Iwasaki, Nobuaki Egashira, An-Xin Liu, Kenichi Mishima and Michihiro Fujiwara | Phytother Res 21: 291-294 (2007). | Effect of Toki-Shakuyaku-San on acetylcholine level and blood flow in dorsal Hippocampus of intact and twice-repeated ischemic rats |
| **22** | Katsunori Iwasaki Nobuaki Egashira, **Izzettin Hatip-Al-Khatib**, Yuki Akiyoshi, Takashi Arai, Yuki Takagaki, Takuya Watanabe, Kenichi Mishima, and Michihiro Fujiwara | Brain Res 1097: 216-223 (2006). | Cerebral ischemia combined with β-amyloid impairs spatial memory in the eight-arm radial maze task in rats. |
| **23** | Ismail Yilmaz, Esat Adiguzel, Ilgaz Akdogan, Ertugrul Kaya, Izzettin Hatip-Al-Khatib | Life Sci 79: 784-790 (2006). | Effects of second generation tetracyclines on penicillin-epilepsy-induced hippocampal neuronal loss and motor incoordination in rats. |
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