



1st Hamidiye International Student Congress (HISCON)

2021, JULY 23-26 | ONLINE, TURKEY

*"On the way of health sciences,
the most genuine guide"*

Abstract submission

Start date: 18 May

Deadline: 15 June

Contact us

www.hiscon2021.com

Our congress is free and meets the academic criteria.



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1st Hamidiye International
Student Congress
2021 July 23-26

On the way of health sciences,
the most genuine guide

1st HAMIDIYE INTERNATIONAL STUDENT CONGRESS (HISCON)

CONGRESS PROGRAM AND BULLETIN SUMMARY BOOK

JULY 23-26, 2021

Zoom and Google Meet online meeting

Abstract book organizing board:

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Turgay SEFERLI

Assist. Prof. Enes AKYUZ

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Scientific Secretary e-mail: hisconsbu2021@gmail.com

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HISCON 2021 SCIENTIFIC PROGRAMME

Location: Online

Date: July 23-26

23 July 2021 (23.07.2021): <https://us02web.zoom.us/j/86458106663?pwd=R0pQZThqMHNXYUtjVkJNabTZQSU9XUT09>

Session Chair: Shams HASANLI

Meeting ID: 864 5810 6663

Passcode: 836376

Time	ZOOM		MEET
	Speaker	Presentation Subject	Student Presentations
10.30-10.35	Eren BAŞYEMENİCİ President of HISCON 2021	Opening Speeches	
10.35-10.40	Şüheda KULA President of HISCON 2021		
10.40-10.45	Dr. Enes AKYÜZ Advisor of the Organizing Committee		
10.45-11.00	Prof. Recep DEMİRHAN Chief Physician of the T.C. Ministry of Health Universtiy of Health Sciences Kartal Dr. Lütfi Kırdar City Hospital		

11.00-11.15	Prof. Fatih GÜLTEKİN Dean of the University of Health Sciences Hamidiye International Faculty of Medicine	
11.15-11.45	Prof. Muzaffer ŞEKER	Opening Lecture
13.00-14.00	Prof. Kai KAILA	Role of Brain pH in Triggering and Suppressing Neonatal Seizures: From Basic Research to Therapeutic Approaches
14.00-15.00	Prof. Ekin DEMİR	Organoid Models of Neural Invasion in Cancer
15.10-15.20	Pelin Pat	COVID-19 Virus Disease and Immunity System
15.20-15.30	Hani ALSAADONI	Investigation of MIR-21, MIR-32 and MIR-181A/B in Terms of Treatment Response in Multiple Myeloma
16.00-17.00	Prof. Bikash R. PATNAIK	Therapeutic Values of Fixing Genes
17.00-17.30	Prof. Kevin ERGİL	Professionalism and the Obligations of the Physician: Across Time and Culture
17.30-18.00	Prof. Marnae ERGİL	Chinese Medicine and Women's Health
18.00-19.00	Prof. Russel J. REITER	Melatonin and COVID-19

24 July 2021 (24.07.2021): <https://us02web.zoom.us/j/82318878570?pwd=K2c0YTVheVJraE9rd203Ujlja1dldz09>

Session Chair: Eren BAŞYEMENİCİ

Meeting ID: 823 1887 8570

Passcode: 412819

	ZOOM		MEET
Time	Speaker	Presentation Subject	Student Presentations
09.30-10.30	Lim Jack WEE	The Longitudinal Immune Responses from Asymptomatic to Convalescent Phases of COVID-19 infection	
11.00-12.00	Prof. Serdar KUYUCAK	Rational Drug Design Using High Performance Computers	
12.10-12.20	İrem KÜLLÜ	α 7NACHR and HMGB1 Expression in the Vagus Nerve and Heart Tissue in Experimental Epilepsy Model	
12.20-12.30	Enes AKYÜZ	Ion Channels and SUDEP	
12.30-12.40	Cem Ata TÜRKYILMAZ, & Cansel DEMİREL	Investigation of the Relationship Between the COVID-19 Pandemic and Anxiety Levels of Individuals Living in Istanbul within the Ages of 18-65	

13.00-14.00	Dr. Mohmad Farooq SHAIKH	Multi-Model Approach for a Multifactorial Disease: Pharmacological Effectiveness of Embelin In Alzheimer's Disease Like Condition
14.10-14.20	Melike AY	The Effects of Brain Derived Neurotrophic Factors on Cochlear Function
14.20-14.30	Zeynep YILMAZ	The Effect of Traumatic Brain Injury (TBI) on Telomere Length and Hybrid Telomeric Repeat Containing RNA (TERRA) Levels in the Hypothalamic-Pituitary-Adrenal (HPA) Axis
14.30-14.40	Eren BAŞYEMENİCİ	Eating Disorders and Comorbid Mental Problems
14.40-14.50	Mohaddeseh Davoudi BILEHSAVAR	Control of 24-Hour Blood Pressure with Inhibitors to Prevent Cardiovascular Disease
16.00-17.30	Panel	Transboundary Medicine
18.00-19.00	Prof. Gabriel-Lopez BERESTEIN	Non-coding RNAs in Cancer Therapeutics

25 July 2021 (25.07.2021): <https://us02web.zoom.us/j/85319346903?pwd=VkY3QkR2SFF3K1NHVnIiUXk0RCtHZz09>

Session Chair: Şüheda KULA

Meeting ID: 853 1934 6903

Passcode: 228711

ZOOM			MEET
Time	Speaker	Presentation Subject	Student Presentations
9.30-10.30	Dr. Özgür TATAROĞLU	Applications of CRISPR in Research	
10.40-10.50	Shams HASANLI	Automatic Detection of Congestive Heart Failure by ECG Signal	
10.50-11.00	Şüheda KULA	Aphantasia: The Blind Mind's Eye	
11.00-11.10	Meryem Esma DÜZ	Comparison of the Volume Rates of Thalamus, Hypothalamus, Corpus Amygdaloideum, Corpus Mamillare Obtained by MRICloud Method in Alzheimer Patients and Healthy People, in Early Stage and Middle Stage Alzheimer's Patients	
11.10-11.20	Murat ÖZCAK	Determination of Herbal Resources Containing Qerecetin, Medical Evaluation Opportunities and Effect Mechanism	

12.00-13.00	Prof. Manabe TOSHIKI	My Medical School Days (1965 Through 1971) That Influenced My Later Life	
16.00-17.00	Prof. Mark STEWART	Creating Experimental Conditions to Study Rare, Sudden Causes of Death: Use of Animal And Human Models of Extreme Physiology	
17.00-17.30	Prof. Bahar USLU	Medicine in Future	

26 July 2021 (26.07.2021): [https://us02web.zoom.us/j/84942769905?](https://us02web.zoom.us/j/84942769905?pwd=Wm1sR3ZFNkpCRENTSHVHSII0ZFV6QT09)
[pwd=Wm1sR3ZFNkpCRENTSHVHSII0ZFV6QT09](https://us02web.zoom.us/j/84942769905?pwd=Wm1sR3ZFNkpCRENTSHVHSII0ZFV6QT09)

Session Chair: Ayşenur TAŞKAN

Meeting ID: 849 4276 9905

Passcode: 715940

	ZOOM		MEET
Time	Speaker	Presentation Subject	Student Presentations
13.00-14.00	Prof. Andrew LEE	Lessons for Public Health from the COVID-19 Pandemic	
14.00-15.00	Prof. Vassiliki A. BOUSSIOTIS	Novel Targets and Biomarkers of Checkpoint Immunotherapy	
15.30-16.00	Award and Closing Ceremony		

July 23 2021: <https://meet.google.com/qzj-qwyn-xca>

COVID-19 VIDEO SESSION 12.00-13.50

Time	Presentation
12.00-12.10	Atiye Nur CANDAN, Burdur Mehmet Akif Ersoy University, "THE PROCESS OF USING HOME CARE SERVICES FOR GERIATRIC ADULTS IN THE COVID-19 PANDEMIC"
12.10-12.20	Emine Gül UMUTLU, Marmara University, "CHANGE OF ACUTE PHASE REACTANTS AND LEUKOCYTE POPULATION DATA WITH INFECTION SEVERITY IN COVID-19 PATIENTS APPLYING TO MARMARA UNIVERSITY PENDİK EDUCATION RESEARCH HOSPITAL"
12.20-12.30	Salih DOĞRU, Burdur Mehmet Akif Ersoy University, "THE PERCEIVED ABILITY TO COPE WITH TRAUMA EXPERIENCED DURING COVID-19 AND RELATED SOME VARIABLES"
12.30-12.40	Gülhan ŞEN, Burdur Mehmet Akif Ersoy University, "EFFECTS OF COVID-19 PANDEMIC ON INDIVIDUALS LIVING UNDER TEMPORARY PROTECTION IN TURKEY"
12.40-12.50	Betül ÇELİK, Burdur Mehmet Akif Ersoy University, "SIDE EFFECTS OF DRUGS USED IN COVID 19 CASES WORLDWIDE"
12.50-13.00	Ayşenur POYRAZ, University of Health Sciences, "COVID-19 RISK IN CYSTIC FIBROSIS PATIENTS"
13.00-13.10	Sevda ELKATMIŞ, University of Health Sciences, "BREASTFEEDING PROBLEMS DURING THE COVID-19 PANDEMIC"
13.10-13.20	Aylin Seher UZUNOĞLU, University of Health Sciences, "PROFILING OF SARS-CoV-2 SPECIFIC T CELL EPITOPES"
13.20-13.30	Merve Saide UZUNOĞLU, University of Health Sciences, "SARS-CoV-2 VARIANTS AND IMMUNE EVASION"
13.30-13.40	Fatma TOSUN, Yıldız Technical University, "RAPID DIAGNOSIS OF COVID-19 BY ARTIFICIAL INTELLIGENCE METHODS"
13.40-13.50	Fatma TOSUN, Yıldız Technical University, "TREATMENT OF COVID-19 THROUGH GLYCO-ENGINEERING"

VIDEO SESSION 1 15.00-17.00

15.00-15.10	Kseniya O. PRYBOLOVETS, Odesa National Medical University, "ON PEROXISOMAL PROLIFERATOR-ACTIVATED γ -RECEPTORS (PPAR- γ) ROLE IN ANTISEIZURE EFFECTS OF PALEOCEREBELLAR STIMULATION"
15.10-15.20	Pınar BURAK, University of Sarajevo, "INVESTIGATION OF LEVELS OF TRACE ELEMENTS AND MALAT DEHYDROGENASE, ISOCITRATE DEHYDROGENASE, GLUTAMATE DEHYDROGENASE ENZYME ACTIVITIES IN GRAVES PATIENTS"
15.20-15.30	Tolga UÇ, Burdur Mehmet Akif Ersoy University, "EMERGENCY MANAGEMENT IN RADIOLOGICAL THREATS AND TERRORIST EVENTS"
15.30-15.40	Eda ARICI, Burdur Mehmet Akif Ersoy University, "BODYBUILDING ATHLETES AND ERGOGENIC AIDS"
15.40-15.50	Büşra DİKMEN, Burdur Mehmet Akif Ersoy University, "GLOBAL TO LOCAL DISASTER RISK MANAGEMENT: SYSTEMATIC REVIEW"
15.50-16.00	Remziye BANKA, Burdur Mehmet Akif Ersoy University, "DOKING STUDY WITH TELOMERAZ&CD8 TRANSMEMBRANE GLYCOPROTEIN, ACETIC ACID ACTIVE SUBSTANCE"
16.00-16.10	Fatma Kübra DÜZGÜN, Burdur Mehmet Akif Ersoy University, "MOLECULAR DOCKING OF β -CRYPTOXANTHIN AND TELOMERASE ENZYME INTERACTION"
16.10-16.20	Hadiye Büşra SİPAHİ, Burdur Mehmet Akif Ersoy University. "DOKING ANALYSIS OF MOLECULE & LIGAND INTERFERENCE: HARMIN & TELOMERASE ENZYME"
16.20-16.30	Rushana ABDİRASHİTOVA, Burdur Mehmet Akif Ersoy University, "THALESSEMIA PATIENTS WAITING FOR BLOOD DONATION"
16.30-16.40	İlayda MERT, Burdur Mehmet Akif Ersoy University, "DISASTER MANAGEMENT SYSTEM"
16.40-16.50	Hamza Utku ÖZCAN, Burdur Mehmet Akif Ersoy University, "BATTEN DISEASE"
16.50-17.00	Kyrylo A. LATYPOV, Odesa National Medical University, "NEURODEGENERATION AND MICROCIRCULATION MORPHOLOGY IN BRAIN STRUCTURES OF PENTYLENETETRAZOL (PTZ)-KINDLED RATS"

JULY 24 2021: <https://meet.google.com/xrs-jxmy-zin>

VIDEO SESSION 2 13.00-16.00

13.00-13.10	Aleyna TOPALOĞLU, University of Health Sciences, "COMPARISON OF MICRORNA AND MRNA EXPRESSION LEVELS OF TYPE 2 DIABETES AND DIABETIC NEUROPATHY PATIENTS"
13.10-13.20	Zemfira MAMMAZADE, University of Health Sciences, "MICROVASCULAR COMPLICATIONS SEEN IN DIABETES MELLITUS"
13.20-13.30	Sena Ebru ÇAĞLAR, University of Health Sciences, "ERYTHROCYTE DEFORMABILITY IN HYPERTHYROID PATIENTS"
13.30-13.40	Nurbanu BAKIR, University of Health Sciences, "THE ROLE OF THE MAOA GENE IN CRIMINAL BEHAVIOR"
13.40-13.50	Busenur BOLAT, University of Health Sciences, "LENTI-VIRAL BASED GDNF PRE-TREATMENT IS NEUROPROTECTIVE FOR STRIATAL NEURON"
13.50-14.00	Elaheh ABDI KORDLAR, University of Health Sciences, "VITILIGO AWARENESS"
14.00-14.10	Zeynep ÖRENE, University of Health Sciences, "THE OREXIN SYSTEM AND NARCOLEPSY"
14.10-14.20	Betül LAÇİN, University of Health Sciences, "GENETIC FACTORS IN OBSESSIVE COMPULSIVE DISORDER"
14.20-14.30	Sena ERTUĞRUL, University of Health Sciences, "BRUGADA SYNDROME: YESTERDAY, TODAY AND TOMORROW"
14.30-14.40	Sinem DORUK, University of Health Sciences, "EVALUATION OF THE EFFECT OF LATE-TIME EATING ON SLEEP DISORDERS IN ADULTS"
14.40-14.50	Qamar Hakeem Luqman SALEEM, University of Health Sciences, "ANTINUCLEAR ANTIBODIES IN ACTIVE TUBERCULOSIS PATIENTS"
14.50-15.00	Ekrem ACAR, University of Health Sciences, "CROSSMODAL CORRESPONDENCE: A REVIEW"
15.00-15.10	Elifnaz İLGAR, University of Health Sciences, "INTERACTION BETWEEN MICROBIOTA AND IgA"
15.10-15.20	Bengü AKÇAM, University of Health Sciences, "THE ROLE OF INNATE IMMUNITY AT HEALTHY NEURODEVELOPMENT"
15.20-15.30	Turgay SEFERLİ, University of Health Sciences, "INVESTIGATION OF DAMAGE AND URINARY EFFECTS OF MULTIPLE DRUG USE IN ELDERLY"

15.30-15.40	Kübra Gül KOCA, University of Health Sciences, "THE RELATIONSHIP BETWEEN IDIOPATHIC INTRACRANIAL HYPERTENSION AND OBESITY"
15.40-15.50	Gökçe KARAOTMARLI, University of Health Sciences, "ZERO DIMENSIONAL NANOCARRIER SYSTEMS: CARBON QUANTUM DOTS"
15.50-16.00	Ayşenur BİLGEHAN, University of Health Sciences, "NUTRITIONAL PROBLEMS AND NEW DIETARY TREND AMONG INDIVIDUALS"

JULY 25 2021: <https://meet.google.com/dpt-rsxr-fhw>

VIDEO SESSION 3 13.00-16.10

13.00-13.10	Ahsen Nihal AKSOY, Marmara University, "THE EFFECT OF TELEREHABILITATION ON QUALITY OF LIFE, ANXIETY AND DEPRESSION LEVELS IN CYSTIC FIBROSIS PATIENTS AND CAREGIVERS"
13.10-13.20	Aslı OKAN, Yozgat Bozok University, "IMMUNOREACTIVE DEFINATION OF TNF, HIF-1, Kir6.2, Kir3.1 AND M2 MUSCARINIC RESEPTOR FOR CARDIAC AND PANCREATIC TISSUES IN A MOUSE MODEL FOR TYPE 1 DIABETES"
13.20-13.30	Aslı OKAN, Yozgat Bozok University, "CONCOMITANT USE OF LINAGLIPTIN AND INSULIN IN A MOUSE MODEL OF TYPE 1 DIABETES IS EFFECTIVE IN PRESERVING OVARIAN FOLLICLE RESERVE"
13.30-13.40	Bahtışen AKARÇAY, Burdur Mehmet Akif Ersoy University, DOCKING INTERACTION OF ZEAXANTHIN LIGAND AND TELOMER MACROMOLECULE
13.40-13.50	Barış GÜRSU, University of Gazi, "FINITE DIFFERENCE TIME DOMAIN (FDTD) APPLICATION FOR TISSUE-THERMAL ANALYSIS BASED ON PENNES' BIOHEAT EQUATION IN ELECTROMAGNETIC ENERGY EXPOSURE"
13.50-14.00	Seda Nur KÖKTÜRK, Bayburt University, "CIRCADIAN RHYTHM, NUTRITION AND OCCUPATIONAL ACCIDENTS IN FEMALE SHIFT WORKERS"

14.00-14.10	Gülşah KÖRPE, Istanbul Medipol University, "VALIDITY AND RELIABILITY OF THE TURKISH VERSION OF SCREENING TOOL ON DISTRESS IN FERTILITY TREATMENT (SCREENIVF)"
14.10-14.20	Eda DEMIRCI, Marmara University, "IMPACT OF STEP EXERCİSES ON HEART RATE AND RESPIRATIONS İN UNİVERSİTY STUDENTS WHICH ARE SEDANTER AGED 18-25"
14.20-14.30	Kezban KOCA, Karabuk University, "PLACENTA PREVIA AND MİDWİFERY CARE"
14.30-14.40	Buse DOĞAN, Burdur Mehmet Akif Ersoy University, MOLECULAR DOCKING STUDY OF μ -OPIOID & TELOMERASE INTERACTION OF CARBAMAZEPIN
14.40-14.50	Emir MUVAFFAK, University of Health Sciences, FLIPPED CLASSROOM MODEL IN ANATOMY EDUCATION
14.50-15.00	Sude TOPKARAOĞLU, University of Health Sciences, "INVESTIGATION OF THE EFFECTS OF LUTEOLIN ON DOXORUBICIN -INDUCED NEPHROTOXICITY IN RATS"
15.00-15.10	Kamran HUSEYNLI, Ankara University, "USE OF NANOTECHNOLOGY IN THE DIAGNOSIS AND TREATMENT OF PARKINSON'S DISEASE"
15.10-15.20	Yağmur ÇAPA, University of Health Sciences, "FUNCTIONAL ORAL AND DENTAL HEALTH PRODUCTS USED DURING COVID-19 PANDEMIC: PRODUCT DESIGN APPROACH BASED ON CONTENT ANALYSIS METHOD"
15.20-15.30	Aysun Büşra BAYRAM, University of Health Sciences, "A REVIEW OF THE CURRENT BENEFITS OF COLOSTRUM FOR USES IN NUTRACEUTICAL PRODUCT DEVELOPMENT"
15.30-15.40	Kardelen AVŞAR, University of Health Sciences, "THE NEGATIVE IMPACT OF COVID-19 PANDEMIC ON EYE HEALTH"
15.40-15.50	Evin ÇETİN, University of Health Sciences, "THE EFFECT OF THE COVID-19 PANDEMIC ON SLEEP AND STRESS PROBLEMS AND ASSESMENT OF THE PRODUCTS USED IN THE TREATMENT OF THESE PROBLEMS"

15.50-16.00	Damla YILMAZ, University of Health Sciences, “INVESTIGATION OF THE EFFECTS OF COVID-19 PANDEMIC ON THE VEGAN NUTRITION AND NUTRACEUTICAL PRODUCT CONSUMPTION”
16.00-16.10	Sehernaz TOPUZOĞLU, University of Health Sciences, INVESTIGATION OF THE ANTIOXIDANT EFFECTS AND STRENGTHENING OF THE IMMUNITY OF THE COMBINATION OF LIPOSOMAL CURCUMIN AND RESVERATROL IN BLACK ELDERBERRY SHOTS

JULY 26 2021: <https://meet.google.com/cyc-nyfd-gdz>

VIDEO SESSION 4 10.00-12.00

10.00-10.10	Ayşenur SAYGILI, Inonu University, “FAMILIAL MEDITERRANEAN FEVER AND GENE THERAPY THE RELATIONSHIP BETWEEN”
10.10-10.20	Yagut ALLAHVERDIZADE, Istanbul University – Cerrahpaşa, “MINIMALLY INVASIVE AND NON-INVASIVE MEASUREMENT METHODS OF INTRACRANIAL PRESSURE”
10.20-10.30	Melisa Sude ÇAVUŞ, Ondokuz Mayıs University of Health Sciences, “SKIN PICKING (EXCORIATION) DISORDER: A SYSTEMATIC REVIEW OF PHARMALOGICAL AND ALTERNATIVE TREATMENTS”
10.30-10.40	Şükrü ATEŞ, Yozgat Bozok University, “THE EFFECT OF ANTIOXIDANTS IN EHRlich ASCITES CANCER”
10.40-10.50	Hilal ACAR, Karabuk University, “GESTATIONAL TROPHOBLASTIC DISEASES AND MIDWIFERY CARE”
10.50-11.00	Berdan Erdost BOZKURT, Canakkale Onsekiz Mart University, “THE CONNECTION BETWEEN GUT MICROBIOME AND BREAST CANCER”
11.00-11.10	Nejla ÖZTÜRK, Giresun University, “TOXOPLASMA GONDII AS A RISK FACTOR FOR ALZHEIMER’S DISEASE”
11.10-11.20	Fatih MARAL, Bezmialem Vakif University, “LOW DOSE LASER THERAPY IN TRIGEMINAL NEURALGI”
11.20-11.30	İremnur GÜLTEN, Afyonkarahisar Health Sciences University, “CHANGES IN THE NEURON AND THE NERVOUS SYSTEM UNDER MICROGRAVITY EFFECT”

11.30-11.40	Adem TOKPINAR, Yozgat Bozok University, "DOES RHAMNITIN HAVE AN EFFECT ON P13K, AKT1 AND MTOR SIGNALING PATHWAYS IN MICE WITH EHRlich ASCITES TUMOR (EAT)?"
11.40-11.50	Şevval ARSLAN, Marmara University, "THE ALTERATIONS OF THE MICROBIOTA RELATED TO THE PPI'S AND CONSEQUENCES"
11.50-12.00	Damla SIBIÇ, Karabuk University, "PELVIC INFLAMMATORY DISEASE AND MIDWIFERY CARE"

VIDEO SESSION 5 13.00-15.10

13.00-13.10	Şeyma Nur YILMAZ, Karabuk University, "CARE FOR FREQUENT VULVAR LESIONS AND MIDWIFERY CARE"
13.10-13.20	Berrak ZEYNEL, Ankara University, "RELATIONSHIP BETWEEN DYSBIOSIS AND COLORECTAL CANCER"
13.20-13.30	Özge ÇAĞLAR, Selcuk University, "ALZHEIMER'S DISEASE TREATMENT NANOTHERANOSTIC APPROACHES"
13.30-13.40	Ayşenur ÖZMEN, Istanbul Uskudar University, "LITERATURE REVIEW OF DISRUPTED NEUROBIOLOGICAL MECHANISMS IN ADOLESCENTS WITH INTERNET ADDICTION: FMRI STUDIES"
13.40-13.50	Memduh Salih ÇİFCİBAŞI, Çanakkale Onsekiz Mart University, "CURRENT DEVELOPMENTS IN THORACIC AND ROBOTIC SURGERY TECHNIQUES"
13.50-14.00	Omer Faruk CETINER, University of Duzce, "THE EFFECT OF ANTIBIOTICS USE ON THE GUT MICROBIOTA"
14.00-14.10	Gözde ÜÇER, University of Firat, "DOPAMIN IN SHIZOPHRENIA"
14.10-14.20	Zeynep Sena BİRER, Uludağ University, "NRF2 PATHWAY AS THERAPEUTIC TARGET IN ALZHEIMER'S DISEASE"
14.20-14.30	Aybike DEMIRTAŞ, Inonu University Faculty of Medicine, "INVESTIGATION OF POTENTIAL PROBIOTIC PROPERTIES AND EVALUATION OF MICROORGANISM COMPOSITION OF SUN DRIED APRICOT PRODUCED IN TURKEY"
14.30-14.40	Kemal Gökhan NALBANT, Beykent University, "IMPORTANCE AND APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN HEALTH SCIENCE"
14.40-14.50	Berivan HAZAR, Inonu University, "EFFECT OF HELICOBACTER PYLORI ON GASTRIC CANCER"

14.50-15.00	Talatcan IKIZOGLU, Celal Bayar University, "EFFECTS AND CLINICAL APPLICATIONS OF BIOGLASS"
15.00-15.10	Özge OSMAN, Kusay AYTEKİN, University of Health Sciences, The Relationship of Sex, Age, Duration and Severity of Disease Factors with the Frequency and Duration of Smell Loss in COVID-19 Positive Patients in Turkey

ORAL PRESENTATIONS

ABS-01

VALIDITY AND RELIABILITY OF THE TURKISH VERSION OF SCREENING TOOL ON DISTRESS IN FERTILITY TREATMENT (SCREENIVF)

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Introduction: Women diagnosed with infertility and receiving treatment of infertility reported high levels of depressive symptoms, anxiety and distress. Infertile women' should first be screened for psychosocial risks. Psychosocial care interventions should be planned according to their needs.

Objective: The aim of this methodologically designed study was to test the validity and reliability of the Screening Tool on Distress in Fertility Treatment (SCREENIVF)'s Turkish version in infertile women.

Method: The study included 323 women diagnosed to be nulliparous and undergoing fertility treatment. Women filled in the descriptive characteristic questionnaire, The Copenhagen Multi-Centre Psychosocial Infertility-Fertility Problem Stress Scale (COMPI-FPSS) and the SCREENIVF.

Results: In order to examine the contribution of the items to the scale, 6 items with insufficient contribution to the scale were removed from the scale as a result of the item-total score correlation values (Corrected item-total correlation <0.25). The item-total score correlation coefficients and subscale-total score correlation coefficients obtained for each subscale ranged from .31 to .98. According to the regression equation formed in line with the multivariate linear regression model that will model the linear relationship between COMPI-FPSS, which is a scale equivalent to the subscale of the SCREENIVF, the total scores of the subscale are statistically significant predictors of the scores obtained from COMPI-FPSS, and ($F=161.281$, $p<0.001$) multiple explanatory coefficients were 77.2%. Cronbach's alpha coefficient was found to be 0.77 and accepted to be reliable. 16% of the women participating in the study were above the cut-off scores in terms of anxiety and depression, 13.9% acceptance, 8.2% hopelessness and 2% social support. The scale consists of 5 subscales and 28 items.

Discussion and Conclusion: The findings indicate that the Turkish version of SCREENIVF is a valid and reliable measurement tool that can be used in routine assessment in terms of psychosocial aspects in the infertility treatment process.

Keywords: Psychosocial Care, Infertility, Distress, Depression, Validation

ABS-02

THE PROCESS OF USING HOME CARE SERVICES FOR GERIATRIC ADULTS IN THE COVID-19 PANDEMIC

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Since the creation of humanity, epidemics and infectious diseases continue to grow simultaneously. As these epidemics concern individuals and societies, they also become problems at the center of health services. The COVID-19 epidemic, which started as of the end of 2019 and negatively affected the whole world, is also among these problems. The COVID-19 epidemic has caused millions of people to be infected and many people to die in the world. It has been observed that there has been an increase in the elderly adult population since the second half of the 20th century, all over the world and in our country. Older adults (geriatric individuals) have become a risk group with high morbidity and mortality rates in the COVID-19 epidemic. Although not every geriatric individual is sick and in need of care, the risk of being affected by the epidemic increases the probability of getting sick, and the need for help due to their physical inadequacies also increases. Due to the pandemic, changing priorities in hospitals, curfews, restrictions in work places and other places are putting more strain on geriatric individuals with physical disabilities. Due to the functional and physical deficiencies seen in this period, elderly individuals and their families are faced with choosing one of the social care alternatives. Home care services are a service model in which the services are provided in the home environment of the elderly and their families by addressing the health problems of the elderly people who need nursing care in their daily lives, with the multidisciplinary approach of members of different professions and the level of meeting their social needs. Home care services aim to increase the quality of life of the elderly by providing them regardless of the home environment in which they are comfortable. Therefore, home care services contain a large part of social and health services during the pandemic period. With the articles examined, it is aimed to draw attention to the home care process, which is the solution to the problems of geriatric individuals, also known as the high-risk group of the pandemic period, and to reveal its different aspects.

Keywords: Geriatric adults, Pandemic, Homecare

ABS-03

**CHANGE OF ACUTE PHASE REACTANTS AND LEUKOCYTE POPULATION DATA WITH
INFECTION SEVERITY IN COVID-19 PATIENTS APPLYING TO MARMARA UNIVERSITY PENDİK
EDUCATION RESEARCH HOSPITAL**

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Introduction and Aim: COVID-19, which emerged in China and caused a pandemic, is a virus that targets the lungs. It was observed that laboratory parameters changed according to the disease severity. In this study, we are aimed to observe the change and relationship between acute phase reactants and leukocyte population data (V-volume-C-conductivity-S-scatter-VCS) according to the severity of the disease in COVID-19 infection.

Materials and Methods: In this study, 229 patients with a diagnosis of COVID-19 who applied to Marmara University Education and Research Hospital were classified as mild (group 1), moderate (group 2) and severe (group 3); analyzed in terms of laboratory and VCS parameters. Data were analyzed with SPSS 17.0 program, Kruskal-Wallis, Mann-Whitney U tests were applied and investigated with ROC curves. $P < 0.05$ was determined as statistical significance value.

Results: There were 101 female and 128 male patients. Fatigue (69.4%), cough (59%) and shortness of breath (52.8%) were the most common complaints. In computed tomography, pulmonary involvement compatible with COVID-19 was observed in 89% of the patients. Hypertension (43.9%) and type 2 diabetes (27.5%) were the most common comorbidities. As the disease severity increased, ferritin, neutrophil percentage, D-dimer, CRP, WBC, SD of Volume of Monocytes (SDV-MO), procalcitonin increased and albumin decreased significantly ($p < 0.001$). It was observed that the neutrophil ratio percentages increased significantly as the severity of the disease increased, while the lymphocyte ratio percentages decreased significantly ($p < 0.001$).

Discussion and Conclusion: The clinical findings of the patients were similar with other studies in the literature. Acute phase reactants (D-Dimer, ferritin, procalcitonin) were also found to increase with disease severity. In our study, lymphocyte-neutrophil percentage, D-Dimer, procalcitonin, CRP are good markers in observing the severity of COVID-19 infection. In VCS parameters, SDV-MO sensitivity was 61.6% and specificity was 61.3%. In cases where urgent decision is required, treatment and intensive care admission can be decided with these parameters.

Keywords: COVID-19, acute phase reactants, leukocyte population data

1st Hamidiye International Student Congress (HISCON2021), July 23-26, 2021 / online

ABS-04

**THE EFFECT OF TELEREHABILITATION ON QUALITY OF LIFE, ANXIETY AND DEPRESSION
LEVELS IN CYSTIC FIBROSIS PATIENTS AND CAREGIVERS**

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Introduction and Purpose: Cystic fibrosis (CF) is a disease that shortens life expectancy and directly affects quality of life. Due to benefit of exercise in CF, exercise programs have important role in CF physiotherapy. It is aimed to examine the effect of telerehabilitation on the quality of life, anxiety and depression levels of CF children who have to stay in home during pandemic and to show that telerehabilitation is an effective way to exercise.

Methods: It is planned to recruit 30 patients and 30 caregivers enrolled in Marmara University Department of Physical Medicine and Rehabilitation. Patients were randomly distributed to the exercise and control group equally via computer. The exercise program is applied twice a week via Zoom. 4 questionnaires [Cystic Fibrosis Revised Questionnaire (CFQ-R), Revised Children's Anxiety and Depression Scale (RCARDS), State Trait Anxiety Inventory (STAI), Beck Depression Inventory (BDI)] were used. 6min walking distances (6WD) and pulmonary function results (FEV1 value) were noted. The data were evaluated in SPSS program with simple descriptive methods and two ways mixed ANOVA. The Significance value is accepted as $p < 0.05$.

Findings: Totally 28 patients and caregivers participated in the study. The mean age of the patients is 9.93 ± 1.86 and 9 (29%) are male. The average age of caregivers is 37.0 ± 4.93 and 28 (90.3%) are women. Considering the initial FEV1, 6WD and age values, there was no significant difference between two groups. The initial mean RCARDS-MDD score in the exercise group was 6.21 ± 3.11 , which was reduced to 3.79 ± 3.92 at the end of the study and it was significantly better ($p < 0.02$). A similar significant change was observed with the RCARDS-GAD score. Significant changes were not observed in the control group.

Conclusion: Short-term telerehabilitation applications provided significant improvement in anxiety scores of patients with CF, but did not in quality of life or functional condition.

Keywords: Cystic Fibrosis, Telerehabilitation, Anxiety, Depression, Quality of Life

ABS-05

**INVESTIGATION OF LEVELS OF TRACE ELEMENTS AND MALAT DEHYDROGENASE,
ISOCITRATE DEHYDROGENASE, GLUTAMAT DEHYDROGENASE
ENZYME ACTIVITIES IN GRAVES PATIENTS**

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INTRODUCTION: It is thought that the regulating enzymes of the Krebs (TCA) cycle located in the mitochondria, which is defined as the heart of energy metabolism, may be associated with Graves' disease, which we mostly detect with the clinical manifestation of hyperthyroidism.

MATERIAL METHOD: The study was conducted among 54 Graves' patients, 25 men and 29 women, and euthyroid healthy groups of 50 men and 50 women. It was studied with the first diagnosis and patient samples who had not received thyroid or any hormone therapy before. Diagnoses of chronic diseases such as cancer, hepatitis, diabetes, hypertension and patients who were pregnant were not included in the study.

RESULTS: In the Graves patient group, TAS level and zinc and isocitrate dehydrogenase enzyme activity were found to be significantly correlated negatively ($r: -0.374$; $p:0.005$, $r: -0.398$, $p:0.005$, respectively) and positive correlation was observed with glutamate dehydrogenase ($r:0.423$, $p: 0.005$). 0.002). A positive correlation and a significant relationship were observed between malate dehydrogenase enzyme activity and myeloperoxidase enzyme activity in the same patient group ($r:0.383$, $p:0.004$). Zinc levels were significantly different between patients and healthy controls ($p<0.001$).

DISCUSSION: In this study, we studied the trace elements zinc and copper, TCA cycle enzymes malate dehydrogenase, isocitrate dehydrogenase and glutamate dehydrogenase enzyme activities and total antioxidant status (TAS), total oxidant status (TOS) levels for the evaluation of oxidative status between Graves patients and euthyroid healthy control group. We aimed to investigate whether there is a significant difference between them.

ABS-06

INVESTIGATION OF MIR-21, MIR-32 AND MIR-181A/B IN TERMS OF TREATMENT RESPONSE IN MULTIPLE MYELOMA.

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Introduction/Aim: Multiple myeloma (MM) is a B-cell neoplasm characterized by the proliferation of clonal malignant plasma cells in the bone marrow. The incidence rate is higher in leukemia and hematologic system comes second after lymphoma among malignant tumors and constitutes about 15% of all haematological cancers. Despite the identification of new drugs such as thalidomide, bortezomib, and lenalidomide, which result in a higher overall response rate and longer life span in MM treatment, MM is still an untreatable disease.

MicroRNAs (miRNAs) play a role in critical biological processes such as cell differentiation, apoptosis, and cell proliferation in cancer. Recent studies have identified miRNA profiles in human myeloma cell lines and primer patient specimens, and these miRNA expression patterns have been associated with specific genetic anomalies and the patient's surveillance. The aim of this thesis work was to examine that difference in expression levels of the 4 miRNAs (miR-21, miR-32, miR-181a and miR-181b) associated with response to treatment.

Material and methods: The level of expression of (miR-21, miR-32, miR-181a and miR-181b genes) in cells of Multiple Myeloma patients, RNA samples that obtained from whole blood samples of 40 MM patients (pre-treatment and post-treatment) and healthy control groups were investigated the expression pattern of miRNAs using Real-Time PCR technique.

Results: The comparison of MM group with healthy controls revealed upregulation of 4 miRNAs levels before starting of chemotherapy treatment, and after treatment there were decreased in these levels as response in treatment, but some patients showed non-response effect to treatment. In chemotherapy response group, the length of time free from MM disease was associated with decreased miR-32 Expression levels because of treatment response.

Conclusion: miR-21, miR-32, miR-181a and miR-181b regulate cell differentiation, proliferation, apoptosis and participate in vascular invasion and metastasis of tumor cells.

We believe that the inhibition of miR-21, miR-32, miR-181a and miR-181b in future experiments with anticancer drugs, and the investigation of whether drug activity develops if these microRNAs are inhibited can also contribute to both the patient's benefit and the literature.

Keywords: Multiple myeloma, cancer, microRNA, plasma cell, real-time PCR

ABS-07

THE PERCEIVED ABILITY TO COPE WITH TRAUMA EXPERIENCED DURING COVID-19 AND RELATED SOME VARIABLES

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Introduction: The rapid spread of the COVID-19 pandemic, its global impact on the world, the unavoidable increases in epidemics, and loss of life; cause psychological problems such as hopelessness, fear, and anxiety in individuals.

Objective: The aim of our study is to examine the perception of coping with the trauma experienced during the COVID-19 pandemic and some related variables.

Method: We completed this cross-sectional epidemiological study with 986 individuals between December 2020 and March 2021 via an online survey on Google Forms. We collected the information via a questionnaire including socio-demographic factors, the Perceived Ability to Cope with Trauma Scale (PACT), the COVID-19 Fear Scale, and the Coronavirus Anxiety Scale (CAS). We analyzed the data via SPSS 25.0 program using and value of $p < 0,05$ was considered significant.

Results: In this study, 72.8% of the individuals were women, 85.1% were between the ages of 18 and 27 years, and 59.2% lived in the city center. 95.4% of individuals stated that they had knowledge of epidemics or infectious diseases, and 21.8% did not know enough about COVID-19. The average PACT Scale score of the participants was 88.06 ± 24.42 . Women had lower PACT Scale and future subdivision score ($32,2 \pm 9,87$, $33,1 \pm 11,71$, respectively) compared to men and the difference between the two groups was statistically significant ($p = 0.006$). There was a negative correlation between the COVID-19 Fear Scale both the PACT Scale trauma sub-dimension and the total score ($r = -0.240$, $p < 0.001$; $r = -0.156$, $p < 0.001$, respectively). There was a negative correlation between the CAS both the PACT Scale trauma subscale and the total score ($r = -0.157$, $p < 0.001$; $r = 0.113$, $p < 0.001$, respectively).

Conclusion: Gender, general health status, and income status are variables associated with the perception of coping with trauma. There is a relationship between fear and anxiety of COVID-19 and the perceived ability to cope with trauma.

Keywords: COVID-19, Coronavirus anxiety, Cope with trauma.

ABS-08

INVESTIGATION OF THE EFFECTS OF LUTEOLIN ON DOXORUBICIN-INDUCED NEPHROTOXICITY IN RATS

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Introduction: Doxorubicin is a drug used in cancer chemotherapy. It is frequently used in cancer treatment because of its ability to inhibit cell proliferation however, its toxic effect limits its usage. Nephrotoxicity occurs in the kidney tissues of rats treated with doxorubicin. Morphological damage is observed in the kidney. Previous research shows that tissue damage caused by doxorubicin decreased in rats treated with antioxidant substances together with doxorubicin. Luteolin is a flavonoid with antioxidant properties. It has antiproliferative, proapoptotic, anti-inflammatory properties. It also has a DNA damage protective effect. It is shown that luteolin treatment has decreased toxic responses, and it has improved antioxidant capacity and interleukine-10 levels on nephrotoxicity.

Objective: In this study, we aimed to investigate the effects of luteolin on doxorubicin-induced nephrotoxicity in male rats histologically.

Method: 34 male rats were divided into 4 groups: Group 1 Control (n=7): Saline injections, Group 2 DOX (n=9): 5 mg/kg doxorubicin injections, Group 3 LUT (n=9): 20 µg/kg luteolin injections, Group 4 DOX+LUT (n=9): Doxorubicin and luteolin injections were given. Kidney tissue was examined histologically (Hematoxylin & Eosin, PAS, Masson Trichrome and Toluidine Blue staining).

Results: Following changes were observed between the DOX group and the DOX-LUT group (p<0.05): There was tubular epithelial edema, inflammation, inflammatory cell infiltration, dilatation of Bowman's space in the DOX group. Mild inflammation and Bowman space dilatation were observed in the DOX-LUT group.

Discussion and Conclusion: Our results show that severe degenerative changes occurred in the DOX group, especially in the tubular epithelial structure. Contraction in the lumen of degenerated tubules and dilatation of Bowman's space were observed. In the DOX+LUT group, luteolin application reduced the damage caused by doxorubicin. In renal damage caused by doxorubicin in rats, our studies show that the renal tubular structure was preserved as a result of luteolin treatment.

Keywords: Chemotherapy, Doxorubicin, Kidney, Luteolin, Nephrotoxicity

ABS-9

Comparison of microRNA and mRNA Expression Levels of Type 2 Diabetes and Diabetic Neuropathy Patients

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Introduction: Diabetes mellitus (DM) is a chronic metabolic disease characterized by hyperglycemia, in which the organism cannot adequately benefit from carbohydrates, fats and proteins due to insulin deficiency or defects in its effect, requires continuous medical treatment and care, reduces the quality of life of the patient due to complications. Diabetic peripheral neuropathy (DPN) is the most common complication of DM and affects different parts of the nervous system, resulting in a disruption in the normal activities of nerves in the body. miRNAs are involved in core processes associated with type 2 diabetes mellitus (T2DM), such as carbohydrate and lipid metabolism, insulin signaling pathway, and adipocytokine signaling pathway. Many studies have found that miRNA-128a, miRNA-146a, miRNA-155 and miRNA-375 may be related to disease pathology. miRNA-146a is involved in the pathophysiology of T2DM, improving diabetic retinopathy and diabetic wound healing. It has been emphasized that miRNA-155 silencing alleviates sciatic nerve damage in DPN and may be a potential candidate as a therapeutic target for DPN. It is known that the level of circulating miRNA-375 affects insulin secretion.

Objective: The aim of this study was to investigate the relationship between miRNA and mRNA expression levels in patients with type 2 diabetes and diabetic peripheral neuropathy.

Method: The study included 30 patients aged 30-75 years with T2DM who did not develop DPN, 30 patients with DPN and 30 healthy controls. 5-10 cc peripheral blood samples were taken into one EDTA tube. The expression levels of miRNA-128a, miRNA-146a, miRNA-155, miRNA-375 were determined by the real-time polymerase chain reaction (PCR) method in the samples.

Results: When each group was compared with others, no significant difference was found in miRNA-128a, miRNA-146a and miRNA-155 expression levels between T2DM patient group, DPN patient group and healthy control group ($p>0,05$). There was a significant difference in miRNA-375 expression levels between the DPN patient group and the control group ($p<0,05$). However, there was no significant difference in miRNA-375 expression levels between the T2DM patient group and the control group and between the T2DM patient group and the DPN patient group ($p>0,05$).

Discussion and Conclusion: Our study's results found that miRNA-375 may be associated with diabetic peripheral neuropathy. However, more comprehensive studies are needed.

Keywords: type 2 diabetes mellitus, diabetic neuropathy, miRNA

ABS-10

ON PEROXISOMAL PROLIFERATOR-ACTIVATED γ -RECEPTORS (PPAR- γ) ROLE IN ANTISEIZURE EFFECTS OF PALEOCEREBELLAR STIMULATIONS

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Introduction: Earlier on the model of pentylenetetrazol (PTZ) – induced kindling it was shown that blockade of PPAR γ with bisphenol A diglycidyl ether (2,2'-[(1-methylethylidene) bis(4,1-phenyleneoxymethylene)] bis-oxirane (BADGE) abolished the antiseizure effects of cerebellar transcranial direct current stimulation (tDCS) performed with the cathode (Godlevsky L. et al., 2017). Furthermore, PPAR γ agonist pioglitazone caused the suppression of epileptiform activity on both acute and chronic models of epilepsy. Meanwhile, combined effects of cerebellar tDCS and PPAR γ agonists have not been investigated yet.

Objective: The investigation aimed to determine characteristics of seizure dynamic in rats with PTZ-induced kindling under conditions of cerebellar tDCS performed after pioglitazone administration.

Method: In rats with the kindling syndrome induced by i.p. injections of PTZ (35.0 mg/kg daily, for three weeks). tDCS was performed with the cathode on the skull surface oriented to the cerebellar cortex (300 μ A, 10.0 min). Pioglitazone (100.0 mg/kg, i.p.) was administered in 60.0 min before tDCS. Fouls stimulated kindled rats were used as a control.

Results: The latent period of seizures induced by a test injection of PTZ (35.0 mg/kg) increased significantly (by 42.2% on average $P < 0.05$ vs. control) after pioglitazone administration (100.0 mg/kg, i.p.) and tDCS. Also, combined usage of tDCS and pioglitazone prevented the precipitation of generalized tonic-clonic seizure fits in 8 out of 10 rats ($P < 0.05$), reduced seizure severity by 31.3% ($P < 0.05$), and shortened the duration of ictal discharges by 45.0% ($P < 0.05$).

Discussion and Conclusion: Gained data revealed that tDCS (300 μ A, 10 min) of the paleocerebellar cortex and pioglitazone (100.0 mg/kg, i.p.) delivered separately suppress kindled seizures induced with pentylenetetrazole administration. Combined usage of tDCS and pioglitazone is followed by more pronounced increase the latency of first seizures, prevent generalized seizure fits, and inhibit ictal epileptogenesis in the frontal cortex and hippocampus of kindled rats.

Keywords: Peroxisomal proliferator-activated γ -receptors, Transcranial direct current stimulation, Epilepsy, PTZ-kindling model, Paleocerebellum

ABS-11

MICROVASCULAR COMPLICATIONS SEEN IN DIABETES MELLITUS**Zemfira MAMMADZADA***

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Diabetes is a lifelong disease caused by the deficiency or ineffectiveness of the insulin hormone. If the insulin hormone is completely missing, this diabetes is called "Type 1 diabetes (insulin dependent diabetes)". If there is insulin hormone but the amount is low or there is resistance to insulin in the tissues, this diabetes is called "Type 2 diabetes (non-insulin dependent diabetes)". Diabetes Mellitus is an important health problem with an increasing frequency all over the world, especially due to the increase in type 2. The incidence of microvascular complications such as diabetic retinopathy, diabetic nephropathy and diabetic neuropathy is increased in patients with uncontrolled or poorly treated diabetes. Microvascular disease is a pathology involving small blood vessels throughout the body. This condition can occur in various ways in different parts of the body. In patients with this condition, the walls of the small blood vessels are damaged. The vessels are gradually clogged, blocking the blood flow. Diabetic nephropathy is the most serious group of microvascular complications seen in diabetic patients, also the most common cause of chronic renal failure (33-40%). Another microvascular complication is diabetic neuropathy which is a peripheral, symmetrical, sensorineural polyneuropathy that can occur clinically or subclinically in the course of DM, especially affecting the lower extremities. And lastly microocclusion and deterioration in vessel permeability are responsible for the development of diabetic retinopathy. In line with the presented review, DM is a chronic disease that negatively affects life expectancy and quality by causing organ and function losses due to the complications it creates.

Keywords: Diabetes Mellitus, Insulin, Microvascular complications

EMERGENCY MANAGEMENT IN RADIOLOGICAL THREATS AND TERRORIST EVENTS

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The emergency situation is essentially defined as "a situation that occurs with planned attacks, disasters and accidents that can cause all kinds of material and moral losses, which have the characteristics of harming various living things in and around the area where the incident took place". While there is a limited number of things that can be done during the pre-detection of such events, which are a risk in community life, and then taking precautions, in case of an emergency, providing an approach according to the type of emergency experienced at the scene, and then the operations that can be done at the stage of closing the damages and then rebuilding are more difficult. They are many and varied. In our country, the precautions taken and the work done should be more effective, since terrorist incidents, which are a type of emergency rather than radiologically, are frequent in our country and one of the leading threats against society. In a possible terrorist incident; It is necessary to have awareness on issues such as the safety of the crime scene, how to approach the crime scene, the management of the crime scene, the evacuation of the wounded and triage. On the other hand, with the presence of a radiological threat from the past to the present in our country's Black Sea front, it also brings some gene diseases that have been going on since the past to our country. In such an emergency, it is necessary to provide a regular management in order to avoid the incident with the least damage and not to be transferred to other countries, with measures such as the protection and isolation of the crime scene, the awareness of the public against a radiological factor that may be exposed. The aim of this study is to raise awareness about the management and security of the crime scene in a possible terrorist attack and to raise awareness about how to protect the society against radiological threats that may come from another country as a threat to our country and how to survive the event with the least damage. As a result, although the existence of measures to be taken reduces the threat elements to a minimum, they cannot completely eliminate them today. For this reason, disciplines such as disaster management and event command management play a serious role in the synchronous response to such events.

Keywords: Radiological threat, Terrorism, Emergency, Attack, Disaster

ABS-13

NEURODEGENERATION AND MICROCIRCULATION MORPHOLOGY IN BRAIN STRUCTURES OF PENTYLENETETRAZOL (PTZ)-KINDLED RATS

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Introduction: Degenerations of neurons, microglia activation, and creation of new vessels underlay pathogenetic basis for the progressive and resistance to treatment epileptiform manifestations in models of chronic epilepsy. The hippocampus was the main object for such investigations, while other structures are less explored. In our work, we also investigate the paleocerebellum, which is involved in the suppression of seizure activity. The frontal cortex was chosen due to its tight functional link with the cerebellum.

Objective: In our study, we aimed to investigate the density of neurons and the total number of capillaries in the frontal cortex, ventral hippocampus, and paleocerebellar cortex of rats with fully developed pentylenetetrazol-induced kindling.

Method: PTZ administrations (35.0 mg/kg, i.p.) during three weeks were used for kindling induction in male Wistar rats. Light microscopy was performed on hematoxylin and eosin-painted slices (x200 magnification)—data presented as $M \pm S.E.$, Mann Whitney test used for statistics.

Results: The total number of microvessels in the frontal cortex was 24.33 ± 2.19 per 490.000 mcm^2 and exceeded in the control by 44.5% (13.5 ± 0.50) ($P < 0.05$). Similar prevalence was registered in the ventral hippocampus (20.67 ± 1.20 and 10.50 ± 0.55 correspondently, $P < 0.05$) and in the paleocerebellar cortex (17.0 ± 0.58 and 9.55 ± 0.45 , $P < 0.05$). At the same time, such signs on newly created vessels presence as endothelial cells mitosis, “buds” of vessels growing and bifurcations were seen. The reduction of neuron density was registered in all investigated structures. Thus, it was shown that the number of Purkinje cells (PC) per 1 mm of the length of PC row in lobule VI reduced from 65 ± 2.7 to 38 ± 1.5 ($P < 0.05$).

Discussion and Conclusion: gained data are in favor of the pronounced deteriorations in brain structures of PTZ-kindled rats. Similar data for all investigated structures was confined to loosing of principal neurons along with growing new capillaries. Effects were more pronounced in the hippocampus.

Keywords: Epilepsy, PTZ-kindling model, Neoangiogenesis, Neurodegeneration, Paleocerebellum

Eating Disorders and Comorbid Mental Problems

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Eating disorders are mental problems that affect an individual's physical health and psychosocial functioning. At least 9% of the world's population has eating disorders. Attitudes towards weight, body shape and eating habits play an important role in the prevalence and maintenance of eating disorders. Anorexia nervosa, bulimia nervosa, binge eating disorder, pica, avoidant-restrictive food intake disorder and rumination disorder; are the six eating disorders which take place in diagnostic systems. People of all ages can be affected by eating disorders. It's known that eating disorders are convenient conditions to prevalence another mental illnesses.

Mental disorders are conditions that influence ones thinking, emotion, mood and behavior. Regarding to "The Diagnostic and Statistical Manual of Mental Disorders (DSM)", there are 17 main categories of eating disorders. Mood disorders, anxiety disorders and eating disorders, substance-related disorders are four of them.

Mood disorders are group of mental conditions that disturbs person's psychology by mania and depression states. Major depression disorder and bipolar disorder are known types of this group. Anxiety disorders contains; generalized anxiety disorder, specific phobias, social anxiety disorder, panic disorder etc. in it. Substance-related disorders are conditions correlated with addictive behaviors and substances. All mental problems mentioned are commonly seen comorbid problems with eating disorders.

Eating disorders are commonly develop with body dysmorphia. On the other hand, eating disorder patients are inclined to get anxiety disorders, depression disorders and addictions. Thus living with couple of mental disorders would influence the individual's whole life.

In conclusion; this study, aims to review the researches on comorbid mental disorders in patients with eating disorders.

Keywords: Anorexia nervosa, blumia nervosa, depression, anxiety, addiction.

ABS-15

EFFECTS OF COVID-19 PANDEMIC ON INDIVIDUALS LIVING UNDER TEMPORARY PROTECTION IN TURKEY

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The Covid-19 pandemic, which is a biological disaster, has affected the whole world economically, socially, and physically. According to the updated (June 7, 2021), there are 173,674,509 cases worldwide and the total number of deaths is up to 3,744,408. The pandemic, which has many negative effects on the segment of societies, affects the effect on vulnerability groups. This study, it was aimed to examine the impact of the Covid-19 pandemic on individuals living under temporary protection in Turkey. In this context, data from both national and international reports and scientific studies published were used. Asylum-seekers and refugees are reported to be among the most vulnerable and most-at-risk groups under the current conditions of the Covid-19 pandemic. In many reports, such as being in the place prepared by the World Health Organization, Covid-19 from people is to be exposed to difficult struggles to escape from the motherlands this day. As of May 26, 2021, the number of registered Syrians under temporary protection in Turkey is 3 million 672 thousand 646 people. 1 million 740 thousand 677 (47.4%) of these people are children between the ages of 0-18. The total number of children and women aged 0-18 is 2 million 601 thousand 387 people (70.8%). In the year 2020, it has been reported that 124,375 Syrian contracted Covid-19. There are concerns that these individuals are hiding the Covid-19 infection for various reasons, so the actual number of cases may be much higher than the official case figures. Accordingly, during the fight against the Covid-19 pandemic, they have been affected economically, especially due to unemployment. While poverty and unemployment rates were already high before the pandemic, they have had difficulties in accessing basic rights and services due to the increased economic vulnerability after the pandemic. In particular, they have faced problems such as insufficient access to food and basic hygiene requirements, not being able to benefit from distance education, and insufficient access to health services. So much so that some of them may not want to access health services for fear of being deported. In addition, it has become difficult to comply with social distance and hygiene rules because refugees live in crowded households and camp environments. At the same time, having insufficient information about Covid-19 and having difficulty accessing protective equipment has been one of the other problems. This increases the risk of disproportionate transmission. Another effect of Covid-19 on refugees has been to increase the fear of social stigma. Also, refugees, as an important group in the control of the epidemic, should be vaccinated as soon as possible. In addition, the state should provide them with access to basic rights and services. Most importantly, the pandemic has reminded us once again that no one is safe until everyone is safe.

Keywords: Pandemic, Covid-19, Refugee, Turkey

BODYBUILDING ATHLETES AND ERGOGENIC AIDS**Eda ARICI¹, Gülcihan Aybike DİLEK KART², Mümin POLAT¹**

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Bodybuilding is a versatile sport that strengthens and develops the muscles and various systems of the body by using certain tools and weights, keeping the person healthy and in shape and providing the desired appearance. The main goal of people engaged in this type of sport is to show the best performance. Ergogenic comes from the Greek words ergon (work) and genon. Ergogenic aids are the general name given to the applications made to increase the performance of the athletes, but they are an effort to increase the chances of success by artificially increasing the power and energy of the people. Ergogenic aids are divided into 5 groups as nutritional, psychological, physiological, pharmacological, mechanical and biomechanical. The most preferred ergogenic aids by bodybuilders are nutritional aids. The most common nutritional aids used are; Protein powders can be listed as Glutamine, BCAA, Creatine, L-carnitine, Amino acids, Arginine. Access to these foods is very easy, and they are increasingly on the shelves in gyms and stores where sports products are sold. Although some ergogenic aids have been shown to have positive effects on athlete performance, they are available in many commercially available products that directly affect the health of athletes negatively. Evidence on the effects of ergogenic aids is scant and conflicting. For this reason, it is of great importance for the health of the athletes to examine the contents of these aids, to control their sales and to use these products under the control of a specialist.

Keywords: Ergogenic aids, Bodybuilding, Athlete health

ERYTHROCYTE DEFORMABILITY IN HYPERTHYROID PATIENTS

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Introduction: Thyroid hormones have non-genomic effects on cardiovascular system. Increased heart rate in hyperthyroid state leads to an increased shear stress exposure on erythrocytes. Also, an increase in metabolic rate in hyperthyroidism cause an increase in oxygen demand. These effects may result in structural changes on erythrocytes which may change erythrocyte deformability (ED).

Purpose: Aim of this study was to analyze the effect of thyroid hormones on ED and to investigate the effect of antithyroid treatment on ED by comparing before-after treatment measurements.

Method: 55 patients newly diagnosed with hyperthyroidism and have not used antithyroid treatment (ATT) before included in this study. 36 of these patients had overt hyperthyroidism and received methimazole as ATT. 19 patients had subclinical hyperthyroidism and did not receive treatment. Blood samples were taken at the onset of diagnosis and after euthyroid state was achieved. ED was analyzed through elongation index (EI) on 9 different shear stress values, maximum elongation index (EI_{max}) and half of the shear stress required to achieve maximum elongation index ($SS_{1/2}$), using laser-ektacytometer device. Before treatment results compared with the control group (n=66). Measurements repeated after ATT, the results compared with before treatment results.

Findings: EI, EI_{max} and $SS_{1/2}$ didnot show any significant difference among the groups also after treatment. Post-treatment results showed a significant decrease in EI_{max} compared to before treatment values (p:0,045).

Discussion&Conclusion: Decrease in EI_{max} after treatment can be due to the depressive effect of methimazole on common progenitor cell series which causes a decrease in erythropoiesis as well. Hence, decreased erythropoiesis will lead to a dominance of aged erythrocytes in peripheric circulation which may cause an overall decrease in ED. Multiple and distant measurements after the euthyroid state is achieved could reveal more obvious effects of methimazole on ED.

Keywords: Erythrocyte deformability, Hemorheology, Hyperthyroidism, Microcirculation

Note: This oral presentation is prepared with the data obtained from a thesis study.

ABS-18

Comparison of The Volume Rates of Thalamus, Hypothalamus, Corpus Amygdaloideum, Corpus Mamillare Obtained by MRICloud Method in Alzheimer Patients and Healthy People, in Early Stage and Middle Stage Alzheimer's Patients

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AIM OF STUDY: Alzheimer's disease (AD) affects more than 35 million people around the worldwide and its incidence is predicted to triple by 2050. In our study, we aimed to determine which volume ratio is more important in the differentiation of early and middle stage AD.

METHOD: The study included 24 Alzheimer's patients (10 early stage, 14 early stage), 16 control groups (KG), a total of 40 people. Telencephalon (Telen), Brain Spinal Fluid (CSF), Thalamus (Thal), Hypothalamus (HypoTh), Corpus amygdaloideum (Amyg), Corpus mamillare (Mama) data was obtained from the Type2 L5 statistics table in the web based MRICloud program. The SPSS 27.0 program was used in the analysis of the data.

FINDINGS: TelenL/AmygL, TelenL/MamaL, TelenR/AmygR and TelenR / MamaR rates were significantly higher in the AH group ($p<.05$). Although telenl/ThalL, TelenL/HypoThL and TelenR / ThalR rates were higher in the AH group, no significant differences were observed ($p>.05$). Although the ratio of TelenR / HypoThR was lower in AD group, no significant difference was observed ($p>.05$). Although TelenL / HypoThL and TelenR / AmygR were lower in the middle stage AD group, there was no significant difference ($p>.05$). CSF/TotAmyg, CSF/ThalamT, CSF/TotHypoth and CSF / TotMam ratios were significantly higher in the AH group. It was found that the CSF/ ThalamT ratio was significantly higher in the middle stage AH group ($p<.05$). Although CSF / TotAmyg, CSF / TotHypoth and CSF / TotMam ratios were higher in the middle stage AH group, no significant difference was observed ($p>.05$).

RESULTS: It was observed that the thalamus, hypothalamus, corpus amygdalaodieu and corpus mamillare volumes, showed significant morphological changes in AD patients, and all telencephalon ratios were higher in AH than in KG, except for a measured value. It has been concluded that Cerebrospinal Fluid volume rates may be more important in detection stages than Telencephalon volume rates.

Keywords: Alzheimer's Disease, MRICloud, Thalamus, Hypothalamus, Corpus Amygdaloideum, Corpus Mamillare

The Relationship Between Familial Mediterranean Fever and Gene Therapy

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Familial Mediterranean Fever (FMF) is an autosomal recessive autoinflammatory disease characterized by recurrent episodes of abdominal pain and fever, acute inflammation of the membranes covering the lungs and joints. FMF disease is caused by mutations in the MEFV gene. The FMF gene, is located on the short arm(p) of chromosome 16 (p13.3). The MEFV gene contains 10 exon regions and encodes the pyrin protein. The pyrin protein consists of 781 amino acids. Gene therapy is a method used to correct mutations in the structure of a gene and replace it with a healthy sequence.

MEFV gene, more than 200 mutations have been identified. In order of percent of the 5 most common mutations; M694V, E148Q, M680I,V726A and M694I. This disease has spread to the following geographies: Turkish, Armenian and Arab populations. In our country, the highest number of case data is reflected in the data in the Central Anatolia region. Symptoms of FMF include episodes of abdominal pain, fever, skin rash, swelling of the joints, inflammation of the pleura and shortness of breath.

CRISPR/Cas9 is a defense system found in bacteria and archaea. The CRISPR/Cas strategy, which can be used to eliminate, replace or correct unwanted genes that cause genetic diseases, is used in CRISPR/Cas9-based gene therapy CRISPR/Cas9 uses nucleic acids in the form of customizable single-stranded guide RNA (sgRNA) to target a specific locus in the genome, and an endonuclease (Cas9) to edit DNA manipulation. sgRNA directs the Cas9 enzyme, a double-stranded RNA-specific ribonuclease, to any target site

In summary, this study aimed to compile research on gene therapy of mutations in the MEFV gene seen in FMF patients.

Keywords: CRISPR/CAS9, FMF, Gene Therapy, Mutation, Rare Diseases

MINIMALLY INVASIVE AND NON-INVASIVE MEASUREMENT METHODS OF INTRACRANIAL PRESSURE

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Intracranial pressure (ICP) is formed by the cerebrospinal fluid (CSF), brain and spinal cord structures within the skull. The volume of the intracranial cavity under normal conditions is constant. Therefore, the maintenance of a constant ICP depends on the volume of its contents. Brain tissue is incompressible, so there must be a balance between the rate of arterial and venous blood, also the rate of CSF production and drainage. ICP may increase with the addition of a fourth component, such as mass, intracranial hemorrhage, or cerebral edema. ICP measurement is performed to evaluate the intracranial volume changes. Measurement of ICP is a cornerstone in surveillance and diagnosis of neurological and neurosurgical patients.

Invasive methods have some risks such as infection, bleeding, thrombus that can even be life- threatening. The interest in developing less invasive or non-invasive methods to reduce these risks is increasing with the development of technology. With the combination of various biosensors, imaging-based methods and artificial intelligence make a great contribution to safer diagnosis and treatment process.

Imaging-based methods such as magnetic resonance imaging, ultrasonography, positron emission tomography, robotic surgery, which have developed in the last 50 years, have a very significant role in both diagnosis and treatment. These processes become easier and more beneficial with the development of new technologies and the improvement of existing ones.

Lumbar puncture and ventricular catheter methods are mostly provided invasively by pressure measurement. They are prone to various complications such as infection, bleeding, and neurological deficits and are not sufficient for long-term follow-up. For this reason, studies on the development are targeted less risky methods such as epidural, otic and transcranial doppler methods.

In summary, in this content, it is aimed to compile the latest and current studies on the less invasive and non-invasive measurement of ICP.

Keywords: Imaging-based method, biosensor, cerebrospinal fluid, transcranial doppler

THE EFFECT OF ANTIOXIDANTS IN EHRlich ASCITES CANCER

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A fundamental goal in molecular oncology is to unravel the underlying mechanisms which cause the cell transformation. In line with this approach, genome-wide functional screening approaches have revealed exciting insights into heterogeneous nature of cancer. Rapidly expanding horizons of research have unraveled myriad of pathways which play instrumental role in carcinogenesis and metastasis. Oxidative stress has also been reported to be significantly involved in cancer onset and progression. In line with this approach, oxidative stress modulating chemicals have always been sharply divided into antioxidants and oxidative stress-inducing agents. Conceptual and experimental advancements have enabled us to critically analyze full potential of these two different groups of chemicals in cancer chemoprevention. Different antioxidants are currently being analyzed in different phases of clinical trials. Although it has been reported in the literature that antioxidant supplements reduce tumor cells in some tumors or cause volume reduction in solid tumor sizes, there is no definite consensus. Therefore, an antioxidant supplement guideline based on more detailed clinical research and as a result of these is needed to achieve the best care for cancer patients and to avoid risky treatments for cancer patients.

Keywords: Ehrlich Ascites Cancer, Antioxidants, Oxidative Stress

GESTATIONAL TROPHOBLASTIC DISEASES AND MIDWIFERY CARE**Hilal ACAR*, Reyhan AYDIN DOĞAN****

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Gestational Trophoblastic Diseases (GTD) is a cluster of diseases characterized by abnormal and excessive proliferation of trophoblast cells as a result of the abnormal fertilization process. They originate from the placenta and are neoplasms that tend to spread. Gestational Trophoblastic Diseases are of two types, benign and malignant. Exaggerated placental site, placental site nodule, hydatiform mole (partial and complete) constitute benign GTD. Malignant GTD consists of invasive mole hydatiform, choriocarcinoma, placental site trophoblastic tumor and its variant, epithelioid trophoblastic tumor. The different types of GTD symptomatology and diagnostic methods are examined. The various treatment modalities are reviewed. In the management of GTD and GTN, midwives need to be aware of the incidence, risk factors, and symptoms of certain types of GTD so that they can diagnose and refer to treatment in a timely manner. The psychosocial aspects that affect the woman who has not only had a pregnancy loss but also may be faced with a life-threatening illness are examined within the scope of midwifery practices. The aim of this review, which is written as a review, is to draw attention to the classification, incidence, symptoms, diagnostic methods, treatment and midwifery care of gestational trophoblastic diseases in the light of current literature.

Keywords: Gestational trophoblastic disease, Gestational trophoblastic neoplasia, Hidatiform Mol, Choriocarcinoma, Midwifery care.

GLOBAL TO LOCAL DISASTER RISK MANAGEMENT: SYSTEMATIC REVIEW**Büşra Dikmen***

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Introduction: Disasters; They are disasters that develop suddenly, disrupt daily life, cause social, psychological, environmental, and cultural losses as well as physical losses, in which local opportunities are insufficient, that may cause a secondary event, that occur because of natural or man-made hazards. Disaster management consists of four main topics. These; mitigation, preparedness, response, and recovery. The first two phases are risk management; The last two phases are called crisis management.

Objective: After the 'International Decade for Reducing Natural Disasters' declared by the United Nations between 1990-2000, interventions in disasters shifted from crisis management to risk management. In this review, it is aimed to examine risk management at a global and local level and to draw attention to risk management that will minimize or eliminate the destruction caused by disasters.

Method: Literature search was carried out by searching with the keywords Disaster Management, Sendai, Hygo and Risk Management using Pubmed and Google Scholar databases.

Results: There are many frameworks and action plans for global and local risk management. Chief among these is the Yokohama Strategies globally, the Hyogo Framework, the Sendai Framework for Action and the associated UNDRR. In addition to these framework plans, many projects and plans such as basin wide and national IRAP and ISPLAN studies have been put into effect.

Discussion and Conclusion: The most important part of Disaster Management; is risk management. It aims to minimize the loss of life and property that may occur. For an effective risk management, all reasons preventing the assessment of risks should be addressed.

Keywords: Risk Management, Disaster Management, Global, Local

ABS-24

SKIN PICKING (EXCORIATION) DISORDER: A SYSTEMATIC REVIEW OF PHARMALOGICAL AND ALTERNATIVE TREATMENTS***Melisa Sude CAVUS**

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Skin Picking Disorder, also known as excoriation, is an obsessive-compulsive and related disorder which is characterized by excessive picking of normal skin or skin with minor surface irregularities. SPD may lead to self induced cutaneous lesions and significant distress or functional impairment. Patients know that his/her self-destructive behaviour but think can not give up.

The treatment of SPD may be pharmacological and/or psychological. There is some evidence for the benefit of SSRI and N-Acetyl-Cysteine. A randomized, double blind trial was conducted at ambulatory care center at University of Minnesota and The University of Chicago and included 66 adults with SPD. N-acetylcysteine or placebo was administered for 12 weeks. Participants were assessed using measures of skin picking severity, including the modified Yale Brown Obsessive Compulsive Scale (NE-YBOCS). Results, compared with placebo, the treatment was associated with significant improvements in the NE-YBOCS.

Other treatments include alternative therapies such as yoga, aerobic exercise, acupuncture. This trial was conducted at the National University of Asuncion (San Lorenzo, Paraguay). Results for yoga: This technique may influence the structure and the functioning of the areas of emotional processing. Although still limited, the current research has given useful results. Results for aerobic: When patients feel negative or anxious, this behaviour get worse. Since the exercise improve individuals mood and reduce their anxiety, it can help patients to reduce skin picking. Results for acupuncture: Acupuncture increases serotonergic activity and releases endorphins which could be beneficial for patients.

N-acetylcysteine treatment resulted in significant reductions in SPD symptoms. Yoga and aerobic exercise shown useful in combination with pharmacotherapy. Obtaining solid evidence about long term effects of alternative therapies requires more investigation.

In line with the presented review, a more effective solution will be obtained, when alternative and pharmacological treatment methods are used.

Keywords: Skin picking, Excoriation, Treatment methods

ABS-25

THE ROLE OF THE MAOA GENE IN CRIMINAL BEHAVIOR
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The MAOA gene (Monoamine Oxidase A gene) is the gene that encodes the Monoamine Oxidase A enzyme in humans. It is one of the key regulators of normal brain functions. It catalyzes neurotransmitters such as dopamine, norepinephrine, and serotonin through oxidative deamination. Analysis of data from studies revealed that the low-activity MAOA genotype (MAOA-L) was associated with increased levels of aggression and violence. Therefore it has begun to be seen as a "candidate gene" in the behavioral genetics community. This genotype and criminal behavior relationship is still being researched.

Criminal behavior is defined as any antisocial behavior punishable by law or norms. It is also a social problem that is studied by many disciplines today. Many factors influence criminal behavior, such as environmental, social, psychological, and genetics. In recent years, the relationship between genetics and criminal behavior has been on the agenda. The assessment of this relationship is important in terms of illuminating the processes of punishment and rehabilitation.

Data from studies have shown that the strongest relationship between genetic diversity and criminal behavior-especially aggression and antisocial behavior- comes from MAOA. It has been reported that the lower the MAOA activity in the cortical and subcortical brain regions, the higher the aggression in the individual. Several studies have reported that the MAOA-L genotype causes an increase in serotonin at synapses and destabilizes neural circuits critical for emotion regulation. On the other hand, many factors influence criminal behavior and studies are controversial.

In conclusion, it is aimed to analyze important studies in this review and to determine the relationship between MAOA and criminal behavior.

Keywords: Maa-L, criminal behavior, aggression, anti-social behavior, emotional regulation

COVID-19 VIRUS DISEASE and IMMUNE SYSTEM**Pelin PAT***

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Immune system; It is a natural defense system in which many systems, organs and proteins in the body work together. All cells of the immune system develop from a common stem cell in the bone marrow. These cells, along with proteins, are distributed throughout the body. The immune system is made up of two parts: the innate, (general) immune system and the adaptive (specialized) immune system. The innate immune system is the body's first line of defense against germs entering the body. The adaptive immune system specifically targets the type of germ that is causing the infection. The main task of the immune system; to protect the body against disease-causing microbes and viruses and to produce antibodies to kill pathogens.

The Covid-19 virus is an infectious disease that causes respiratory tract infection. Common symptoms of Covid-19 include headache, loss of smell and taste, stuffy and runny nose, cough, myalgia, sore throat, fever, and shortness of breath or difficulty breathing. COVID-19 is a complex multisystem disease of varying severity and affects many human systems, including the cardiovascular, respiratory, gastrointestinal, neurological, hematopoietic, and immune systems.

When they detect a foreign virus (such as COVID-19) in their immune cells, they begin the necessary work to destroy this virus. However, because COVID-19 is new, it cannot be easily identified by the immune system. COVID-19 causes immune cells to overreact, sending more cells than necessary, and killing sick cells as well as healthy cells. It is important to keep the immune system active and strong against the Covid-19 virus.

In summary, in this study, it is aimed to compile research on the effects of the covid-19 virus on the immune system.

Keywords: SARS-CoV-2, COVID-19, Immune System, Body Cells

ABS-27

IMMUNOREACTIVE DEFINATION OF TNF α , HIF-1 α , Kir6.2, Kir3.1 AND M2 MUSCARINIC RESEPTOR FOR CARDIAC AND PANCREATIC TISSUES IN A MOUSE MODEL FOR TYPE 1 DIABETES

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Purpose: Diabetes mellitus (DM) is characterized with insulin resistance or hyperglycemia caused by insufficient insulin secretion. Acetylcholine can stimulate insulin release depending on glucose while hyperglycemia in DM pathology can cause cellular hypoxia. In our study, we aimed to evaluate the immunoreactivity in pancreas and heart of adaptive responses to hypoxia that develops with DM.

Methods: In this study, 14 Balb/C female mice were divided into control and Type 1 diabetes mellitus-DM groups. Streptozotocin (STZ; 150 mg/kg/bw) was injected ip in mice to create a type 1 diabetes model. During the experiment, diabetic rats with a daily blood-glucose value higher than 250 mg/dl were injected subcutaneously with 1U/day insulin. Two weeks after STZ injection, the mice were euthanized by cervical dislocation and the heart and pancreatic tissues were removed and prepared for histological and immunohistochemical analysis for TNF- α , HIF-1 α , Kir6.2, Kir3.1 and M2 muscarinic receptor.

Findings: Significant increase of TNF- α , HIF-1 α and Kir6.2 immunoreactivity was observed in both cardiac and pancreatic tissues of type 1 DM model mice. And also, cardiac Kir3.1 and M2 muscarinic receptor and pancreatic M2 muscarinic receptor immunoreactivities significantly increased.

Discussion: As a result, it has been shown that hypoxia, which develops with beta cell destruction and high glucose, in TNF α and HIF-1 α , and type 1 DM disrupts Kir channel activity and activate survival mechanisms with the increase of M2 muscarinic receptor suppressing apoptosis.

Significance: Our study can contribute to understanding the role of Kir3.1, Kir6.2 channels and hypoxia biomarkers in type 1 DM mechanism.

Keywords: Type 1, Mouse, Cardiac, Pancreatic, HIF-1 α

**CONCOMITANT USE OF LINAGLIPTIN AND INSULIN IN A MOUSE MODEL OF TYPE 1
DIABETES IS EFFECTIVE IN PRESERVING OVARIAN FOLLICLE RESERVE**

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Introduction: The mechanism of action of diabetes in the ovary should be better characterized, especially considering the effects of type 1 diabetes mellitus (DM) on reproductive function, such as delayed menstruation, menstrual irregularities and ovarian dysfunction.

Purpose: We aimed to examine the effects of linagliptin, which have blood-glucose lowering effects and high antioxidant activity without increasing the risk of hypoglycemia, on ovarian weight index and ovarian follicle reserve in type 1 diabetic mice.

Method: In this study, a total of 84 Balb/C female mice at 6 weeks of age were divided into seven groups: 1) Control, 2) Vehicle, 3) Insulin, 4) Linagliptin, 5) Linagliptin+Insulin, 6) TUDCA and 7) TUDCA+insulin groups. Streptozotocin (STZ, 150 mg/kg/bw) was injected ip as a single dose to form type 1 diabetic mice model except control and vehicle groups. Linagliptin (3mg/kg/day) and TUDCA (100 mg/kg/day) were administered by oral gavage for two weeks. Body weight and ovarian weight index were determined, and ovarian follicle reserve was evaluated by counting healthy follicles.

Findings: There was no difference in body weights between the groups. Ovarian weight index decreased in Insulin, Linagliptin, Linagliptin + Insulin and TUDCA groups compared to control and vehicle groups. Primordial follicle number increased in Linagliptin and Insulin groups compared to Linagliptin + Insulin, control and vehicle groups. The number of antral follicles was decreased in the Linagliptin group compared to the control group. And, the number of atretic follicles was decreased in the Linagliptin + Insulin group compared to the other groups.

Discussion: We suggest that co-administration of Linagliptin and Insulin is effective in maintaining diabetic ovarian reserve.

Conclusion: We believe that our study will contribute to new approaches that can be used in the treatment of diabetes related ovarian dysfunction.

Keywords: Linagliptin, Insulin, Type 1, Diabetes Mellitus, Mouse

ABS-29

SIDE EFFECTS OF DRUGS USED IN COVID 19 CASES WORLDWIDE**Betül Celik**** Burdur Mehmet Akif Ersoy University Faculty of Health Sciences betcelikk@gmail.com

Although COVID-19 is usually mild to moderate, it can be severe in approximately 10-15% of cases and very severe or fatal in 1%. Many drugs are used to make the Covid-19 pandemic faster and the damage it leaves less. Hydroxychloroquine, favipiravir, remdesivir and lopinavir-ritonavirin, which are among the most widely used drugs worldwide, have been evaluated by analyzing published studies on this subject.

In the light of some clinical studies, hydroxychloroquine has been shown to be ineffective in the treatment of covid-19 cases of outpatient, lying or severely surviving patients. Hydroxychloroquine has been proven to be a drug that should not be used unless a contrary attitude is proven, as a result of some clinical trials and observations.

Hydroxychloroquine is said to cause enough cardiostatic effects to significantly affect vital functions, especially when used in combination with certain drugs. In the same way, the efficacy of this drug lopinavir/ritonavirin, which is used in the treatment of covid-19, has been concluded that it should be taken together with a number of drugs and that the frequency of use is low.

There is no antiviral drug that has been shown to be effective during the Covid-19 process, but it has been scientifically proven that the drugs used have more benefits than side effects.

In summary, it is aimed to compile research on the side effects and attitude of drugs used in covid-19 cases around the world.

Keywords: Side effect, covid-19, clinical trials

THE CONNECTION BETWEEN GUT MICROBIOME AND BREAST CANCER

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The microorganisms that live symbiotically in human beings are increasingly recognized as important players in health and disease. The largest collection of these microorganisms is found in the gastrointestinal tract. Microbial composition reflects both genetic and lifestyle variables of the host. In health, the function of the microbiome considered to be in dynamic equilibrium with the host, exerting both local and distant effects. However, 'disequilibrium' may contribute to the emergence of disease, including malignancy. One of the most prominent roles of gut microbiota is the regulation of steroid-hormone metabolism, such as estrogens, a component playing an important role as risk factor in breast cancer development.

Breast cancer is the most frequently diagnosed cancer in women worldwide. The disease and its treatments exert profound effects on an individual's physical and mental health. There are many risk factors associated with breast cancer (BC) such as the familial history of BC, using hormone replacement therapy, obesity, personal habits, and other clinical factors; however, not all the risk factors are fully understood.

Recent research suggests that the microbiota of women with breast cancer differs from that of healthy women, indicating that certain bacteria may be associated with cancer development and with different responses to therapy. The objective of this review is to provide an overview of the current understanding of the relationship between the gut microbiota and breast cancer.

Keywords: gut microbiome, microbiota, breast cancer, bacteria, therapy, estrogen

Automatic Detection of Congestive Heart Failure by ECG Signal

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Heart failure (HF) is a clinical syndrome with an existing prevalence of over 23 million worldwide. The most common form of heart failure is congestive heart failure, a disease that occurs when the heart cannot deliver the required amount of blood due to cardiac disorders. In this study, it was automatically detected by the electrocardiogram (ECG) signal in patients with congestive heart failure.

In patients with congestive heart failure, normal sinus rhythm (NSR) disorder has been increasingly recognized as a common devastating problem. Therefore, in this study, automatic detection of cardiac signal and NSR disorders in congestive heart failure patients was aimed to accelerate the diagnosis process.

As an effective and non-invasive method, ECG-based approaches are widely used to identify these diseases. In this study, the ECG device was used as it is in the nature of determining the cardiac signal and properties. In the study, after the test procedures performed with an ECG device in heart failure patients, changes were observed in the cardiac and NSR parameters of each subject. These changes were examined by recording the signals received from the ECG device with a computer.

As a result of the study, it has been observed that features such as ventilation depth, breath rate, fluctuation levels of cardiac signals, and retention in heart-muscle signals affect cardiac functions in patients with cardiac disorders. Results show that an early and automatic detection of congestive heart failure was realized with this method.

In conclusion, it is expected that the automatic detection of congestive heart failure by ECG device will facilitate the diagnosis, especially in patients with a high probability of having a heart attack. Automatic detection of the disease is important in terms of starting the treatment processes of patients with sinus rhythm disorder earlier.

Keywords: Heart failure, congestive heart failure, cardiac disorder, normal sinus rhythm (NSR), ECG.

USE OF NANOTECHNOLOGY IN THE DIAGNOSIS AND TREATMENT OF PARKINSON'S DISEASE

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Neurodegenerative disorders are diseases that induce inflammation and neuron damage, as well as functional and structural loss in the nervous system. Parkinson's disease is the second most common neurodegenerative disease worldwide, after Alzheimer's disease. Loss of dopaminergic neurons in the substantia nigra of the midbrain plays an important role in the pathogenesis of the disease. Parkinson's disease classically causes symptoms such as resting tremor, muscle rigidity, bradykinesia, and bent posture. Pharmacological therapies and surgical methods such as deep brain stimulation have been tried for the treatment of disease, but a definitive treatment is still not available. For this reason, many new alternative treatment methods are being tried. Nanoparticles have recently been a popular issue in the diagnosis and treatment of Parkinson's disease. The advantages of utilizing nanoformulation techniques in the treatment of Parkinson's disease are their increased bioavailability, blood-brain-barrier permeability, and high targeting capacity. In addition, early diagnosis of the disease is important because motor symptoms occur after 50-70% loss of dopaminergic neurons. The use of nanotechnology in the diagnosis of Parkinson's disease is another important consideration. In general, the early diagnosis of the disease is based on the detection of pathophysiology-specific genetic markers. Recently, the use of nanotechnological methods in the early diagnosis of the disease has become increasingly widespread. Metallic NPs, quantum dots, and nanotechnology breath test can be given as examples of nanotechnological methods used in the diagnosis of Parkinson's disease. In the future, with the development of nanotechnology, it is likely that more advanced methods will be developed to aid in the early diagnosis and treatment of Parkinson's disease.

Keywords: Parkinson, Neurodegenerative, Nanoparticles, Diagnosis, Treatment

LENTI-VIRAL BASED GDNF PRE-TREATMENT IS NEUROPROTECTIVE FOR STRIATAL NEURONS

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Introduction: Glial Derived Neurotrophic Factor (GDNF) is well known for its regulatory function on dopaminergic neurons, especially in the nigrostriatal pathway. Dopaminergic neurons are important not only for motor but also for cognitive functions and it related to serious pathophysiological post-ischemic outcomes such as limb paralysis, depression, memory problems and so on.

Objective: The aim of this study was to study how neuroprotective GDNF is on dopaminergic neurons when delivered intracerebrally by using a viral delivery approach soon before cerebral ischemia.

Method: C57-B16 male mice (8-10 weeks) were treated with lenti-viral GDNF (Lv-GDNF) vectors 10 days before the induction of cerebral ischemia which is implemented by blockage of the middle cerebral artery technique. Animals were terminated 72 hours after ischemia within the acute phase of ischemic pathophysiology. Their brains were taken for histological and molecular investigations. Following confirmation of GDNF overexpression, tyrosine hydroxylase (TH) immunostaining and immunoblotting were used to evaluate the role of GDNF on dopaminergic neurons. Next, Fluorojade C staining was used to examine the degree of neuronal degeneration at the damaged parenchyma.

Results: Neither the amount of TH-positive dopaminergic neurons nor the expression of TH differed in the Lv-GDNF treated animals when it's compared to control animals. The expression of Nurr1, an essential transcription factor that regulates dopaminergic neuron activities, and Gap43, a growth and plasticity-related protein, shown to be considerably elevated in the ischemic striatum upon GDNF exposure. Treatment with Lv-GDNF resulted in a modest reduction in the number of degenerated neurons. Finally, enhanced GDNF expression also induced expression of one of the important stress related transcription factors NFkB, as well as the nitric oxide synthase enzymes iNOS and nNOS in the contralateral hemisphere.

Discussion and Conclusion: Considering these results together, GDNF's impact on dopaminergic neurons is not outstanding for its neuroprotective role.

Keywords: GDNF, ischemia, gene therapy, lenti-virus, dopaminergic neurons

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Control of 24-hour blood pressure with inhibitors to prevent cardiovascular disease**Mohaddeseh Davoudi Bilehsavar***

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Disorders of the heart and blood vessels, called cardiovascular disease (CVD). CVD is common worldwide and remains the leading cause of death. In patients with coronary artery disease, outpatient blood pressure is followed and blood pressure is controlled. Ambulatory blood pressure measurement (ABPM) did not lower blood pressure in patients with coronary artery disease (CAD), unlike those with high ABPM, but did lead to more significant changes in antihypertensive treatments.

Blood pressure is a primary vital sign that should be monitored regularly for the early diagnosis, prevention and treatment of cardiovascular diseases. Accurate arterial blood pressure measurement is essential to provide safe and appropriate care to patients, both in the operating room and intensive care setting. High blood pressure is a leading cause of death worldwide and a critical factor for increasing the risk of serious diseases, including cardiovascular diseases.

In one study, concludes information on sodium-glucose cotransporter-2 (SGLT2) inhibitors, blood pressure, and cardiovascular events. Participants with type 2 diabetes treated with SGLT2 inhibitors had reduced cardiovascular events compared with placebo. There is insufficient evidence to suggest that lowering blood pressure makes a significant contribution to the observed cardiovascular benefits.

Another study performed 24-hour blood pressure control with SGLT2 inhibitors to prevent CVD. It supports the role of SGLT2i as effective blood pressure lowering agents and poorly controlled hypertension, independent of initial glucose control status. Continuous improvements in 24-hour blood pressure profile are likely to add to CVD benefits of SGLT2i therapy.

Keywords: ABPM, SGLT2, Inhibitors.

TOXOPLASMA GONDII AS A RISK FACTOR FOR ALZHEIMER'S DISEASE**Nejla ÖZTÜRK****Giresun University, Medical Faculty, Turkey, nejlaozturkmail@gmail.com

Alzheimer's is a kind of neurodegenerative dementia characterized by cognitive and behavioral impairment. Short-term memory loss, mood changes, and difficulties doing daily activities are all symptoms that patients suffer. There are no treatments for Alzheimer's. Age, beta and Tau protein buildup, genetic variety and cardiovascular disorders are all factors to risk. Fungi, bacteria and infectious parasites such as Toxoplasma Gondii also increase the risk of Alzheimer's. Toxoplasma gondii (T. gondii) is a parasite that produces lesions in numerous mammals, including humans, as intermediate hosts. This parasite is quite common since it is spread through eating foods infected with oocysts in cat feces, receiving organ transplants, and receiving blood transfusions. T. gondii is thought to affect one-third of the world's population. In normal people, infection is benign and develops in the same way a regular cold does. Pregnant women (miscarriage status) and people with impaired immune systems are at danger. T. gondii prefers the central nervous system and can cause cysts in a range of brain cells. The host deteriorates as the cysts multiply. Furthermore, as the body's synthesis of interferon-gamma increases for defense, tryptophan and serotonin levels decline. As a result, this parasite has been linked to major psychological and neurological diseases. T. gondii is thought to be a severe risk factor for Alzheimer's because it causes immunological responses in the host, alterations in neurotransmitter levels, and inflammation of the central nervous system. Specialists and patients should pay close attention to this circumstance. In summary, the goal of this study was to compile information on the association between the T. gondii parasite and Alzheimer's, as well as to contribute to the prevention and delaying of Alzheimer's progression.

Keywords: Alzheimer's, Toxoplasma Gondii, Parasite

LOW DOSE LASER THERAPY IN TRIGEMINAL NEURALGIA**Fatih Maral***

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Trigeminal neuralgia (TN) is a neuropathic disease characterized by the involvement of the sensitive branches of the trigeminal nerve unilaterally or bilaterally. While involvement is most common in the maxillary and mandibular branches, the involvement is seen in the ophthalmic branch at a lower rate. Pain attacks occur spontaneously, and also are triggered by a nonpainful sensory stimulus to the skin, intraoral mucosa surrounding the teeth, or tongue. Anatomical trigger zones often can be identified. Although trigeminal neuralgia is one of the most painful conditions which are often reported in patients older than 50 years of age, it may affect younger people or even children. Due to the lack of clear, physical and laboratory findings in TN, it is a very long and difficult process to diagnose in most cases. After the diagnosis is made, a difficult process awaits the patients. Medical treatments such as carbamazepin and phenytoin or interventional treatment approaches are applied. Recently, low-dose laser therapy (LLLT) has been applied in addition to these treatments. LLLT, which has a very complex mechanism, is also known as bio stimulation or soft laser therapy. LLLT, whose mechanism is based on the absorption of visible red and near infrared light by photoreceptors in the cell (especially in the electron transport chain in the mitochondrial membrane), has analgesic, anti-inflammatory and regenerative effects. In addition, LLLT it normalizes abnormal hormonal activity and stimulates the release of endorphins. There are unpredictable risks of medical and surgical interventional approaches in trigeminal neuralgia patients. The main benefit of LLLT is that it is relatively non-invasive and may have the ability to treat nerve injuries without surgical intervention thus making it a desirable treatment option. Therefore, LLLT appears to be a highly effective method for the treatment of persistent pain in trigeminal neuralgia.

Keywords: Pain, Trigeminal Nerve, Laser Therapy, Non-Invasive Intervention

ABS-37

VITILIGO AWARENESS

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Vitiligo is a pigmentation condition occurring as a result of a genetic predisposition that is characterized by hypomelanosis of the skin, hair and oral mucosa. This depigmentation occurs when the immune system attacks the body's own melanocytes in the epidermis but its reason remains elusive. It has a prevalence of 0.5–2% of the global population with an equal incidence in male and female patients and has no geographic or ethnic boundaries. The exact etiology of this disease is unknown; however, it appears to be caused by interaction of genetic, lifestyle choices, multiple hormones, oxidative stress, immunological and neurological factors. There are a variety of therapies available; Among them, topical steroids, camouflage therapy, repigmentation therapy, narrowband ultraviolet B mono-therapy and psoralen-ultraviolet A (PUVA) are the most common treatments; however, there is no known therapies guaranteed to work for everyone. Vitiligo is often dismissed as a cosmetic issue despite the fact that its effects can be psychologically devastating and have a considerable impact on everyday life; therefore, it's essential to increase awareness of this noncontagious disease which is often met with misconceptions. Vitiligo can create a serious deal of emotional distress in the patient, necessitating treatment. This review of vitiligo summarizes theories aiming to explain melanocyte destruction mechanisms, current treatment options and increase social awareness on this condition.

Keywords: Vitiligo, Treatment, Awareness, Etiology, Autoimmune disease

CHANGES IN THE NEURON AND THE NERVOUS SYSTEM UNDER MICROGRAVITY EFFECT**İremnur GÜLTEN*, Aycan BAŞ****

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Space has gained importance due to developing technology and has been named as a potential living place in the future. The effect of low gravity (microgravity), one of the conditions of space, on human physiology has been investigated since the first space missions. This study aims to compile observed changes in the neuronal system and neurons under microgravity. Since space studies have disadvantages such as logistical, financial, and practical constraints, alternative space analogs are frequently used to provide microgravity. In in-vitro experiments, clinostat, parabolic flight and free fall towers are used to investigate cellular parameter values such as cell membrane structures, action and resting potentials of neurons. The electrophysiological properties of various cell types have been investigated by different methods. It was shown that the resting potential of human neuronal cells is slightly depolarized by 3 mV under microgravity and slightly hyperpolarized under hypergravity conditions. In the experiments, worm axons, glioma tissues from patients, and EEG and MRI images of people in real spaceflight or analog environments were examined. Cellular parameter changes and systemic changes were observed under microgravity. It was observed that the neuron cell membrane fluidity increased and therefore the probability of open state of ion channels decreased. By examining the glioma tissue samples under microgravity, it was determined that the cytoskeleton was unevenly distributed and cell apoptosis increased. EEG measurements showed an increase in alpha rhythm in the parieto-occipital and sensorimotor regions. MRI measurements revealed narrowing in the central sulcus and spaces where cerebrospinal fluid (CSF) accumulates. In the light of ongoing studies and the data obtained, though it was determined to a certain extent how and to what extent the nervous system and neurons, which have a complex organization, are affected by microgravity, it should not be forgotten that there are unknown and unanswered areas.

Keywords: space, microgravity, neuron, nervous system, action potential

ABS-39

THE EFFECTS OF BRAIN DERIVED NEUROTROPHIC FACTORS ON COCHLEAR FUNCTIONS**Melike AY ***

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Brain-derived neurotrophic factor (BDNF) is an important protein family member that controls the survival, growth and development of neurons in the central and peripheral nervous system. It is rapidly released in synaptic function of synapses and axon-dendrite branching. In experimental studies, it has been shown that BDNF infusion gives a positive response in many treatments, especially in hearing loss due to neuronal degeneration.

The main neural structures in the adult cochlea are: hair cells in the basillar membrane, modiolus, and spiral ganglion neurons (SGN) in the auditory nerve. In the presence of stimulation, the axons of the spiral ganglion neurons forming the auditory nerve are depolarized by the vibration of the basillar membrane. The vestibular nerve and the auditory nerve together extend into the central nervous system in the form of the vestibulocochlear nerve.

Sensorineural hearing loss (SNHL) as a result of damage to the sensory epithelium within the cochlea is a common cause of deafness. Initially, the loss of synaptic connections between hair cells and SGNs is followed by demyelination and degeneration of the peripheral structure as it moves away from the corti. As these changes continue, they lead to a long period of deafness and the number of SGNs decreases markedly.

SGNs are target cells of the cochlear implant, which is the neural prosthesis when SNHL. BDNFs, the most characterized form of neurotrophic factors, are important for maintaining synaptic connectivity and plasticity in cases of severe hearing loss and cochlear implant users. Many animal studies have found that SGN degeneration is preventable by administration of neurotrophins. Therefore, the BDNF therapeutic approach may improve speech perception outcomes and provide functional benefits in cochlear implants and individuals with SNHL.

In summary, this study aimed to compile research on the effects of BDNF on cochlear functions and hearing loss.

Keywords: Neurotrophic Factor, Hearing Loss, Spiral Ganglion Neurons, Cochlear Implant

ABS-40

Does rhamnetin have an effect on P13K, AKT1 and mTOR signaling pathways in mice with Ehrlich Ascites Tumor (EAT)?

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Introduction: An average of 10 million people are diagnosed with cancer each year, and many die from cancer. Chemotherapy and radiotherapy are commonly used in its treatment. Herbal therapy, known as complementary medicine, is practiced by some of the people. It is reported that flavonoids have anticarcinogenic properties against different cancers. There are different studies that address the effectiveness of flavonoids, including foods, in cancer prevention and treatment. Rhamnetin is one of these flavonoids, the use of which is increasing day by day.

Purpose: Investigation of whether the rhamnetin plant, which is stated to be protective against cancer, has a tumor tissue effect.

Method: In our study, tumor tissue of mice with Ehrlich acid tumor was examined by Immunohistochemical Analysis. A total of three groups of ten mice in each group were formed. EAT cells (1×10^6) from stock animals were injected intraperitoneally (IP) and subcutaneously (SC) into the animals. Then rhamnetin IP was applied. Animals in the ascites tumor-induced treatment groups received doses of 100 µg/kg IP and 200 µg/kg for 15 days.

Findings: In our study, rhamnetin was administered as two doses, 100 and 200 mg/kg/bw. PI3K immunoreactivity was decreased in both groups compared to the positive control group. In the present study, AKT1 immunoreactive levels were decreased in the rhamnetin application groups compared to the positive control group. Excessive activation of mTOR signaling supports cell proliferation and metabolism which contributes to tumor initiation and progression. According to the data we obtained, both dose ratios of rhamnetin were effective in suppressing mTOR signaling.

Discussion and Conclusion: Rhamnetin can provide new therapeutic approaches by suppressing activation of the PI3K/AKT/mTOR signaling pathway.

Keywords: mTOR, AKT1, P13K, Ehrlich Ascites Tumor

ABS-41

COVID-19 RISK IN CYSTIC FIBROSIS PATIENTS***Aysenur POYRAZ**

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Cystic fibrosis (CF), a genetic defect, is caused by mutations in the cystic fibrosis transmembrane conductance regulator (CFTR) gene. These mutations lead to dysfunction of the CFTR protein. Abnormal CFTR causes abnormal salt and water transport across epithelial surfaces. In the lungs, this is manifested by the accumulation of mucus and the inability to clear inhaled organisms. This leads to chronic infection and inflammation, leading to remodeling of the airway and disease. Infection control is a fundamental part of patient care in CF.

Covid-19 is transmitted through inhalation or contact with infected droplets. The incubation period ranges from 2 to 14 days. Symptoms are usually fever, cough, sore throat, shortness of breath, fatigue, weakness. The disease is mild in most people. In some, it may progress to pneumonia, acute respiratory distress syndrome, and multi-organ dysfunction.

Patients with severe symptoms usually experience chest tightness and shortness of breath 7-10 days after the onset of symptoms. Some develop acute respiratory distress syndrome, septic shock, metabolic acidosis and coagulopathy.

Data published to date for individuals with CF have shown that individuals with CF do not have a higher risk of contracting Covid-19 infection. However, there is evidence that some subsets in the CF population (such as those with transplantation) may experience a more severe clinical course.

In summary, this study aimed to compile research on the risk of Covid-19 in CF patients.

Keywords: Covid-19, Cystic Fibrosis, CFTR Gene, Risk

ABS-42

DOCKING INTERACTION OF ZEAXANTHIN LIGAND AND TELOMER MACROMOLECULE**Ülkü BAYHAN¹, Bahtışen AKARÇAY²**

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Introduction: *Zeaxanthin* is a type of carotenoid found in the retina. It is a chemical compound found especially in dark green leafy vegetables, as well as in chard, watercress and turnips. Increases bile production by reducing oxidative stress, ischemic inflammation in different tissues. In addition, zeaxanthin prevents LDL oxidation in arteries and blood. It can be observed that it provides protection against chronic eye, vascular and heart diseases. The application of *zeaxanthin* on the skin provides protection against UV light. *Zeaxanthin* inhibits sunburn by reducing inflammation. It positively affects the kinetics of DNA repair after UVA exposure. It is thought that the effect of zeaxanthin on DNA repair may positively affect the work of the telomerase enzyme. Telomerase is the enzyme that synthesizes and protects the telomeres at the ends of the DNA chain. Telomeres are located at the ends of chromosomes in eukaryotic organisms. Composed of non-coding specialized DNA repeats. Telomere length is known to be associated with cell aging and regeneration ability.

Objective: In our study, the effect of Zeaxanthin on the Telomerase enzyme, which is known to have a effect on each cell division, was investigated. The interaction of molecules with telomerase enzyme was found by theoretical calculations using simulation techniques.

Method: Ligand protein interactions placed in molecular pockets were examined using the AutoDock 4.0 program code. Molecule ligand interactions were based on the adhesion & insertion reaction study. The interactions between zeaxanthin and telomerase enzyme were calculated using theoretical methods in simulation environment.

Results: It was found that the interactions between *Zeaxanthin* and Telomerase could bond with high probability.

Discussion and Conclusion: *Zeaxanthin* ligand is likely to have a positive effect on Telomerase macromolecule. It can be used in drug studies by taking advantage of the interaction results.

Keywords: *Zeaxanthin*, Telomerase, Molecular Insertion.

DISASTER MANAGEMENT SYSTEM**İlayda Mert***

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Every year, millions of people faced with disasters and their many consequences. Disasters are dangerous situations that affect humans life, causing physical, economic and social losses of varying magnitudes from nature, technology or human origin. The plans made for us to act with the least risk and reliability of these hazards constitute the "disaster management system". Disaster management consists of 4 basic phases: mitigation, preparedness, response and recovery. The management and planning of these four phases, which form a successive and interconnected structure called the disaster management cycle, is very important. Today, there are two basic disaster management systems adopted in the literature as a disaster management system. These management systems are Integrated Disaster Management System and Community Based Disaster Management. The Integrated Disaster Management system means that all resources are used together and coordinated in the fight against the disaster, that is, all resources are a single fist. It is a perspective that thinks about disaster completely and aims to see the whole picture. Today, the Integrated Disaster Management System is accepted and implemented in our country and in many other developed countries such as the USA and Japan. The Community Based Disaster Management system, on the other hand, adopts the involvement of the community in the disaster management system. The community must be involved in all four phases of disaster management. These systems need to be planned, directed, supported and comprehensive in a way that covers all segments of the society. The purpose of the Disaster Management System is; Preventing possible losses and damages by minimizing the risks that may lead to life loss and property, Rescuing those who suffer first-degree damage from disasters, Protecting property, natural environment, cultural and natural assets, Turning life into a better way than normal after a disaster, Business continuity, Ensuring the continuation of services and sustainable development are the main objectives of disaster management. Although studies are carried out to prevent the painful experiences experienced in the previous periods in the future, the studies are not yet at a sufficient level due to the low applicability of the plans.

Keywords: Disaster Management, Integrated Disaster Management, Community Based Disaster Management

ABS-44

DOKING STUDY WITH TELOMERAZ&CD8 TRANSMEMBRANE GLYCOPROTEIN, ACETIC ACID ACTIVE SUBSTANCE

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Introduction: Human telomerase reverse transcriptase (hTERT) is an enzyme that plays an important role in elongating and maintaining telomere length to regulate cell lifespan and replication activity. Normally, cells progress to the process of senescence or apoptosis by decreasing telomerase activity and gradually shortening telomeres. CD8+ T cells act as the key to antitumor immunity, killing immune cells. The transmembrane glycoprotein CD8 is the principal molecule expressed on the surface of cytotoxic T lymphocytes. Acetic acid (ethanoic acid) is an organic acid with the formula CH₃COOH. It is formed as a substance exchange product of acetic acid bacteria in acetic acid fermentation. It is the compound that gives vinegar its sour taste and pungent smell. It can be obtained both biologically and synthetically in the industry. Therefore, the interaction of acetic acid with telomerase and CD8 transmembrane glycoprotein was calculated.

Objective: In this study, the interaction of the active ingredient of acetic acid with two different molecules was calculated. Telomerase enzyme for its effect on aging and CD8 transmembrane glycoprotein for its effect on immune system were selected to be calculated.

Method: The interactions between acetic acid-telomerase and acetic acid-CD8 were investigated in the molecule ligand interaction attachment & insertion study. AutoDock 4.0 MGLTolls and UCSF Chimera package programs were used in the calculations.

Results: According to the calculations made, it was found that acetic acid had strong interactions with the two proteins. In this study, single, double and triple bonds were found as a result of the calculations.

Discussion and conclusion: According to this study, there is a strong correlation between the determined active substance and protein structures. It has been determined by experimental studies that the effect of this attachment is positive or negative. These results are preliminary information for future experimental studies.

Keywords: Telomerase, CD8, Acetic Acid, Transmembrane Glycoprotein, Molecular Insertion.

MOLECULAR DOCKING STUDY OF μ -OPIOID & TELOMERASE INTERACTION OF CARBAMAZEPIN

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Introduction: *Carbamazepine* (CBZ) is one of the most widely used antiepileptic and migraine drugs. Opioid receptors (ORs) are undisputed targets for pain management. The μ -opioid receptor (MOR) is the cellular mediator of the effects of the most widely used ORs and is a prototypical G protein-coupled receptor (GPCR) for which new pharmacological, signaling and cell biology concepts were invented. GPCR constitute the largest group of cell membrane proteins expressed in human tissue. Telomeres are located at the ends of chromosomes and their length decreases during cell division. It is known that telomere length shortening is associated with cell aging and regeneration ability. It consists of specialized non-coding DNA repeat sequences. Telomere length is regulated by the enzyme telomerase and various telomere-associated proteins. Telomerase is a large enzyme complex that accelerates the addition of telomeric repeats to the ends of eukaryotic chromosomes.

Objective: In this study, the effect of *Carbamazepine* active ingredient on Telomerase enzyme was investigated. In addition, the interaction of *Carbamazepine*, which is used in migraine drugs, with the μ -opioid receptor targeted for pain treatment was investigated. The interaction of this molecule with telomerase enzyme and μ -opioid receptor was found as a result of theoretical calculations using simulation techniques. These interactions are discussed in the results section of the fitness analysis.

Method: In the adhesion & insertion reaction study of molecule ligand interactions, the interactions between *Carbamazepine* & Telomerase, *Carbamazepine* & μ poiid receptor were calculated by theoretical methods. AutoDock 4.0 MGLTolls and UCSF Chimera package programs were used in the calculations.

Results: Interaction was observed between *Carbamazepine* & Telomerase and *Carbamazepine* & μ -opioid receptor.

Discussion and Conclusion: An interaction was observed between *Carbamazepine* & Telomerase and *Carbamazepine* & μ -opioid receptor. These interaction results are a preliminary study for future experimental studies.

Keywords: Telomerase, μ -opioid, *Carbamazepine*, Epilepsy, Molecular Docking.

ABS-46

DOCKING ANALYSIS OF MOLECULE & LIGAND INTERFERENCE: HARMIN & TELOMERASE ENZYME

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Introduction: Passiflora, also known as passion flower, is effective in the treatment of diseases such as anxiety, parkinson's, shingles, and nervous seizures. Harmin, the active ingredient of the Passiflora plant, is known to be a strong inhibitor of the enzyme that regulates cell proliferation and brain development. It is reported that Harmin is an active ingredient obtained from perennial plant extracts, increases the proliferation of human neural stem cells and has pronounced antitumor effects on various tumors. Telomeres are sequences of repeats found at the ends of chromosomes in eukaryotic cells known as membrane-bound cells. Telomeres gradually shorten with aging in body cells. The telomerase enzyme adds the synthesized TTAGGG sequences to the telomere ends to prevent telomere losses that occur in each cell division. Telomerase is one of the important factors used as a biomarker in human longevity and cancer diagnosis. It is thought that Passiflora may interact with telomerase, which is effective in cell regeneration due to its effects in nervous seizures.

Objective: In this study, the probability of interaction with the telomerase enzyme, as the active ingredient of the Passiflora plant of Harmin, which is effective in cell aging, was calculated by theoretical methods.

Method: In the molecule & ligand- attachment & insertion study, interactions between Harmin and Telomerase were investigated. AutoDock 4.0 MGLTolls and UCSF Chimera package programs were used in the calculations.

Results: It was found that the interactions between Ligand and Telomerase could be linked with a high probability.

Discussion and Conclusion: The ligand is likely to have a positive effect on the Telomerase macromolecule.

Keywords: Telomerase, Passiflora, Harmine, Molecular Docking.

ABS-47

MOLECULAR DOCKING OF β -CRYPTOXANTHIN AND TELOMERASE ENZYME INTERACTION**Ülkü BAYHAN*, Fatıma Kübra DÜZGÜN****

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Introduction: β -Cryptoxanthin is an oxygenated carotenoid commonly found in fruits and vegetables. It has been reported in the literature that it has many benefits on human health. β -Cryptoxanthin has antioxidant, anti-inflammatory, anti-obesity, and anticancer properties. It is also known to produce vitamin A, which is known to be particularly beneficial to eyesight. In eukaryotic cells, there are repeating sequences called telomeres at the ends of the chromosomes, which have functions such as protecting DNA against damage and breaks and ensuring chromosome stability. Telomeres shorten with each cell division. In order to prevent the loss of these repeat sequences that determine the life of the cell, telomerase, an RNA-dependent enzyme, synthesizes the TTAGGG sequence and adds it to the telomere ends. This enzyme, which has high activity in reproductive cells, has little or no activity in body cells. Telomerase enzyme activity is of great importance especially in aging and cancer. For this reason, it is important to find substances that will interact with the telomerase enzyme.

Objective: In our study, it is aimed to calculate the presence or absence of β -Cryptoxanthin and telomerase enzyme interaction theoretically by using simulation methods.

Method: β -Cryptoxanthin (PubChem CID: 5281235) and telomerase enzymes (PDB ID: 3KYL) were downloaded from the database and necessary optimizations were made. Theoretical calculations were made using the AutoDock 4.0 program. Analysis and visualization studies were carried out using AutoDock 4.0 and UCSF Chimera programs.

Results: As a result of the calculations and analyzes, the possibility of interaction between β -Cryptoxanthin and telomerase enzyme was found.

Discussion and Conclusion: Interactions found as a result of theoretical calculations should be supported by experimental studies.

Keywords: β -Cryptoxanthin, Carotenoid, Telomerase, Molecular Docking

ABS-48

Thalassemia Patients Waiting for Blood Donation**RUSHANA ABDİRASHİTOVA***

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Mediterranean anemia or Thalassemia as its familiar name. It is a type of "anemia" disease which is frequently referred to as "Beta Thalassemia" gene from parents to children in the Mediterranean regions. The reason for the formation of anemia (anemia) is the defect in the structure of the "hemoglobin" molecule, which is located in the structure of the red blood cells. Blood transfusions are needed every month in order to sustain the patients with thalassemia due to the lack of red blood cells in the body. Blood, which is provided on a voluntary basis, is an indispensable need for thalassemia patients.

Thalassemia patients need at least two units of blood in 21 days. Combating thalassemia and helping the treatment of those suffering from this disease is in the hands of young and common people. My aim in this study is to encourage young people and donors to donate blood and to promote bone marrow transplantation. If it is the society we are looking for, we can reach it more easily through social media.

For this reason, I am sure that the society that will donate blood for our thalassemia patients will increase. The reason is that today's social media usage of each individual is more than we think. It is also possible to donate stem cells with 3 tubes of blood to be taken while donating blood. Thus, your blood donation and stem cell donation will be hopeful for patients with thalassemia waiting for bone marrow transplantation.

Keywords: Thalassemia, blood donation, social media.

PLACENTA PREVIA AND MIDWIFERY CARE

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Placenta previa occurs when the placenta partially or completely covers the internal cervical os. Its incidence is seen between 2-3%. The etiology of placenta previa cases is not known exactly. Among the risk factors; maternal advanced age, multiparity, multiple pregnancy, smoking/cocaine use, cesarean delivery, abortion, premature birth are among the risk factors.

There is painless vaginal bleeding in placenta previa. The cause of bleeding is generally seen as maternal origin. It is classified into 4 groups. Placenta Previa Totalis: It is the complete closure of the internal cervical os by the placenta. Placenta Previa Partialis: It is the partial closure of the internal cervical os by the placenta. Placenta Previa Marginalis: The edge of the placenta remained at the border of the internal cervical os. Low Lying Placenta Previa: The placenta is located in the lower segment of the uterus. The diagnosis of placenta previa is made by ultrasonography. The most important complications are placenta accreta, placenta increta and placenta percreta.

In the pregnancy follow-up of placenta previa; Increasing cesarean rate and advanced age of the mother increase the risk of placenta previa. Changes in myometrial arteries of older mothers cannot provide adequate blood supply and this causes placental anomalies. Pregnant women who are diagnosed are given cesarean section. Vaginal examination should never be done.

In the follow-ups, the mother should be followed closely in terms of bleeding. It should be explained that she should not do sexual intercourse and heavy activities. It should be monitored for vital signs and signs of shock. Abdomen should be monitored for signs of any complications. (Pain, tenderness, uterine palpation and size should be evaluated.) The contact numbers where we can reach the patient's relatives should be obtained and the patient and her relatives should be informed about her condition.

The aim of this review is to define patients diagnosed with placenta previa, to determine maternal-fetal risk factors, to determine what to follow up during pregnancy, to determine the relationship between complete blood count parameters and placenta previa, to identify possible complications, and to explain midwifery care and follow-ups.

Keywords: Placenta, Placenta previa, placental anomalies, maternal factor, obstetric risk factors, midwifery care.

BREASTFEEDING PROBLEMS DURING THE COVID-19 PANDEMIC**Sevda Elkatmis***

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COVID-19 is a disease transmitted from person to person by droplet infection, spreading rapidly and therefore defined as a pandemic by the World Health Organization. It causes respiratory, gastrointestinal, and neurological system symptoms and most of the common cold symptoms in humans. Coronavirus threatens people's lives. This situation, along with other public health problems, has created problems such as how to approach newborns and the safety of breastfeeding. Breast milk is an ideal nutritional source that provides the physiological and psychosocial needs of the baby during the first six months after birth. Breast milk protects the baby from many diseases. Breast milk and infant nutrition are important for child, mother, and community health. Therefore, intense efforts are made exclusively for breastfed infants in our country as well as in other countries. The Covid-19 pandemic has brought along some breastfeeding problems. Mothers in COVID-19-exposed communities endorsed more clinically acute stress response to childbirth than matched controls. Higher acute stress response in birth was associated with more childbirth-related posttraumatic stress disorder symptoms and less bonding with the infant, including breastfeeding problems. The World Health Organization (WHO) has provided detailed guidance on the care of babies of women who have been confirmed to have COVID-19. This guide supports postpartum mother-infant contact and breastfeeding with appropriate respiratory precautions. Many countries have followed WHO guidance; however, some countries have implemented infection prevention and control policies that impose postpartum separation and prohibit breastfeeding or the provision of expressed breast milk. Separation causes harm, including interrupting breastfeeding and limiting breastfeeding protection against infectious diseases that have effects on infants. Separating COVID-19 positive mothers and their infants can lead to preventable illness and death among infants and women worldwide. In summary, the aim of this study was to compile research on breastfeeding problems experienced during the covid-19 pandemic.

Keywords: Coronavirus, breast milk, newborn, World Health Organization

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THE ALTERATIONS OF THE MICROBIOTA RELATED TO THE PPI'S AND CONSEQUENCES**Sevval Arslan***

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As a concept intestinal microbiota brings into minds only bacteria but it is consisting of fungus, archaea, viruses, and protozoans. In our body we have one of the most various and largest ecosystem which plays an important role in the body's metabolic, nutritional, physiological and immunological defence processes and is closely linked to the wellbeing of our body. In recent years, a significant interest in the microbiota has developed in the scientific community; and intestinal microbiota have been associated with numerous diseases.

Proton pump inhibitors (PPIs) are the agents that balances acids of stomach and are one of the most widely and overused drugs in the world. PPIs are the number one therapy for acid-related diseases of gastrointestinal system such as bleeding, gastroesophageal reflux, peptic ulcers, erosive esophagitis (ERD) and so on. The use of PPIs is usually well tolerated but in long-term use, risk of developing extra-intestinal disorders comes out, most likely due to PPI-induced gastric hypochlorhydria, which can lead so many negative changes in microbiota system. Changes in this microbial balance, which is called dysbiosis, can promote and influence the course of many intestinal and extra-intestinal diseases. PPIs change the pH and ecosystem in the gut and eliminate our first line of defence against ingested pathogens. This is a great chance of staying alive for malicious bacteria to break the balance of good bacteria and bad bacteria in our microbiota. This kind of changes in the gut microbiome can induce the colonisation of enteric infections.

Detection of which drugs affect microbiota is essential to determine therapeutic strategies, such as probiotic supplementation, could be a useful approach to prevent dysbiosis during PPI treatment.

Aim of this study is to highlight the effects of PPIs on intestinal microbiota and to discuss their effects.

Keywords: Microbiota, PPI, Bacteria, GIS, Dysbiosis.

PELVIC INFLAMMATORY DISEASE AND MIDWIFERY CARE**Damla Sıbıç*, Reyhan Aydın Doğan***

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Pelvic inflammatory disease (PID) is common especially in women of reproductive age. It is an infection of the uterus, ovaries, fallopian tubes and pelvic peritoneum structures, usually caused by sexually transmitted bacteria such as *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. Early diagnosis and treatment have an important place because of its asymptomatic progression and symptoms suggesting other diseases. It is usually diagnosed clinically without the need for USG and laparoscopy. Treatment of early diagnosed *N. gonorrhoeae* and *C. trachomatis* infections is provided with broad-spectrum antibiotics. In cases that are not diagnosed and treated in time, sequelae such as chronic pelvic pain, infertility and ectopic pregnancy may be encountered. The aim of this review, which is written as a review, includes the early detection and treatment of symptoms of pelvic inflammatory diseases within the current literature, the prevention of pelvic inflammatory diseases and their serious sequelae as much as possible by increasing the awareness of the society against sexually transmitted diseases and midwifery care.

Keywords: Pelvic inflammatory disease, sexually transmitted diseases, midwifery care.

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CARE FOR FREQUENT VULVAR LESIONS AND MIDWIFERY CARE
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The vulva is the region that covers the entire external genitalia and has an important place in our society in terms of reproductive system function and femininity perception. However, due to the society's perception of femininity and the physiological, curved and uniquely pigmented structure of the vulva, it is inevitable that the changes in the vulva are noticed late, or that there are delays in the application. Although vulvar lesions have many variations, they generally present with itching, pain and the presence of lesions. In the diagnostic phase, biopsy is mostly performed to rule out the risk of cancer. In treatment, corticosteroids are mainly used with patient education. All diagnosis and treatment of vulvar lesions should be done by a multidisciplinary team. In this review, the classification of vulvar lesions made by the vulvovaginal diseases international working group (ISSDV) in 2011 is based on, and it is aimed to examine the most common vulvar lesions and to explain midwifery care.

Keywords: vulva, lesion, vulvar lesions, midwifery care.

ALZHEIMER'S DISEASE TREATMENT NANOTHERANOSTIC APPROACHES

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Alzheimer's disease (AD) is an age-related neurodegenerative disease that is characterized by behavioral and thought disorders. Its prevalence in the world is increasing with population growth and aging, and it is predicted that it will affect more than 80 million individuals by 2040. In AD, the accumulation of amyloid- β ($A\beta$) plaques in the brain cause neuronal dysfunction and senile plaques characterized by death. Although the development of treatments to lower $A\beta$ levels is important for the treatment, side effects are encountered, therapeutic effectiveness is difficult and control of the process is limited. High $A\beta$ accumulations in the brain cause excessive production of reactive oxygen species (ROS). This case leads to mitochondrial dysfunction and neuronal cell death. Therefore, new treatment methods are needed to reduce the high $A\beta$ level in the brain.

Nanotheranostic studies have attracted a lot of attention in recent years for the diagnosis and treatment of diseases. Different nanoparticles have many uses. Cerium oxide nanoparticles (CeO_2NP) differ from other nanoparticles with their unique properties such as self-renewing antioxidant, prophylactic and pro-oxidant properties, and nanotechnology as a therapeutic compound has become the main focus of interest in biomedical research in recent years. CeO_2NP gains importance for the treatment of AD and many other diseases with its properties.

As a result, the purpose of this study is to describe the impact of the nanotheranostic approach and CeO_2NP in the treatment of Alzheimer's disease, which is becoming more prevalent in society.

Keywords: Alzheimer's disease, cerium oxide nanoparticles, nanoparticle.

ABS-55

Literature Review of Disrupted Neurobiological Mechanisms in Adolescents with Internet Addiction: fMRI Studies

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Introduction and Purpose: Internet addiction (IA) or problematic internet use (PIU) is characterized by excessive or poorly controlled urges or behaviors regarding internet use that leads to impairment or distress. Internet addiction is a serious condition that affects millions around the world, especially adolescence and affect their overall aspect of lifestyle. The aim of this study is to understand the neurobiological mechanisms underlying IA, imaging studies have been performed to investigate structural and functional abnormalities associated with IA.

Method: We review current literature studies about neuroimaging studies of IA-related changes in specific brain regions and connections of adolescents.

Results: Two studies, which we reviewed, showed that IA subjects showed increased connectivity between the left dorsal caudal putamen and bilateral caudal cingulate motor area. IA adolescents demonstrated significantly reduced functional connectivity (FC) with the caudate head and subcallosal anterior cingulate cortex (ACC) bilaterally. Decreased FC was also found between the left inferior ventral striatum (VSi) and the posterior cingulate cortex (PCC) bilaterally. The left DC also showed reduced FC with the left ventral lateral thalamus, as well as the right DC displayed lower positive relationships with the left IFG in IAD. IA adolescents showed decreased voxel-mirrored homotopic connectivity (VMHC) of dorso-lateral prefrontal cortex (DLPFC) and reduced fractional anisotropy (FA) values in the genu of corpus callosum (CC). In addition, another study showed that IA subjects showed reduced inter-hemispheric FC of the right fronto-parietal network (FPN), whereas increased intra-hemispheric FC of the left FPN; reduced FC in the dorsal medial prefrontal cortex (mPFC) of the anterior default mode network (DMN); reduced FC between the salience network (SN) and anterior DMN. Another study shows that two inter-hemispheric connections, one between the left angular gyrus and right middle orbitofrontal cortex and another between the left fusiform gyrus and right angular gyrus, exhibit increased connectivity strength in IA adolescents. One intra-hemispheric connection, between the right caudate and right supra-marginal gyrus, shows decreased connectivity in IA adolescents.

Conclusion and Discussion: Studies showed that IA-related alterations in functional interactions between the cerebral hemispheres and its anatomical basis, especially the relationship between functional and structural deficits during resting state and the VMHC deficits of DLPFC were also associated with craving mechanisms. IA adolescents brain had the imbalanced interactions within and between large-scale brain networks may serve as system-level neural underpinnings. The results demonstrate that IA is characterized by impairment of corticostriatal functional circuits involving affective and emotional processing, and cognitive control. Moreover, the studies suggests that IA may share similar neurobiological abnormalities, psychological and neural mechanisms with other types of impulse control disorders and addictive disorders. In addition, the associations between the connectivity strength of the corticostriatal circuits and behavioral measures indicate that corticostriatal circuits may serve as a potential new treatment target for IA.

Keywords: internet addiction, neuroanatomy, fMRI

CURRENT DEVELOPMENTS IN THORACIC AND ROBOTIC SURGERY TECHNIQUES**Memduh Salih ÇİFCİBAŞI ***

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Thoracic surgery is a medicine branch that specializes in examining traumas and surgical treatments of regions such as the lungs, nose, and pharynx. As in all surgical branches, minimally invasive procedures are important in thoracic surgery. Video-assisted thoracic surgery and robot-assisted thoracic surgery are two of these procedures.

In video-assisted thoracic surgery, a camera called thoracoscope is used in addition to normal surgical operations. So, it is known among surgeons as video-assisted thoracoscopic surgery (VATS). The surgeon makes one or more punctures in the patient's rib cage for using this technique. Then, the camera and surgical instruments are inserted into the patient's body through these holes. The image from the camera is given to a screen so that the surgeon can easily perform the operation. However, as with any technique, this technique also has some limitations. These include the two-dimensional image and limited maneuverability of the surgical instruments used.

With the development of robot technology, a new branch called robot-assisted thoracoscopic surgery (RATS) emerged and various limitations of VATS were eliminated. Most importantly, the size of the incision made with RATS was much smaller than with VATS. This advantage shortened the recovery period of the patient and increased the success risk of the surgery.

In the RATS technique, after the robot is attached to the patient, the surgeon leaves the patient's side and moves to a part called the console and can see the inside of the patient in three dimensions from this console. He performs the operation by controlling the apparatus called the master. At the same time, the tools can rotate up to 540 degrees through this technique in which robotic devices are used.

In summary, this study aimed to discuss the current methods in the field of thoracic surgery.

Keywords: Video Assisted Thoracoscopic Surgery, Robot Assisted Thoracoscopic Surgery, Minimally Invasive, Maneuverability, Three-Dimensional Image

ABS-57

THE EFFECT OF ANTIBIOTICS USE ON THE GUT MICROBIOTA

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Antibiotics are natural or synthetic substances used for the treatment and prevention of bacterial infections. Antibiotics show their effect by inhibiting the growth of bacteria or by killing them. It has saved millions of lives since it was discovered. In recent years, it seems that the inappropriate use of antibiotics has become widespread. In addition to its negative effects on human health, particularly, microorganisms living in the human body are adversely affected by antibiotics.

Microbiota is defined as a community of microorganisms living in the human body, associated with metabolic processes and interactions. A large part of this complex structure consists of bacteria. There are approximately 1.3 times bacteria for each cell in the human body. Additively, the number of genes found in the microbiota is about 150 times greater than in the human genome. Microbiota is present in almost all parts of the human body, mostly in the gastrointestinal tract.

The gastrointestinal tract has a surface area of almost 2 tennis courts. Additionally, it hosts more than 2000 bacterial varieties. The gut microbiota has functional effects such as digestion, metabolism, protection from pathogens, vitamin production, and immune system development. The gut microbiota is affected by environmental and personal factors such as diet, genetics, and medication. Especially, the use of antibiotics has devastating effects on the gut microbiota.

It has been reported that the use of antibiotics reduces bacterial diversity and changes intestinal composition (dysbiosis). Dysbiosis has been associated with the development of inflammatory and metabolic diseases. Interestingly, the use of antibiotics has negative effects on the homeostasis of intestinal cells. Eventually, the functionality of the bacteria in the gut microbiota is restricted.

In summary, this study, it is aimed to compile studies on the adverse effects of antibiotic use on gut microbiota.

Keywords: gut microbiota, antibiotics, dysbiosis, bacteria

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DOPAMIN IN SHIZOPHRENIA***Gözde ÜÇER**

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Schizophrenia is a complex, heterogeneous behavioral and cognitive syndrome resulting from impaired brain development caused by genetic and environmental factors. Schizophrenia is characterized by positive, negative and cognitive symptoms. Positive symptoms include hallucinations, voices talking to or about the patient, and delusions that are often paranoid. Negative symptoms include flattened affect, loss of sense of pleasure, loss of desire or impulse, and social withdrawal. Cognitive symptoms, such as deficits in attention and memory, are prominent features of the illness

Dopamine is a neurotransmitter belonging to the catecholamine family. Dopamine is known for its role in reward, motivation and pleasure and is known as the happiness hormone. At the same time, dopamine is very important in changing cognitive flexibility and emotional flexibility. In addition, dopamine is one of the main regulators of motor control and coordination of body movements.

Dopamine is produced in the substantia nigra and ventral tegmental regions of the brain. Impairments in the dopamine system result from dopamine dysfunctions in the substantia nigra, ventral tegmental region, striatum, prefrontal cortex, and hippocampus.

The substance responsible for schizophrenia is thought to be dopamine. Dopaminergic hyperactivation in mesolimbic regions causes with positive symptoms. Hypodopaminergic activity in the prefrontal regions is related to negative symptoms and cognitive impairment.

In summary, this study aimed to compile research on the effect of dopamine on schizophrenia.

Keywords: Schizophrenia, Dopamine, Negative Symptoms, Positive Symptoms

ABS-59

GENETIC FACTORS IN OBSESSIVE COMPULSIVE DISORDER**Betül Laçın***

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A gene is a unit of heredity. It is the nucleotide sequence that makes up a particular part of a DNA. It is also used in the sense of a biological unit that carries a certain characteristic from parents to their children. As a result of studies, it has been determined that genes play an important role in many psychiatric diseases, including obsessive compulsive disorder.

Obsessive compulsive disorder is a severe and multifactorial mental disorder. Obsessions are impulses, ideas and images that a person cannot prevent from entering her mind and cannot get rid of. Compulsions are repetitive behaviors to reduce anxiety, restlessness and intense distress caused by obsessions. Family and twin studies have shown that environmental and genetic factors may increase the risk of disease.

Neuroimaging studies have drawn attention to the cortico-striato-thalamo-cortical circuit in the pathophysiology of the disorder, with the observation of specific neuropsychological disorders, especially in executive functions in patients with OCD. Genetic studies indicate that genes affecting serotonergic, dopaminergic and glutamatergic systems and their interactions play a very important role in the functioning of this circuit.

In conclusion, we touched on the relationship between the genetic factors and obsessive compulsive disorder in this review.

Keywords: Obsessive compulsive disorder, genetic

ABS-60

The Relationship of Sex, Age, Duration and Severity of Disease Factors with the Frequency and Duration of Smell Loss in COVID-19 Positive Patients in Turkey.

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Introduction: SARS-CoV is a member of the coronavirus family. Sars-Cov-2 virus, which has been identified as a new member, has spread rapidly around the world and caused a pandemic. SARS-Cov-2 is transmitted through droplets and causes symptoms of various spectrums. These symptoms include fever, myalgia, shortness of breath, muscle pain, sore throat, loss of taste and loss of smell. After it was understood that loss of smell was associated with Covid-19 infection, a wide range of smell loss frequency that varies between 5-90% was reported from many countries. We can mention two terms regarding loss of smell; one of them is anosmia (the inability to smell), the other one is hyposmia (a decreased ability to smell).

Objective: Our aim in this research is to contribute to the data diversity in Turkey by showing the relationship of the frequency and duration of smell loss in Covid-19 positive people with factors such as age, sex, disease severity and duration, drug use, accompanying disease, smoking and alcohol use.

Method: The research was conducted through an online survey of 23 questions. Individuals who complete the questionnaire are required to be over 18 years of age and have Covid-19 infection. it was decided to conduct the research with at least 384 volunteers.

Result: It was determined that the duration of smell loss in Covid-19 positive individuals were most commonly in the range of 1-14 days. In Covid 19 positive individuals; being a woman, having chronic diseases, not having allergies increases the frequency of smell loss.

Discussion and Conclusion: The study has brought up the following questions: What is the reason for the higher frequency of loss of smell in the female sex? And What is the reason why the frequency of loss of smell decreases in the presence of allergies?

ABS-61

BATTEN DISEASE**Ülkü Bayhan¹, Hamza Utku Özcan²**

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Neuronal Ceroid Lipofuscinoses (NCL), also known as Batten's disease, constitute a large class of inherited disorders of the nervous system with rare fatal outcomes, manifested by epilepsy, memory/learning impairment, blindness and loss of motor function. In these diseases, a defect in a particular gene triggers many problems. Deficiency in both copies (one from each parent) of the specific gene that causes Batten disease causes the disease. Batten disease is an autosomal recessive disease. However, an adult so-called CLN4 disease was initially reported to be inherited in an autosomal dominant manner. People with a single defective copy (carriers) do not develop symptoms and are often unaware of their carrier status. It is determined by the age of the child when symptoms begin to appear. Each gene is called CLN (ceroid lipofuscinosis, neuronal) and has subtypes. As a result of different gene mutations, the severity of symptoms also varies. Mental illness is prevalent in the United States. Mental illnesses include many different conditions, ranging from mild to moderate to severe.

Keywords: Epilepsy, Blindness, CLN, Neuron, Mutation.

INVESTIGATION OF POTENTIAL PROBIOTIC PROPERTIES AND EVALUATION OF MICROORGANISM COMPOSITION OF SUN DRIED APRICOT PRODUCED IN TURKEY

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According to the USDA, fresh and sun-dried apricots are an important food, containing high of vitamin A, sugar, dietary fiber, potassium, calcium, and phosphorus. The country with the highest sun-dried apricot production in the world is Turkey. Turkey meets 85.6% of the world's sun-dried apricot exports.

We aimed to determine whether the probiotic potential and microbial composition of sun-dried apricots from 10 different provinces of Turkey would change depending on the soil properties by looking at the bacterial flora they contain.

In study, samples were taken with a scalpel from the inside of the apricot. Inoculated in Luria Bertani Broth (LB) broth and incubated. Later, samples inoculated into Yeast Extract Peptone Dextrose (YPD) and Blood Agar. After incubated, in a drying-oven and room temperature. Matrix-assisted laser desorption/ionization mass spectrometry (MALDI-TOF MS) was used to identify bacteria isolated.

Bacteria belonging to 9 genera and 21 species were detected in sun-dried apricots in Malatya (Bacillus spp, Streptococcus spp, Stafilokok spp, Acinetobacter spp, Corynebacterium spp, Lactococcus spp, Leclercia spp, Micrococcus spp, Neisseria flava/perflava/subflava spp). In Elazığ, Antalya, Iğdır and Kayseri province, (Bacillus spp, Staphylococcus spp); In Maraş, (Bacillus spp, Achromobacter spp); In Sivas, (Bacillus spp, Streptococcus spp); In Mersin (Bacillus spp, Rothiobacteria spp); In Hatay, (Bacillus spp); were identified in sun-dried apricots.

In our study, no pathogenic bacteria were found. The detection of B.subtilis, which is accepted as safe for use as a probiotic by the FDA in all provinces, is proof of the probiotic importance of apricot. The highest bacterial diversity and number were obtained in sun-dried apricots from Malatya. We concluded that the reason for the presence of different types of bacteria according to the provinces may be related to the growing and soil conditions of the apricot.

Keywords: Apricot, MALDI-TOF MS, Probiotics, Bacteria, Bacillus subtilis.

**THE EFFECT OF TRAUMATIC BRAIN INJURY(TBI) ON TELOMERE LENGTH AND HYBRID
TELOMERIC REPEAT CONTAINING RNA (TERRA) LEVELS IN THE HYPOTHALAMIC-
PITUITARY-ADRENAL (HPA) AXIS**

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Introduction: Traumatic brain injury (TBI) are brain injuries that occur as a result of the head hitting an object suddenly and violently. Telomeres are special nucleoprotein structures at the end of linear chromosomes. The main task of telomeres is to maintain genomic stabilization by protecting chromosomal ends from erosion and end-to-end fusion, serving as insertion sites for DNA repair proteins. Telomeres were thought to be transcription quiet. But now, telomeric DNA is transcribed telomeric repeating RNA (TERRA), which is a long non-coding RNA (lncRNA) in mammalian cells, and then TERRAs hybridize again on telomeres. TERRAs protect the chromosome ends from degradation and provide genome stabilization.

Objective: In this study, the relationship between the hypothalamic-pituitary-adrenal (HPA) axis in the acute and chronic phases of trauma-induced stress in rm-TBI (repeated) and mTBI (single) mice was investigated. The effect of TBI on telomere dysfunction and genome stabilization in tissues associated with the HPA axis was investigated by telomere length and TERRA expression levels.

Method: Telomere lengths and TERRA expression levels were determined in real-time polymerase chain reaction (RT-PCR) by performing RNA, DNA and DNA:RNA hybrid isolation from HPA axis tissues.

Results: As a result of the study, the most shortening in terms of telomere length in the hypothalamus after repeated TBI, in terms of TERRA expression levels the highest response was detected in the adrenal after repeated trauma.

Discussion and Conclusion: With our study, the role of lncRNA hybrid TERRA transcripts, which are responsible for the protection of telomere length and telomeres and genome stabilization in the HPA axis in the acute and chronic phases after TBI for the first time in the literature. The most shortening in terms of telomere length in the hypothalamus after repeated TBI, in terms of TERRA expression levels the highest response was detected in the adrenal after repeated trauma. The data we obtained show that especially recurrent mTBI has a negative effect on the HPA axis, which plays an important role in the maintenance of homeostasis, which regulates the organism's response to stress.

Keywords: Traumatic Brain Injury (TBI), Hypothalamus-Pituitary-Adrenal (HPA) Axis, Telomer, TERRA

ABS-64

NRF2 PATHWAY AS THERAPEUTIC TARGET in ALZHEIMER'S DISEASE

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Alzheimer's disease (AD) is a complex neurodegenerative disease characterized by severe impairments in cognitive functions and progressive neuronal loss. AD is the main cause of dementia. The hallmarks of AD include amyloid β -peptide ($A\beta$) aggregation, high levels of hyperphosphorylated tau protein (p-tau), and impaired redox homeostasis. Also AD; It has many pathological characters such as abundant oxidized DNA, severe mitochondrial damage, diffuse lipid peroxidation, high levels of neurotoxic trace elements. A decrease in expression of Nrf2 transcription factor (nuclear factor-erythroid 2-p45-derived factor 2) and its driven genes is observed in AD brains. The Nrf2-ARE pathway is a defense mechanism against oxidative stress. Nrf2 plays a role in maintaining cellular redox homeostasis and regulating the inflammatory response by inducing the expression of many protective and detoxifying genes. Redox-regulated Nrf2 is the master controller of the enzymes and antioxidant species of the cellular cytoprotective system that protect against oxidative stress. In this way, Nrf 2 enables cells to adapt and survive under stress conditions. Nrf2 activation has been shown to be successful in achieving neuroprotection by increasing the levels of antioxidant proteins. There is ample evidence to highlight the protective role of the Nrf2-ARE pathway in neurodegenerative disorders, as it reduces oxidative stress and neuroinflammation. High Nrf2 levels may ameliorate damage caused by reactive oxygen species and mitochondrial dysfunction in AD. Recent studies have shown that Nrf2 also interferes with several important pathogenic processes in AD, such as the $A\beta$ and p-tau pathways. Understanding the mechanisms underlying the neuroprotective action of Nrf2 activators against both $A\beta$ and p-tau could aid in the development of effective AD drugs. In summary, in this study, it was aimed to compile studies on the role of the Nrf2 pathway in AD.

Keywords: Alzheimer's disease, oxidative stress, neurodegeneration, Nrf2

IMPORTANCE AND APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN HEALTH SCIENCE**Kemal Gökhan NALBANT ***

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Artificial intelligence is based on the functions of the human brain and the features of human intelligence. Artificial intelligence can be defined as making machines perform human-specific functions such as thinking, learning, problem-solving, reasoning and interpretation. The first studies on artificial intelligence were started between 1943-1956, and this period can be called the birth period of artificial intelligence. The term artificial intelligence was first coined by John McCarthy at the Dartmouth Conference in 1956 [1]. The increase in chronic diseases, the emergence of epidemics such as Covid-19, the increase in the elderly population, and the rise in the number of patients who need to be taken care of at home have increased the importance of the health sector. So, the expectations of people from health services have also increased. As a result of the continuous development of technology, it is expected that digital systems for treating patients will develop, and innovative studies will be carried out in this field. At this point, the use of artificial intelligence technologies is needed. Internist-1, CASNET, and MYCIN expert systems are the first artificial intelligence applications used in health to benefit doctors and patients. Later, artificial intelligence technologies were used in all areas of health.

Nowadays, people do not want to be sick; they want to protect their health and receive predictable health care. With artificial intelligence health technologies, people can examine their health status and use balanced nutrition and weight loss applications. With the predictive applications of artificial intelligence, health costs are reduced, time is saved, the average life expectancy is increased, and human-induced errors are prevented. In this study, the necessity, development, applications, application areas, advantages-disadvantages of artificial intelligence in the field of the health sector, and the innovations it brings to the health system are examined.

The application areas of artificial intelligence in the field of health are pretty comprehensive. Medical decision making, early diagnosis and treatment, developmental disease detection, drug development, evaluation of radiology images, and medical training have become very easy with the help of artificial intelligence technologies. Moreover, these technologies can detect breast cancer, brain tumor, lung cancer, and skin cancer early. In addition, artificial intelligence-supported robotic surgeries facilitate the work of doctors, and personalized treatment is also provided with robot technology. In the current pandemic (Covid-19) process, many artificial intelligence applications are also used to detect and fight Covid-19. Artificial intelligence technologies such as Virtual Reality, Augmented Reality, and robotic applications also bring innovations to health sciences.

Keywords: Artificial Intelligence, Artificial Intelligence in Health, Virtual Reality, Augmented Reality, Health Sciences.

EFFECTS AND CLINICAL APPLICATIONS OF BIOGLASS**Talatcan Ikizoglu***

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Bioglass, one of the bioceramics, is a silica-based biomaterial containing calcium and phosphate. Before Bioglass was invented by Larry Hench in 1969, cellular response was a major challenge due to the use of inert materials. Because of the content of Bioglass is similar to the extra cellular matrix (ECM), especially the hard tissues, it is a biocompatible material and therefore the cellular response is minimal.

Bioglass is a biodegradable material and dissolves in the tissue to a hydroxyapatite (HA). In this layer, cells differentiate, and tissue healing begins. The substances released from Bioglass with this dissolution cause various changes in the body.

Bioglass increases proliferation and angiogenesis with calcium and the growth factors it secretes. It has an anti-inflammatory effect by increasing the transforming growth factor-beta (TGF- β). The increase in pH with the effect of Bioglass, the ions which is contained in the bioactive glass and the Hydroxyapatite layer formed in the degradation of this glass creates an anti-bacterial environment.

One of the most important applications of bioactive ceramics is known as the repair of bone tissue damage. Although it has been used so far in hard tissues such as dental implants, it also shows promise in soft tissues with epithelium such as stomach, lung, skin with new researches.

In this review, the effects of Bioglass and it is clinical application areas with current studies were examined.

Keywords: Bioglass, Biocompatible, Bioceramics, Regenerative medicine, Hydroxyapatite.

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ZERO DIAMENTIONAL NANOCARRIER SYSTEMS: CARBON QUANTUM DOTS
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Quantum dots, a group of zero-dimensional nanomaterials, were discovered in the 1980s. Quantum dots with a length of 10-75 atoms (1-10 nm) attract attention with their unique properties. Quantum dots gain quantum-specific properties due to their size and can radiate continuously in the UV-VIS range. Quantum dots with a size of 1-2 nm show photoluminescence in blue, while quantum dots with a size of 9-10 nm show photoluminescence in red. Thanks to these features, their use as drug delivery systems has been the subject of research in recent years. Carbon-based quantum dots were first produced in 2004. Carbon quantum dots (CQDs) have superior properties compared to metal core quantum dots in terms of being biocompatible, biodegradable, photostable, and being produced by green synthesis methods. CQDs can be produced from biological starting materials such as mango, lemon peel, and various fish species as well as chemical starting materials such as citric acid and hydroquinone. In addition, drug targeting can be done by coating the surfaces of CQDs with substances such as polyethylene glycol and folic acid. It has been reported in studies that CQDs coated with folic acid are targeted to cancerous tissue. CQDs, which can be used as drug delivery systems, also allows simultaneous monitoring of drugs thanks to their unique features. Especially in cancer studies, they can be very advantageous in monitoring the accumulation of anticarcinogenic substances in the target tissue. Studies show that CQDs can easily cross the blood-brain barrier. The use of CQDs as a drug delivery system is promising, especially in diseases such as brain tumors, Alzheimer's, and Parkinson's. CQDs stand out among the new generation nanocarrier systems, thanks to their ability to be tolerated by the organism, easily cross biological barriers thanks to their very small size, their simultaneous imaging by continuous photoluminescence, and their ability to be targeted to the tissue. The studies and the results obtained show the great potential of CQDs and emphasize the need for research for their clinical use.

Keywords: Carbon Quantum Dots, Drug Delivery, Nanocarriers, Quantum Dots

FLIPPED CLASSROOM MODEL IN ANATOMY EDUCATION
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Gross anatomy is the study of the macro external and internal aspects of a human being. It defines the relationships between anatomical structures and their function. The study of human anatomy has traditionally served as a fundamental component in the basic science education of medical students, yet the traditional classroom lecture is still commonly used in undergraduate medical education. However, these classroom lectures can be considered teacher-centered strategies that lead to passive learning. Therefore, the Flipped Classroom method is becoming more popular among the many different models of learning used. The flipped classroom is a modern method of active teaching that aims to encourage students to learn by reversing the learning steps of classic lessons. This approach does not consist of a single model. Instead, it inverts the lecture-based classroom model. For this purpose, the use of pre-recorded videos and pre-class reading assignments form the basis of this model. Students are required to watch the online lectures and complete the teaching materials for completing the course. During classroom sessions, students are expected to engage in active work and discuss concepts under the direction of the instructor. Multi-modal and blended learning encouraged student-centered learning and integration in line with a problem-based type of teaching model. Recently many studies compared flipped anatomy classroom models to traditional anatomy education. In summary, this review aimed to examine the results of comparative studies to understand how flipped classrooms applied in anatomy education and the outcomes associated with this style of teaching.

Keywords: Flipped Learning, Active Learning, Anatomy, Medical Education, Review

EFFECT OF *HELICOBACTER PYLORI* ON GASTRIC CANCER**Berivan HAZAR***

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Helicobacter pylori (*H. pylori*) is a gram-negative bacterial pathogen that colonizes the gastric epithelium. Bacterium; it is urease, catalase and oxidase positive, spiral shaped and has 3 to 5 polar flagella. Unlike other pathogens, *H. pylori* has developed the ability to colonize the acidic environment in the stomach by converting urea to ammonia via urease, which surrounds the bacteria. Thanks to this ability, *Helicobacter pylori*, which can survive for decades in difficult stomach conditions, is the main risk factor for stomach cancer.

Gastric cancer (GC) is the 4. most common malignancy. It remains the 2. cause of death of all malignancies worldwide. The disease becomes symptomatic in the advanced stage. Gastric cancer is caused by a combination of environmental factors and accumulation of specific genetic changes. Despite declining trends worldwide, the primary goal should be the prevention of GC.

Gastric cancer; It is divided into four groups as sporadic gastric cancer, early-onset gastric cancer, gastric stump cancer and hereditary diffuse gastric cancer. The most common type of gastric cancer is sporadic gastric cancer. Sporadic gastric cancer usually occurs under the influence of environmental factors and occurs between the ages of 60 and 80.

H. pylori infection reduces gastric cell death and epithelial cell turnover in a large proportion of infected cells, resulting in primary tissue lesions associated with the initial inflammatory response. However, excitatory responses are induced in the remaining gastric cell population that increase cell survival and proliferation, resulting in the acquisition of malignant features that can lead to precancerous lesions. Deregulation of intrinsic survival responses to *H. pylori* infection may emerge as a factor promoting disease progression.

In summary, in this study, a review of the studies dealing with the relationship between *Helicobacter pylori* and gastric cancer is explained.

Keywords: *Helicobacter pylori*, Infection, Gastric Cancer

ABS-70**Evaluation of the Effect of Late-time Eating on Sleep Disorders in Adults****SINEM DORUK*, QAMAR HAKEEM LUQMAN**, BELKIS IREM MECİT*****

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Eating habits play an important role in determining human health and cause both positive and negative effects on people. In addition to the nutritional status of individuals, meal time also affects their eating habits and human health. Late in the day, both the metabolism and physical activities of the human body slow down. Eating late at night can lead to a variety of health problems, such as increased blood sugar levels, heart disease, obesity and sleep problems.

Sleep is an active period that is important for us to renew our mental and physical health. There are about 85 types of sleep sickness. Most cause reduced quality of life and deterioration in a person's health. Some sleep disorders lead to difficulty falling asleep or maintaining. Others cause excessive sleepiness during the day and some of them may be life-threatening.

It's seen that late-night feeding is common in adults for various reasons and this can lead to sleep problems. Late meal intake has been associated with poor sleep parameters. Eating late has been found to be positively associated with poor sleep quality and daytime sleepiness, leading to many health problems.

In summary, in this study, the effect of eating late on sleep quality; It is aimed to investigate the effect of adults on sleep quality and possible sleep disorders by taking into account the time between the last meal consumed at night and bedtime.

Keywords: nutrition, sleep, quality of sleep

ANTINUCLEAR ANTIBODIES IN ACTIVE TUBERCULOSIS PATIENTS**Qamar Hakeem Luqman SALEEM**

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Tuberculosis is an infectious disease that mostly affects the lungs and caused by a bacteria called *Mycobacterium tuberculosis*. It is transmitted through air droplets. Cough, weight loss, fever and night sweats are the most common symptoms of this contagious disease. Tuberculosis also shows rheumatological symptoms which are autoimmunity and inflammation related symptoms. Few studies came up with the fact that active tuberculosis might trigger the body to create antibodies to attack its own cells.

Antinuclear antibodies (ANA) are autoimmune antibodies that tend to attack the cell's own nuclear elements. These antibodies have subtypes that bind to different elements of the nucleus and some of them have specificity for certain disorders. Antinuclear antibodies are highly associated with rheumatological disorders including scleroderma, rheumatoid arthritis, systemic lupus erythematosus (SLE), sjögren's syndrome and mixed connective tissue disease.

Antinuclear antibodies are detected with ANA test. In the test, the ANA subtype/s found in blood serum are detected in order to help diagnosing. Despite the fact that a positive ANA does not necessarily mean a disorder is existing, but the existence of some connective tissue disorders has a high association with ANA positivity.

According to studies, a correlation between tuberculosis and autoimmune antibodies is stated and antinuclear antibodies were detected in some patients. It is not clearly stated if active tuberculosis patients with rheumatological symptoms necessarily have ANA positivity in some active tuberculosis patients was suggested as an etiology for those who had rheumatological symptoms but not in those who have not had these symptoms.

In this study, it is aimed to collect the research done about antinuclear antibody existence in active tuberculosis patients.

Keywords: ANA, Tuberculosis, autoimmune, antibodies

SARS-CoV-2 VARIANTS AND IMMUNE EVASION**Merve Saide Uzunoğlu¹, Sevgi Kalkanlı Taş²**

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The coronavirus disease 2019 (COVID-19) is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) which has evolved to show distinct patterns of genetic variation in its genome across geographical areas. In the COVID-19 pandemic, many fast-spreading forms of SARS-CoV-2 have emerged as the main circulating strains. Human population genetic differences and immunological diversity might be driving forces in virus evolution. Although the majority of mutations in the SARS-CoV-2 genome are likely to be detrimental and quickly purged or largely neutral, a tiny percentage may impact functional characteristics and may modify infectivity, disease severity, or interactions with host immunity. Since late 2020, SARS-CoV-2 development has been marked by the appearance of a group of changes known as variants of concern that affect viral properties like as transmissibility and antigenicity, most likely as a result of the changing immunological profile of the human population. As it is known that the spike protein is responsible for the virus attachment to host cell surface receptors and the fusion of viral and cell membranes, SARS-CoV-2 variants that have recently appeared have numerous mutations in the spike glycoprotein's receptor binding domain, which lead to immune evasion and increased interaction with angiotensin-converting enzyme 2 (ACE2). Even though the development of viral genetic diversity is driven by those two separate selection forces, changes in the SARS-CoV-2 spike protein that promote transmission, increase disease severity, and escape immune recognition in previously exposed hosts are the most concern. Here, it is aimed to provide improved insights about SARS-CoV-2 variants and its immune escape mechanisms in order to emphasize transmission and pathogenesis of the variants, as well as vaccine/antiviral medication development and precision medicine techniques in general, particularly for high-risk populations.

Keywords: COVID-19, Immune escape, Mutations, SARS-CoV-2, SARS-CoV-2 variants

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PROFILING OF SARS-CoV-2 SPECIFIC T CELL EPITOPES

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Long-lasting immunological memory to the SARS-CoV-2 is essential for the development of population-level immunity, which is the focus of vaccination strategies. Successful viral clearance, removal of virus-infected cells, and longitudinal protection of disease all require T cells which play a key role in the control and eradication of viral infections; CD8+ T cells are required for efficient virus-infected cell clearance, whilst CD4+ T cells promote both the CD8+ T cell response and the B cell-mediated generation of specific antibodies. SARS-CoV-2 cellular immunity relies heavily on CD4+ T cells that are evidenced by a larger frequency of convalescent donors with detectable SARS-CoV-2-specific CD4+ T cells, as well as a stronger T cell response and a larger cytokine profile of CD4+ T cells. Researchers have identified the T cell epitopes that mediate these specific and cross-reactive SARS-CoV-2 T cell responses in convalescent and unexposed people, demonstrating that the establishment of immunity needs recognition of several epitopes. Robust T cell responses to viral epitopes were revealed to be linked to the production of greater neutralizing antibody titers. Vaccines that generate neutralizing antibody responses against conformational epitopes have proved to be effective in preventing infection and illness. However, more frequently, there has been worry about the fast evolution of the virus variants, which has resulted in a reduction or loss of neutralization from certain new strains. Nevertheless, currently circulating variants do not likely to suppress T cell reactivity, suggesting that vaccine-induced T cell responses might serve as a second line of protection against viral infection. Therefore, the particular epitopes driving these long-term T cell responses, as well as the functionality of persistent SARS-CoV-2-specific T cells are needed to be elucidated as it appears that long-term protection following COVID-19 may need persistence of SARS-CoV-2-specific T-cell immunity, which has implications for vaccine development.

Keywords: COVID-19, Immunity, SARS-CoV-2, T cell epitopes, Viral infection

ABS-74

Aphantasia: The Blind Mind's Eye**Şüheda Kula*, Enes Akyuz****

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Aphantasia is a term that has only been used in the literature for about a decade. Zeman et al. (2015) used the term to describe “a situation of diminished or absent voluntary imagery.” Imagination allows us to visualize objects and events that do not exist at that moment. 1-3% of people do not have visual imagination. These aphantasic people can recognize images but cannot visualize them. Congenital aphantasia refers to those who have never fully developed their ability to form mental pictures, while acquired aphantasia refers to people who have lost this ability.

Acquired imaging defects are related to extensive lesions in the occipital, temporal, and parietal regions of both hemispheres. This reflects the fact that visual images are a complex skill that depends on the integrity of the regional network distributed in the two hemispheres. There is growing evidence that most patients with acquired aphantasia have lesions affecting the left temporal lobe. Compared with patients with relatively preserved visual perception, patients with aphantasia and sensory deficits have more posterior lesions.

According to the literature, aphantasia appear to be a rare neuropsychological disorder. However, unlike loss of facial recognition or loss of reading ability, the loss of mental images may not quickly attract the patient's attention, nor will it affect the patient enough to motivate them to report it as a complaint. Therefore, it may be underreported in patients with acquired brain injury.

In conclusion, aphantasia is a spectrum disorder defines inability to create visual images. The etiology of this disorder is not clear yet and more scientific research must be done in order to understand the pathophysiology.

Keywords: aphantasia, visual imagery, visual perception, mental imagery

ABS-75

RELATIONSHIP BETWEEN DYSBIOSIS AND COLORECTAL CANCER**Berrak Zeynel***

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Colorectal cancer, which ranks third among adult cancers, is formed by the gradual accumulation of epigenetic changes in the colon and rectal epithelium. Epidemiological studies show that a low fiber and red meat diet, physical inactivity, smoking and alcohol dependence are associated with an increased risk of colorectal cancer. An important part of colorectal cancers consists of adenocarcinoma histological type. Adenocarcinomas develop from adenomatous polyps with malignant potential. Several genetic mutations, such as APC, MMR, and KRAS, initiate progressive dysplasia cascades, promoting the progression of adenoma to adenocarcinoma.

Disruption in the intestinal microbiota balance caused by various microorganisms naturally found in the gastrointestinal tract is defined as dysbiosis. Chronic inflammation caused by the dysbiosis process triggers carcinogenesis through cytokines and chemokines that promote cell proliferation and suppress apoptosis.

Epidemiological studies show that the intestinal microbiota of healthy individuals and colorectal cancer patients are different both faecally and mucosally. As a remarkable finding, it was determined that the mushroom composition changed in colorectal cancer patients. In various studies, it was observed that the rate of Ascomycota increased in colorectal cancer patients compared to healthy controls, while depletion was observed in Saccaromycetes and Pneumocystidomycetes species. Several types of bacteria have also been identified that increase the risk of colorectal cancer. Various studies have shown that *Fusobacterium nucleatum* bacteria play an important role in the differentiation of colorectal adenomas into adenocarcinoma. In addition, it has been reported that *Enterococcus faecalis* is significantly higher in colorectal cancer patients compared to healthy controls, and *E. Faecalis* infection causes DNA damage by increasing superoxide production.

In summary, the gut microbiota of colorectal cancer patients exhibit dysbiosis, reflecting a different ecological microenvironment than healthy individuals.

Keywords: Colorectal cancer, dysbiosis, intestinal microbiota

CROSSMODAL CORRESPONDENCE: A REVIEW**Ekrem ACAR*, Doğukan ASLAN****

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Crossmodal correspondences (CC) have been defined as a tendency for a sensory feature, or attribute, in one modality, either physically present or merely imagined, to be matched (or associated) with a sensory feature in another sensory modality. CC, which has been the subject of research for more than 80 years, was assumed to exist only among a few senses in the early stages of research. However, with recent research, it has been shown that all senses (tactile, visual, auditory...) interact with each other. As a matter of fact, it has been noticed that music and memory are also subject to CC. In the light of these studies, it is known that CC have different effects such as electrophysiological, neuroanatomical and psychological.

Understanding CC allowed us to discover that our perceptions are not uniform, but they present multisensory integration. In this way, our thoughts about the working principles of our perceptual world have changed. As a result of close research, it has been understood that the modalities can facilitate each other as well as suppress or deflect each other.

In the future, results of researches may provide a clearer understanding of the effect of CC on the detection and decision mechanism. These developments will open new routes in fields such as neuromarketing, VR, artificial intelligence, psychology and psychiatry. Therefore, research on CC should be supported and increased.

Keywords: Crossmodal Correspondence, Modality, Multisensory Integration

INTERACTION BETWEEN MICROBIOTA AND IgA**Elifnaz İLGAR*, Sevgi KALKANLI TAŞ****

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Microbiota is the name given to all commensal, symbiotic and pathogenic microorganisms in the human body. While the human body consists of 10^{13} cells, it contains 10^{14} microorganisms with more than one thousand five hundred types of bacteria. This means that there are 10 times more microorganisms than the human cell number. Bacteria in the flora contain beneficial and harmful bacteria at certain rates. When the ratio of beneficial/harmful bacteria decreases, a pathological process called “microbial dysbiosis” begins. Beneficial bacteria play a role in biological and chemical processes such as production of vitamins, short-chain free fatty acids (SCFA), conjugated linoleic acid (CLA), amino acid synthesis, fermentation and hydrolysis of indigestible foods, and modulation of the immune system. Microbial dysbiosis process has been found to be associated with many diseases such as allergies, inflammatory bowel disease, cancer, lupus, asthma, multiple sclerosis, Parkinson's disease, obesity, diabetes, and cardiovascular diseases. The intestine is a digestive organ that plays an important immunological role. More than half of the immune cells in the body are found in the gut. The intestinal immune system, including the production of IgA antibodies, contributes to defense in the early stage of infection as pathogens, including viruses, bacteria and toxins, invade the mucosal surface of the intestinal tract. Immunoglobulin (Ig) A controls host-microbial homeostasis in the gut. In case of collapse of immunological homeostasis in the gut, excessive immune responses lead to autoimmune diseases, inflammation and allergy; in contrast, impaired immune functions are associated with an increased risk of infectious disease. In recent studies, it has been observed that IgA is directly affected by dietary changes and its deficiency is altered by obese gut microbiota. It has been aimed to be reviewed the critical role of IgA in the development of diseases and focus on how IgA-microbiota homeostasis is regulated.

Keywords: Gut microbiota, Immunoglobulin A, Immunity, Microbiota, Microbial dysbiosis

ABS-78

INVESTIGATION OF THE RELATIONSHIP BETWEEN THE COVID-19 PANDEMIC AND ANXIETY LEVELS OF INDIVIDUALS LIVING IN ISTANBUL WITHIN THE AGES OF 18-65

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Introduction: Coronaviruses are subfamilies of the Coronaviridae family. The new type is called COVID-19, which started in Wuhan, China and it affected the whole world. Due to the fast spread of COVID-19, it has accepted as a "pandemic". The inability to keep COVID-19 under control and the potential risk of all individuals, increasing depression, loneliness, financial difficulties and health anxiety have revealed the necessity and importance of psychosocial interventions during and after the pandemic. Health anxiety is the belief that a person has or will have an illness because of wrong evaluation of the symptoms, and being concerned about his health. Psychological resilience studies play an important role in reducing and preventing health anxiety that can occur due to the pandemic.

Purpose: In this study, it's aimed to determine the variables that affect the health anxiety of individuals during the COVID-19 pandemic process. For this purpose, it is planned to investigate the impacts of demographic alterations on catching COVID-19. Thus, it is aimed to contribute to the literature with original and reliable data.

Method: Demographic Information and Covid Knowledge Level Form were used. To evaluate the health anxiety levels of the participants, the Health Anxiety Inventory-Short Form developed by Salkovskis et al. was also used.

Findings: According to the results obtained from our research, it was determined that the level of health anxiety during the pandemic is higher in women when evaluated according to gender. When evaluations made according to age, the health anxiety experienced increases as the age of the participant increases also as the education level decreases, the health anxiety experienced decreases.

Discussion and Conclusion: Our findings have shown that women experience more health anxiety during the pandemic than men. This data obtained may be an important result for psychotherapies to be applied during and after the pandemic.

Keywords: Health anxiety, Covid-19, Pandemic

ABS-79

Investigation of Damage and Urinary Effects of Multiple Drug Use in Elderly**Turgay Seferli*, Enes Akyuz****

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As a result of the developments in care and health services in Turkey, the proportion of the elderly population in the general population is increasing and Turkey is in the class of elderly societies. The term polypharmacy was first defined in the mid-20th century as the use of multiple and intensive drugs. Today, although there is no clear consensus on its precise definition, it is generally expressed as the use of at least 4 or more drugs per day.

Since most of the drugs are excreted through the kidneys, elderly individuals are at risk for decreased kidney function and intoxication. The study aims to reveal the effects of polypharmacy on kidney damage and urinary incontinence in individuals aged 64-84 years.

The study will be carried out between January 2022 and January 2023. As a result of the power analysis, 150 patients will be included in the study. Patients, in terms of kidney damage; urea, creatinine, hemogram, glucose values, protein and renal ultrasonography will be evaluated monthly

As a result of the study, polypharmacy caused; If the effects on kidney damage and incontinence are detected, the loss of kidney function and urinary incontinence rate will be reduced with the arrangements to be made. It is predicted that the need for dialysis of patients may decrease if kidney damage that may develop due to polypharmacy is prevented. In this way, the burden on the health system will be alleviated in the long run and the country's economy will be contributed.

The role of polypharmacy on urinary incontinence and kidney damage has not been established. In this study, the effect of polypharmacy will be investigated comprehensively and the studies to be carried out to prevent this situation will be shed light on.

Keywords: Kidney Damage, Polypharmacy, Urinary Incontinence, Elderly

ABS-80

THE ROLE OF INNATE IMMUNITY AT HEALTHY NEURODEVELOPMENT

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The immune and neurological systems are two systems with highly specialized roles that work together flawlessly to ensure an organism's healthy growth and maturation. In the developing neurological system, there are several immune cells and immune-related signaling molecules that contribute to optimal neurodevelopment. Many components of the innate immune system, such as toll-like receptors (TLRs), cytokines, inflammasomes, and phagocytic signals, are crucial for proper brain development. Immune cells are now widely considered to play a key role in nervous system homeostatic functions. Microglia which are the resident macrophages of the central nervous system (CNS) perform very important tasks such as neurite maturation, glial differentiation and myelination, angiogenesis, synaptic pruning, and population control. TLRs have a part in neurogenesis functions, cell death, and shaping neuronal morphology throughout the development of the nervous system. Studies have shown that the loss of certain TLRs leads to various memory and anxiety changes, impaired sociability, and behavioral abnormalities. Also, cytokines maintain homeostasis by mediating multiple branches of neurodevelopment, such as neurogenesis, gliogenesis, migration, axonal pathway, differentiation, survival, and possibly more, through complex mechanisms. Pyroptotic cell death induced by inflammasome activation promotes healthy brain development. The complement system, along with other phagocytic receptors, has been shown to regulate synaptic pruning during neurodevelopment, and its failure may play a role in the pathogenesis of neurodevelopmental disorders. On the other hand, several factors including maternal immune activation (MIA), genetic predisposition, maternal nutrition, prenatal stress, and others have been recognized as crucial risk factors for neurodevelopmental problems. As a result, any research into the role of innate immunity in neurodevelopment is critical for unraveling the mysteries of the developing brain, understanding neurodevelopmental diseases, and devising therapeutic solutions.

Keywords: Innate immunity, Neurodevelopment, Neurodevelopmental diseases

ABS-81

α 7NACHR AND HMGB1 EXPRESSION IN THE VAGUS NERVE AND HEART TISSUE IN EXPERIMENTAL EPILEPSY MODEL

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Introduction: Epilepsy is a neurological disease characterized by seizures resulting from abnormal electrical activity in neurons. Dysfunctions in the autonomic nervous system (ANS) are involved in epileptic processes. Studies have shown that ANS may be effective in the mechanism of neuroinflammation in epilepsy. It has been shown that HMGB1, a chromatin component released during inflammation, is released during epileptogenesis and the activity of HMGB1 pathways increases.

The release of HMGB1 is regulated by the cholinergic anti-inflammatory system. The cholinergic anti-inflammatory system functions by the interaction of acetylcholine released from the vagus nerve with α 7 nicotinic acetylcholine receptors (α 7nAChR) in activated immune cells. It has been stated that the cholinergic anti-inflammatory system is effective on neuroinflammation in epilepsy. However, the mechanism between the immune system and the autonomic system in epilepsy has not been clarified yet.

Objective: In our study, we aimed to investigate HMGB1 and α 7nAChR expressions in vagus nerve and heart tissue using the pentylentetrazole (PTZ) kindling model in order to explain the mechanism between the immune system and ANS in epilepsy.

Method: The study was carried out using adult male and female Wistar-albino rats. 35 mg/kg dose of PTZ agent was administered intraperitoneally to induce chronic epilepsy in rats. Immunohistochemical examination and analysis were performed for HMGB1 and α 7nAChR in dissected vagus nerve and heart tissue from rats in the control and epilepsy groups.

Results: As a result of the immunohistochemical data we obtained, that HMGB1 and α 7nAChR immunoreactivity were significantly increased in the vagus nerve and heart tissue ($p < 0.05$).

Discussion and Conclusion: Our study data show that α 7nAChR may have a protective effect against cardiac pathology seen in epilepsy patients. In addition, the increase in HMGB1 detected in conditions such as epilepsy with cardiac arrhythmias may be an indicator of an abnormal inflammatory response.

Keywords: Acetylcholine, PTZ-kindling model, TLR4, RAGE, SUDEP

**FINITE DIFFERENCE TIME DOMAIN (FDTD) APPLICATION FOR TISSUE-THERMAL ANALYSIS
BASED ON PENNES' BIOHEAT EQUATION
IN ELECTROMAGNETIC ENERGY EXPOSURE**

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Introduction: When the human body or any biological system is exposed to an electromagnetic (EM) wave, the electromagnetic field is induced in the body. The resulting heat production is not distributed homogeneously in the body. The inhomogeneous distribution of energy absorption can cause temperature rise, which will result in some biological effects. Heat transfer in living tissues is quite complex phenomenon, namely it is a combination of conduction, blood transport, perfusion and metabolic heat production in tissues. Many mathematical models have been developed to define heat transfer in living biological tissues. The most widely used bioheat model today was created by Pennes proposing a simplified bioheat model to explain the effect of blood perfusion and metabolic heat production during heat transfer in a living tissue. Pennes' bioheat transfer equation is very significant in estimating temperatures in tissues due to Radiofrequency Radiation (RFR). Radio frequency (RF) waves covering the frequency range of 3 kHz-300 GHz in the electromagnetic spectrum, are generated by the daily used sources of people such as mobile phones and base stations. The most accepted effect of RFR is the temperature increase that may occur in the tissues mostly in high power density of RFR sources. In this study, skin tissue-thermal analysis has been performed using Pennes' bioheat equation and Finite Difference Time Domain (FDTD) method. Specific Absorption Rate (SAR) and maximum electric field (E_{max}) values have been calculated in the situation of exposed to RFR indifferent frequencies and different power densities. Temperature increases under the skin in case of EM exposure are shown with figures drawn in MATLAB.

Objective: In our study, we aimed to obtain subcutaneous temperature, Specific Absorption Rate (SAR) and maximum electric field (E_{max}) values and temperature changes depending on subcutaneous distance for tissue-thermal analysis in case of RFR exposure at a certain level of power density yet at different frequencies and at certain frequencies with different power densities.

Method: In the study, the Finite Difference Time Domain (FDTD) method is used for solving Pennes' bioheat transfer equation in MATLAB. SAR, maximum electric field (E_{max}) and temperature values are calculated and plotted in MATLAB for RFR at 1000 MHz and 2.45 GHz and power densities of 10 mW/cm² and 63 mW/cm², respectively

Results: For a frequency, SAR and E_{max} values increased if the power density exposure increases. For a certain frequency, subcutaneous temperature at a certain distance increases if the power density rises. For a certain power density, SAR and E_{max} values increased as RFR exposure increased. If RFR exposure increased at the certain power density, the temperature values at the certain subcutaneous place increased. Subcutaneous temperature values increased over time at the certain subcutaneous distances in all exposure applications.

Discussion and Conclusion: We are frequently exposed to electromagnetic energy in our daily life. When the electromagnetic energy is absorbed through the body, it causes an increase in temperature in the tissues. This heat increase depends on the frequency, power density and duration of the RFR. SAR and E_{max} values, which are very important parameters in EM energy exposure for showing the temperature increase, can be found by using the Pennes bioheat equation.

Keywords: Electromagnetic Energy Exposure, Tissue-Thermal Analysis, Finite Difference Time Domain (FDTD) Method, Specific Absorption Rate (SAR), Maximum Electric Field (E_{max}).

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THE RELATIONSHIP BETWEEN IDIOPATHIC INTRACRANIAL HYPERTENSION AND OBESITYKübra Gül KOCA*

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Idiopathic intracranial hypertension (IIH), also known as pseudotumor cerebri syndrome (PTCS) is characterized by symptoms of increased intracranial pressure; including headache, blurred vision, papilledema, and sixth cranial nerve palsy without an identifiable cause. Most patients with IIH are reported to be obese. Obesity is defined quite simply as excess body weight for height. However, this definition shows that its effects occur not only in terms of excess fat, body fatness or body size, but also metabolically. Obese individuals are at higher risk of many diseases, including diabetes mellitus, cardiovascular diseases, sleep apnea, dyslipidemia, and IHH. It has previously been reported that 90% of patients with IIH are obese. Many studies have found associations between IIH and female gender and morbidities such as polycystic ovary syndrome (PCOS), which are naturally associated with obesity and weight gain. PCOS is thought to be linked to BMI rather than playing a direct causal role to PTCS. PTCS is most common in obese women of childbearing age. However, there are many cases of children with PTCS. The primary problem in children with PTCS is chronically high intracranial pressure, and the most important neurological finding is papilledema, which can lead to secondary progressive optic atrophy, vision loss, and possible blindness. Compared with studies of adults with PTCS, children with PTCS were not gender-dominated and obesity was a less common cause. In conclusion, the goal of this study was to emphasize the causes of IHH and the effect of obesity.

Keywords: Pseudotumor Cerebri, Obesity, Idiopathic Intracranial Hypertension, Papilledema

THE EFFECT OF THE COVID-19 PANDEMIC ON SLEEP AND STRESS PROBLEMS AND ASSESSMENT OF THE PRODUCTS USED IN THE TREATMENT OF THESE PROBLEMS

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The COVID-19 pandemic can create various problems for individuals, such as stress and anxiety. To examine the effect of the pandemic and quarantine process on the psychological health of individuals in Italy, they surveyed 18,147 participants over the internet and as a result of the study, 37% of the participants had post-traumatic stress symptoms, 20.8% had anxiety symptoms, 17.3% had depression symptoms, 7.3% had sleep problems, 21.8% had high perceived stress levels, and 22.9% had adjustment disorder scores above the cut-off point required to diagnose the illness. If stress is prolonged and can not bring under control, it can pose a severe threat to the health of individuals.

Stress can cause various problems on sleep by affecting the activation of the hypothalamic-pituitary-adrenal axis. Insufficient sleep can impair immune system responses. It can also have unfavorable effects on the psychological health of individuals. With the COVID-19 pandemic, most people's lifestyles have changed. In some studies, it has been observed that as a result of house arrest, individuals' bedtime to go to later hours, decrease in sleep time at night, increase in daytime sleep. Some participants in the study stated that there was a deterioration in sleep quality with house arrest.

Various products can be used to keep sleep and stress under control during the COVID-19 pandemic. Stress-related sleep problems can be reduced by consuming foods containing melatonin. In addition, melatonin has other positive effects on individuals such as accelerating falling asleep and increasing sleep time. Cherry juice can help individuals solve sleep problems thanks to the melatonin it contains. As a result of the researches, it was concluded that cherry juice increases the level of melatonin in the body and improves sleep. To keep the stress level under control and to protect mental health during the pandemic, more B and D vitamin groups can be used. Eight types of B vitamins, known as B-complex vitamins, can improve mood and reduce stress by lowering homocysteine levels or maintaining healthy levels of this amino acid. Some research that establishes a link between vitamin D and levels of depression and shows that taking vitamin D supplements treats stress states. In this direction, vitamin D supplementation in the pandemic may help individuals to keep their stress levels under control.

Keywords: Sleep, Stress, Melatonin, COVID-19 Pandemic, Vitamin.

ABS-85

INVESTIGATION OF THE EFFECTS OF COVID19 PANDEMIC ON THE VEGAN NUTRITION AND NUTRACEUTICAL PRODUCT CONSUMPTION

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The COVID-19 pandemic has led to a drastic rise in, plant-based eating and prophylactic approach among people. This urgent requirement for a solution is reflected on the individual level by an unprecedented rise in consumer sales of vegan foods including plant-based proteins and nutraceutical products which were considered to be effective against transmission of corona virus, have been on the front burner during this pandemic.

According to given information by Plant Based Foods Association (PBFA), plant-based meats grew 65% with more than \$939 million sales in 2019. Furthermore, plant-based meat alternatives market is predicted to be US\$ 27.9 billion in 2025. Another fastest growing market in the vegetable protein products segment are milk and other dairy substitutes (US\$1.4 billion, with 19%-dollar sales growth between 2018 and 2019). Although it is more difficult for vegan people to get enough important nutrients such as protein, iron, calcium, vitamin B12, zinc, vitamin D, and fatty acids than people who eat a regular diet. This vegan consumption requirement for a solution is reflected on the individual level by an unprecedented rise in consumer sales of vegan food supplements and nutraceutical products.

In the content analysis, using the keywords “vegan nutrition, vegetable protein and food supplement”, 374, 4.145 and 32.160 scientific articles were identified, respectively, by the content analysis conducted on the PUBMED search engine. In contrast, 1 and 0 thesis studies were identified on the website of the National Thesis Center of YOK between 2000 and 2021 using the keywords “vegan nutrition and vegan nutrition + COVID19”, respectively. The results here reported are a further confirmation that the effect of COVID19 pandemic on the vegan consumer’s health or consumption trends has not been well studied until now in Turkey.

Keywords: Covid19 Pandemic, Vegan Nutrition, Plant-based Eating, Nutraceutical, Immunity

A REVIEW OF THE CURRENT BENEFITS OF COLOSTRUM FOR USES IN NUTRACEUTICAL PRODUCT DEVELOPMENT

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With the COVID-19 pandemic, the tendency to natural foods and food supplements has increased in order to protect and maintain immunity. It is well-known that breastmilk transmits antibodies from the mother and that this confers enhanced immunity against likely microbial exposures to the newborn infant. It has recently been shown that secretory immunoglobulin A (sIgA) which constitutes 90% of the immunoglobulins content in breastmilk, plays an important role in the immune response against COVID-19. The importance sIgA has also been demonstrated in other viral infections, such as infection with the rotavirus; the human immuno-deficiency virus (HIV), the norovirus, the herpes simplex viruses, echoviruses 6 and 9, and polioviruses 1, 2 and 3.

As known, colostrum contains high levels of antibodies, immunoglobulin, protein, and vitamin E, which strengthens the immune system and protects against infections. By making the intestinal pH acidic, it strengthens the defense system against harmful bacteria and the digestive system is also supported. Studies have shown that ones who consume colostrum are less likely to suffer from viral and bacterial diseases compared to those who do not. Fructose oligosaccharides (FOS) can be preferred as prebiotics to increase the efficiency of colostrum in nutraceutical product development. FOS supports the growth of bifidobacteria in the intestinal tract.

This review cover research on the current benefits of colostrum fortified with FOS as a nutraceutical product. With the increase in studies on colostrum recently, it has been thought that colostrum can be preferred as a food supplement for the protection/support of immunity in the COVID-19 pandemic. The thesis/scientific studies on colostrum and breast milk between the years 2000-2021 were examined in the YÖK National Thesis Center, PUBMED and Google Scholar search engine. Using the keywords "colostrum and breast milk", 117,000 and 18,700 scientific articles in PUBMED, respectively; There were 4,676 and 10,575 scientific studies, on Google Scholar, and 25 and 10 thesis, respectively, on the YÖK National Thesis Center website. However, there is no thesis study on foods with colostrum. In this state, colostrum and innovative products containing colostrum were found to be worth researching for the nutritional use of colostrum.

Keywords: Colostrum, Nutraceutical, Breast Milk, Immunity, Covid-19

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FUNCTIONAL ORAL AND DENTAL HEALTH PRODUCTS USED DURING COVID-19 PANDEMIC: PRODUCT DESIGN APPROACH BASED ON CONTENT ANALYSIS METHOD

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Oral and dental diseases might cause systemic complications that threaten general state of Significance of oral health has increased due to the COVID-19 pandemic and compelled people to prefer natural and herbal oral health products including “chewable tablets, gargles, pastils, jelly tots, mouthwashes. The main used herbal extracts in the formulations are ginger, turmeric, pomegranate peel, rosemary, sambucus nigra, miswaak.

Taking into account of the effects of herbal extracts to develop oral health product, content analysis method has been made on the purpose of product assessment and whereas no thesis study has been detected as a result of the research that has been made on YÖK National Thesis Center with keywords such as "mouthwash, pomegranate peel and mouthwash, pomegranate peel and ginger; pomegranate peel, ginger and mouthwash". Furthermore no article that includes words "pomegranate peel, ginger and mouthwash" together has been found in consequence of a search using PUBMED. However, 39 scientific studies has been found as a result of a search that has been made with keywords "pomegranate peel, ginger and mouthwash" on Google Scholar. According to detailed literature search, it is thought that a mouthwash contains ginger, turmeric and pomegranate peel extracts can be an optimal option to develop daily oral care product, especially for young-age group considering their natural based product purchasing approach. It is also expected for the active molecule in rhizomes of ginger-gingerols-to provide antimicrobial, antiplaque and anticariogenic; pomegranate peel extracts to provide antioxidant, antiinflammatory and antiviral properties to the herbal mouthwash. The turmeric extract to be an ingredient because of the possibility of composed resins to change the colour and change the taste of the mouthwash. Furthermore, detailed investigation and research studies are needed to evaluate the effect of herbal extract composition.

Keywords: Covid-19, Oral Health, Mouthwash, Pomegranate Peel, Turmeric

NUTRITIONAL PROBLEMS AND NEW DIETARY TRENDS AMONG INDIVIDUALS WITH AUTISTIC SPECTRUM DISORDER DURING COVID19 PANDEMIC

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Eating habits are selective in individuals with Autism Spectrum Disorder (ASD). Their excessive interest in certain foods negatively affects the intestinal structure of these individuals. Individual-oriented diets are applied against different symptoms seen in individuals. Gluten-free-casein-free diet, feingold diet and ketogenic diet are generally preferred. These diets encourage nutrition to alleviate behavioral symptoms and gastrointestinal system (GIS) problems seen in ASD. It is suggested that vitamin-mineral supplements and some probiotics can be used to reduce the deficiencies and ASD symptoms caused by the applied diets. Since the symptoms seen in ASD are unique to the individual, nutritional interventions also differ for each individual. Since the long-term application of dietary approaches specific to ASD may lead to some major nutrient deficiencies, their application only for a certain period of time is necessary in order to prevent nutrient deficiencies. Another issue to be considered in the foods consumed by patients with autism is food additives and contaminants. One of these additives, phenols, are used in the market as coloring and preservative food additives. Colorants and preservatives were found to cause hyperactivity. It has been observed that removing colorants and preservatives from the diet of children with autism come up with positive results. In addition, it is recommended to exclude foods containing reactive salicylates from the diet. The relationship of individuals with autism to the COVID-19 pandemic, according to recent studies, the death rate of individuals with ASD has been found to be 3 times higher than the death rate of individuals with non-ASD due to COVID-19. The reason for this is thought to be related to the immune systems of patients with ASD. It has been recently shown that individuals with ASD, who have difficulty adapting to changing conditions, have been adversely affected both physically and psychologically during the COVID-19 pandemic. Furthermore, there is a more needed nuanced and comprehensive studies among individuals with ASD, to investigate this relationship.

Keywords: Autism spectrum disorder (ASD), Gluten, Food Additives, Covid-19, Immunity

THE NEGATIVE IMPACT OF COVID19 PANDEMIC ON EYE HEALTH

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During the coronavirus epidemic (COVID-19), the use of technological devices increases considerably while spending time at home due to social isolation. As known, the number of blinks decreased due to distance and focus in mobile phone and computer use. In addition, the humidity balance deteriorated in the indoor environments we were in, and the dry and airless environment caused blurred vision, resulting in eye diseases. Anyone who over uses electronic devices, especially children, without adequate breaks may experience eye strain issues as part of the digital eye strain spectrum. Another important results of Covid19 pandemic is that almost four in ten (38%) self prescribers have taken an eye health supplement, making it the most popular supplement taken by this group. The Covid-19 pandemic has accelerated the worsening of glaucoma cases in people who had already been previously diagnosed. It has been also recently shown that visual disturbances have increased as a result of the restrictions imposed due to the Covid-19 pandemic. Another negative effect of the pandemic process on eye health is that the mask comes out of place or is worn incorrectly, dispersing the air around the eyes. Air leaking through constant air pressure can cause tears to evaporate quickly. Since it accelerates aging in the eyes and increases diseases such as cataracts and yellow spots, sleep patterns should be provided and healthy foods should be consumed. Most epidemiological studies and clinical trials indicate antioxidants such as lutein in improving visual acuity and contrast sensitivity and maintaining overall eye health. Previous studies showed that lutein and zeaxanthin are carotenoid pigments that give a variety of common foods their yellow or orange color, such as melon, pasta, corn, carrots, peppers, fish, salmon, and eggs. As a result of COVID19 impacts, the number of products in the food supplement and nutraceutical market are quite limited and similar to each other for eye health. Hence, there is a more needed nuanced and comprehensive approach among producers to deliver innovative eye health products to the market in success.

Keywords: Covid19 Pandemic, Eye Health, Nutraceuticals, Innovation

ABS-90

INVESTIGATION OF THE ANTIOXIDANT EFFECTS AND STRENGTHENING OF THE IMMUNITY OF THE COMBINATION OF LIPOSOMAL CURCUMIN AND RESVERATROL IN BLACK ELDERBERRY SHOTS

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COVID-19, a new type of viral disease seen around the world, has proven to people that nothing is more important than human health. With the pandemic, more attention has been paid to the importance of healthy nutrition, the intake of food supplements, and the value of antioxidants. Antioxidant, which is one of the most popular topics of the last period, has attracted the attention of people. When a population becomes immune to viruses, it is called herd immunity. It has been found to have natural anti-cancer, anti-oxidant and anti-inflammatory properties. Having these features provides a natural immunity and protection from infections. Today, problems caused by malnutrition have started to be seen at a high rate. Therefore, the use of supplements is increasing. Food supplements affect health positively. In 2019 the effects of curcumin (CUR) and resveratrol (RES) were evaluated on oxidative damage induced by fipronil in forty rats. It was observed that when RES and CUR were given in combination, they attenuated and synergistically reversed the oxidative damage. In another study, it was observed that this combination was also effective in colon cancer. By 'imprise' CUR into liposomes with RES, increased absorption is achieved. The liposomal mixture that is ready to drink in a shot prepared with elderberry extract also makes the usage easy.

On the website of the National Thesis Center of the Higher Education Council, 165,2 30 and 6 thesis studies were identified, respectively, using the keywords "curcumin, resveratrol and Sambucus nigra" between the years 2000-2021. However, while no thesis study was found with the keywords "Sambucus nigra, resveratrol and curcumin", 998 scientific studies were found in the PUBMED search engine and 389 in the Google Academic search engine. In this case, the relationship between these keywords was found to be worth researching and therefore it is expected that the study will contribute to the relevant field.

Keywords: Curcumin, Liposomal Encapsulation, Immunity, Nutraceutical

ABS-91

DETERMINATION OF HERBAL RESOURCES CONTAINING QUERCETIN, MEDICAL EVALUATION OPPORTUNITIES AND EFFECT MECHANISM

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Quercetin is a phenolic compound belonging to the flavonoid class; it is a flavonol. Quercetin has been identified in wide range of different plant species. Existing data indicates quercetin is most abundant in certain medicinal plants, such as aloe vera, soft fruits, such as strawberries, and in cruciferous vegetables, such as cauliflower, onion and dark green leafy vegetables, such as kale. There is a high amount of quercetin found in the skin of the red onion. It is, however, known that flavonoids are commonly understood to function as an anti-oxidant within biological systems, and quercetin has particularly well-established efficacy in the prevention of hydrogen peroxide (H₂O₂) induced cellular damage. Over time, quercetin has been widely reviewed to exhibit a range of additional properties, including functionality as an anti-carcinogenic (anti-proliferative and pro-apoptotic), anti-inflammatory, anti-microbial and anti-viral agent.

Considering its wide health effect and popularity during Covid-19 pandemic, there are few research studies about production of quercetin from plant or agricultural waste products including onion skin. Moreover, the other source of quercetin is "capers, lamb's ear and dill, which grow in a wide area in Turkey. Further investigation is required to determine the best source of quercetin extraction and validate the safety and efficacy of quercetin with a view of the dose-response relationship for viral infections including Covid-19, in vivo. In addition, the application of liposome technology is also quite important in order to increase the bioavailability of the obtained quercetin extract.

Keywords: Quercetin, Covid-19, Antiviral Agent, Agricultural Waste, Onion

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