

# Abstract Book

## 5<sup>th</sup> International Alavi Meeting

*Healthy Aging Congress*



Aging Research Institute, TUOMS

MAY 10-12, 2022



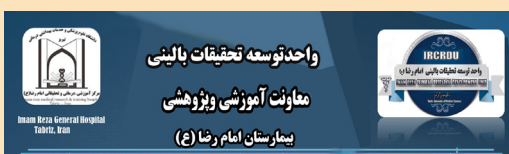
Tabriz University  
of Medical Sciences



Tabriz University  
of Medical Sciences

# 5<sup>th</sup> International Alavi Meeting

Aging Research Institute, TUOMS



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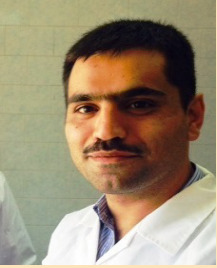
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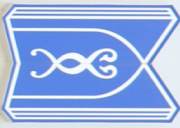


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# FACULTY OF MEDICINE



دانشگاه تبریز

۱۳۳۶

دانشگاه تبریز، خیابان آذربایجان، تبریز

*Healthy Aging Congress (2022),  
Tabriz University of Medical Sciences, Tabriz, Iran*

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# Opening Ceremony

*Opening Ceremony  
(WED, MAY 11)*

<i>TIME</i>	<i>SCHEDULE</i>
<i>08:00 - 08:10</i>	<i>National Anthem of Islamic Republic of Iran - Opening Prayer</i>
	<i>Opening Remarks</i>
<i>08:10 - 08:20</i>	<i>Dr. Sara Farhang</i>
<i>08:20 - 08:30</i>	<i>Dr. Bahman Naghipour</i>
<i>08:30 - 08:40</i>	<i>Dr. Younes Panahi</i>
<i>08:40 - 08:50</i>	<i>Dr. Shahin Akhondzadeh</i>
<i>08:50 - 09:00</i>	<i>Dr. Hassan Soleimanpour</i>
<i>09:00 - 09:10</i>	<i>Prof. Abass Alavi</i>

**Dr. Younes Panahi**

*Deputy of Research and Technology, Ministry of Health and Medical Education*

I extend my greetings and best regards to the respected guests of the healthy aging congress being held in the honor of Professor Abass Alavi at Tabriz University of Medical Sciences. I am really delighted that this congress coincides with the meeting of the research deputies of the country's medical sciences universities in Tabriz.

It is noticed that the world's population is aging and in our country about %10 of the population is elderly at this time, which will increase up to %30 due to improving the quality of life and life expectancy. The point needing attention is that the elderly population faces various problems. There is a wrong believe people at the age of 60 or older have no place in social activities. In fact, this misbelief along with their health problems like cardiovascular disorders, neurological disorders, dementia, cancer, musculoskeletal diseases, and etc. increase the risk of social isolation in elderly. The point is that we should improve the health status and quality of life of this population by developing research in the field of aging.

The development of research centers and networks related to aging is necessary in parallel with the increase in the number and proportion of the elderly population. It is very important that the research centers and universities with proper infrastructures and specialized human resources should have the promotion of education and research in the field of aging in their road map, so that they can meet the needs of the ever-increasing elderly population and manage the related concerns. The development of geriatric knowledge can reduce the years of life spent with disability and disease and improve the quality of life of the elderly by possible reduction of exposure to common problems of aging.

Once again I am grateful for participation of Prof. Alavi and other professors and researchers in this meeting and I proudly announce our readiness to support research in the field of geriatric.

**Dr. Bahman Naghipour***Dean of Tabriz University of Medical Sciences*

The world's population is rapidly aging, and this population shift will affect all aspects of society. Aging is associated with changes in biological, psychological, behavioral, and social processes. Having the opportunity to live a long and healthy life and enjoying a healthy life is an inalienable right of all human beings. Due to the importance of paying attention to healthy aging and improving the lives of the elderly, the United Nations has named the current decade the Decade of Healthy Aging (2021-2030).

Healthy aging does not necessarily mean the absence of any disease or disability because most elderly have one or more diseases that, when properly controlled, have little effect on their health. According to the World Health Organization, healthy aging is defined as “the process of developing and maintaining the functional ability that enables wellbeing in older age”. Healthy aging emphasizes the need for action in various sectors and enables older adults to remain a resource for their families, community, and economy.

Scientific communication plays a significant role in knowledge transfer. Congresses are necessary for the scientific growth and development of societies by creating an atmosphere for the exchange of information on various scientific and research topics. Scientific conferences are an opportunity to exchange new and valuable information and achievements, and provide easy access to up-to-date scientific resources. Moreover, they provide a platform for companionship and communication as well as knowledge transfer between seniors and younger researchers. Holding the Healthy Aging Congress as a scientific event is a great opportunity to get acquainted with the latest scientific findings and a step towards improving the scientific, research and health level of society.

**Prof. Abass Alavi**

*Professor of Radiology and Neurology, Director of Research Education of University of Pennsylvania*

It's a great pleasure for me to meet you. Being honest with you, I was going to give my speech in Turkish, because Tabriz is very dear to my heart and some of the best years of my life were spent in Tabriz. I was grown up in this beautiful city, so my heart is still in Tabriz. I love to come to Tabriz very soon and hopefully this is going to happen. So, this is a really great opportunity and it is truly a big pleasure for me to take part in this great occasion.

As you know, aging is a big part of my academic life. I have done a lot of research in many aspects of aging and in 2015, when I was at the university, we had a conversation about aging and I thought that, it was fantastic and was exactly what I wanted to do and I couldn't make it happen in a better place than my beloved Tabriz. So, when we discussed it with Dr. Shakouri and colleagues, it was very clear that we wanted to emphasize on the three of major elderly problems. Following the progress that have been made in medicine, the world is aging very rapidly. People are living much longer, so if you live longer you are going to develop some medical problems, on top of which there are brain disorders as was discussed in dementia, and other abnormalities occurring in the brain.

The second common problem that elderly people would face, is cardiovascular diseases, following the number one killer in the world, also in Iran, atherosclerosis, in which a hardening of arteries develops clots in the heart. And the third common problem is the musculoskeletal problems, in which old people develop significant problems with joints and muscles. So, I really thought that it should be emphasized and some investments must be considered by the university at national level on these problems, and this will be a great help for the university of Tabriz as well as the rest of

I really was satisfied during that visit which we established aging research institute and I want the greatest and the best tuition for young members to get involved at these projects and in fact when I come to Tabriz, that I am hoping it is going to happen soon, we really have to establish some major awards. So I will be able to support that and I really want to do this. I want to just encourage young people in medicine to get interested about research and start it particularly about aged reached disorders, so really this is going to be a very important contribution not only for the people of Tabriz and Azerbaijan but also for the entire country. Actually, I want my homeland to be visible in the world's scene and I really would like to help as many people as I can, to write papers that can be published in international journals. Persians are just smart as anybody in the world and we have to shine as we did 2000 years ago. We were the leaders in any level, science and other things.

Hopefully, this fall I will come to Tabriz. I'm going to visit my homeland and country and my "HAMSHAHRIES", and start another beginning in age related researches. This is going to make me very happy because fortunately I am a healthy old person and I am able to work as hard as anybody; I work 7 days a week and 10 hours a day and I have to help young people, of course in medicine, because I lost my father when I was four years old and my mother was 24 years of age and since that time, she wanted me to help mankind. So I want to do it not only for the world, but also for my country's people and Tabrizi patients. So, this is my greatest desire, I really hope to be there again to see you face to face, rather than by internet. I also hope to seriously examine the projects related to this important issue not only in my motherland but in the whole of Iran.



## **Dr. Shahin Akhondzadeh**

*Professor of Neuroscience, Tehran University of Medical Sciences*

Greetings and best regards to my dear friends and colleagues. I am very happy of accompanying my dear friends here at the 5th international congress on aging. The data used in today's presentation are up-to-date and extracted from new sources.

I reviewed and analyzed the articles on geriatric medicine and gerontology subset of Scopus database. In this slide, you can see countries around the world based on their indexed scientific output in Scopus. You can also see the world's prestigious universities that work in this field, which are mainly American and European universities, with Britain and France having the largest number of papers in this field up to 2022 so far. It is worth to note that most of the institutions that support geriatric research are also countries for which this issue is a priority, and it is interesting to note that Japan is one of the countries where aging is very important and has a large number of elderly people. As you can see, Japan is one of the countries that support aging research. If you look at the list of countries that are ranked in the field of geriatrics and gerontology, the thirty-third country is Iran. This shows that research and production of science in this subject in Iran is somewhat under-developed.

Now, if you take a look at all of Iran's citations in this regard, you will find that we are also ranked 40th in citations related to geriatrics, which is even worse than the status of published articles. While in the general investigation of Iranian citations in all fields, it can be seen that our country's citations in all fields are on average in a better position than the number of articles in each field.

Note that if you look at the rank of Iranian articles on aging in the middle-east, you will notice that the occupying regime of Jerusalem, which is usually not among the first 4 or 5 countries, is on the first place in this subject area, while Turkey is in second place and Iran is in the third place. After Iran, Saudi Arabia is in the fourth place. This is while our country is generally ranked first or second in other fields. Also, looking at the rankings based on citations, Iran have the third rank in the region with a clearly large gap from the second country, and it shows that we have to work hard to be able to compensate the vast lag in this area.

The reason is also clear: The research in this field in Iran has a history of about a decade and is not a field with an extensive history. Therefore, the research that has been conducted in this field is relatively new and has not been yet having good citations. Also, in terms of the number of students and graduates in this field, we have not yet been able to improve ourselves because each student in this field will have two or three articles. Also note that Iran ranks 16th in the world in terms of average science in all fields and 15th in terms of citations in all fields, but in geriatric medicine it ranks 31st in terms of number of articles and 40th in number of citations. This shows that the production of science in this field in Iran is far from the average total production of science in Iran.

The number of Iranian articles in this field has grown reasonably, but because our base in this field was zero, it has caused us to not yet gain our place in the region and in the world. The best approach to solving a problem is to move towards solving it. That is why, the Ministry of Health, Tabriz University of Medical Sciences, Tehran University of Medical Sciences, Welfare and other institutions that work in this field, should provide financial support for research in this field so that this field can grow. Having an overview of the research in this field in the past years, you will see that the main research done in this field is in the field of neuroscience, nursing (which is currently increasing and accounts for most

of the research in this area), and psychiatry (which unfortunately has not yet grown significantly compared to the field of neuroscience).

In this slide, you can see a simple comparison of the average science in Iran in comparison to gerontology, which shows that in sections such as the publication of articles in prestigious journals and the number of citations, Iran is behind its own average and this must be compensated. Of course, it is obvious that fortunately, in the field of international relations, we are ahead of the Iranian average in this field. This means that scientific exchanges in this field are done well, and this shows that there are probably a few people who are the so-called pacemakers in this field in Iran, and they do their job well.

Finally, the most active university in the country regarding publication of articles in this field is the University of Social Welfare Sciences, which has launched the field of geriatrics and has taken students and has been active. However, despite the fact that the number of articles in this university is good, it has not performed well in terms of number of citations, and this shows that it has not published very high quality articles. In the next ranks Tehran University, Iran University of Medical Sciences and other universities of medical sciences are placed.

Investigating the active authors of the country in the fields of geriatrics and gerontology, the top researchers of the country are listed in the table above, among who are professors from the University of Social Welfare and Dr. Fadaei Vatan who has launched the field of geriatrics in Iran, as well as researchers from other universities of the country.

Thank you very much for your attention. I hope I have been able to give my dear friends a good view of geriatric and gerontologic research with this presentation.

# Biography



## Prof. Abass Alavi

Abass Alavi was born in 1938 in Ghare-aghaj district of Tabriz. After graduating from Ferdosi high school in Tabriz, he enrolled in Tehran University of Medical Sciences and subsequently served in the Sepaheh Behdasht in a village (Kinevars) near Abhar. He decided to continue his training in the U.S., and went to Philadelphia for a residency.

He was there that realized clinical medicine was not satisfying, but that he wished to find a more scientific specialty. He found a radiology residency at Harvard and subsequently, a fellowship at the University of Pennsylvania in Nuclear Medicine, and started in that field in 1971. Professor Alavi worked on pioneering research in tomographic imaging of function imaging with the collaboration of Dr. David Kuhl and Dr. Martin Reivich which led to the development of FDG.

He was the first person in the world to use FDG to image human brain and the whole body in 1976. Subsequently, he conducted pioneering research in central nervous system disorders as well as many malignancies and inflammatory diseases.

He has been a very productive researcher in almost all fields of nuclear medicine and medical imaging. His pioneering research with medical imaging techniques has been based application of modern imaging modalities including PET, SPECT, CT, and MRI. He has released extensive publications including more than 2700 write-ups and numerous books.

He has amassed 7500 citations by time, earning him an H-index of 135. He has trained numerous nuclear medicine specialists from various countries, and some are now experts in the field. His efforts have been rewarded by the most prestigious prizes given by the society of nuclear medicine, including the George Charles de Hevesy Nuclear Pioneering Award and the Cassen Prize of the Society of Nuclear Medicine, along with honorary degrees from the University of Southern Denmark, Bologna, Gdansk, Tabriz, Shiraz, and University of Sciences in Philadelphia.



Lorem

El-Goli Mansion, Tabriz, Iran

# Abstracts

*DAY 1, a.m. Session  
(TUE, MAY 10)*

<i>TIME</i>	<i>SPEAKER</i>	<i>TOPIC</i>
<i>08:00 - 08:30</i>	<i>Dr. Mehdi Farhoudi</i>	<i>Update on diagnostic evaluation for secondary stroke prevention</i>
<i>08:30 - 09:00</i>	<i>Dr. Elyar Sadeghi</i>	<i>Advances in stroke treatment</i>
<i>09:00 - 09:30</i>	<i>Dr. Mahnaz Talebi</i>	<i>New therapeutic strategy for Alzheimer's disease</i>
<i>09:30 - 10:00</i>	<i>Dr. Amirreza Jahanshahi</i>	<i>Parkinsonism and its types</i>
<i>10:00 - 10:30</i>	<i>Dr. Saeed Sadigh-Eteghad</i>	<i>Cognitive Rehabilitation Devices in Ischemic Stroke Therapy</i>
<i>10:30 - 11:00</i>	<i>Dr. Mohammad Bagher Rafi</i>	<i>The role of lysosomes in human aging and longevity</i>

## Update on diagnostic evaluation for secondary stroke prevention

*Mehdi Farhoudi, Professor of Neurology, Tabriz University of Medical Sciences, Tabriz, Iran*

Today stroke is a leading cause of mortality worldwide and 1 in 4 of people will have a stroke lifetime.

Therefore, diagnosis of stroke is very important to manage it in golden time and prevent its complications and recurrence.

In this presentation we focus on the last guidelines (AHA/ASA 2021) about diagnosis of stroke for secondary prevention. Based on this guideline we should diagnosis and plan the treatment within 48 hours of stroke onset. In this regards, ECG, and noninvasive imaging methods such as carotid ultrasonography, CT angiography, or magnetic resonance angiography are playing important roles to screen for stenosis. Stroke induced infarct should be confirmed by control imaging and the related risk factors and probable genetic background should be evaluated and managed appropriately. In this issue, atrial fibrillation detection during admission or after that is an especial note to secondary stroke prevention. Hope to prevent stroke recurrences by earlier diagnosis of etiology and their better management.

**Key words:** Stroke, Secondary prevention, AHA/ASA, Imaging

## Advances in stroke treatment

*Elyar Sadeghi Hokmabadi, Associate Professor of Neurology, Tabriz University of Medical Sciences, Tabriz, Iran*

For decades, aspirin has been widely used for secondary stroke prevention, but in recent decades advances in acute stroke treatment changed its face as revolutions. First intravenous thrombolytic therapy (IVT) in 90s then mechanical thrombectomy (MT) approved as safe and effective methods for acute stroke patients to have better short- and long-term outcome. The golden time for IVT is 4.5 hour and for MT is 6 hours; However, under specific circumstances this window for MT may increase up to 24 hours if viable tissue still exists.

Recently systemic approach to acute stroke with written and approved protocols for every center in stroke care units (SCU) also showed to be very promising in outcome of patients. On the other hand, through work up for determining stroke etiology is essential in the acute phase since it shows the way how to treat patients as secondary prevention. Recent trials also showed in patients with cryptogenic etiology and patent foramen ovale (PFO), under specific conditions like high shunt PFO and atrial septum aneurysm, PFO closure results in better outcome in comparison to medical treatment. In patients with ESUS etiology, clinical trials still could not show superiority of new oral anticoagulants to ASA and antiplatelets are the treatment of choice for this group of patients.

**Key words:** *Stroke, Secondary prevention, IVT, MT*

## **New therapeutic strategy for Alzheimer's disease**

*Mahnaz Talebi, Professor of Neurology, Tabriz University of Medical Sciences, Tabriz, Iran*

Due to improved living conditions, more efficient health systems, and improvements in medical treatments, humans are likely to live longer than ever. However, with longer lifespans, the risk of conditions like age-related neurodegenerative diseases also increases. This underscores the importance of research into treatments and cures for such illnesses. By 2050, it is estimated that the number of people with Alzheimer's disease (AD) will be 130 million worldwide. It is therefore desirable to find treatments that can delay disease onset, reduce symptoms, or even cure the disease, to increase the healthy lifespan of older individuals and to reduce the economic and social costs of providing care for affected individuals. For the moment however, most treatments only treat symptoms, including cognitive decline, depression, insomnia, aggression, and hallucinations. disease.

A wide range of potential targets are being investigated, and demonstrates that many clinical trials are underway. However, drug treatments need to be developed for the earliest possible stages of AD, to have the best possible chance of halting or slowing the pathogenesis, and to preserve cognitive function. The availability of brain amyloid imaging and MRI scans, as well as developing biomarker tests, will help determine whether treatments are slowing the pathological advances of the disease (in pre-symptomatic stages).

This will therefore facilitate drug testing at earlier stages, and speed up the discovery of potentially disease-altering drugs to help reduce the burden of this debilitating disease.

**Key words:** Alzheimer's disease, Neurodegenerative diseases

## Parkinsonism and its types

*Amirreza Jahanshahi, Assistant Professor of Radiology, Tabriz University of Medical Sciences, Tabriz, Iran*

Most patients (about 80–85%) diagnosed with Parkinson's disease have what is called primary parkinsonism or idiopathic Parkinson's disease (meaning that the disease has no known cause). This type tends to respond well to drugs that work by increasing or substituting dopamine molecules in the brain.

Secondary parkinsonism does not respond well to dopaminergic medications such as levodopa and include drug-induced parkinsonism, vascular parkinsonism, normal pressure hydrocephalus (NSA), corticobasal degeneration (CBD), progressive supranuclear palsy (PSP) and multiple system atrophy (MSA). In most cases, the diagnosis of probable PD can be made on clinical grounds, and no ancillary investigations are needed, However, in early PD the full triad of clinical symptoms and signs (bradykinesia, tremor at rest and rigidity) may not yet be manifested. The lesion in PD has been localized to the dopaminergic cells of the pars compacta of the substantia nigra and definitive diagnosis of idiopathic PD, requires histologic demonstration of intraneuronal Lewy body inclusions in this area.

Most suitable sequences for diagnosis this disease are T2\*-GRE and SWI and then T1W images and Loss of the normal swallow tail appearance of susceptibility signal pattern in the substantia nigra on axial imaging is perhaps the most promising diagnostic sign.

PSP is more common forms of secondary parkinsonism and Main radiologic feature is midbrain atrophy. MSA is a rare neurological disorder characterized by a combination of 1. parkinsonism, 2. cerebellar and pyramidal signs, and 3. autonomic dysfunction. CBD present with cognitive dysfunction, usually in combination with Parkinson-like symptoms.

**Key words:** Parkinson's disease, Parkinsonism, CBD, PSP, MSA

## Cognitive rehabilitation devices in ischemic stroke therapy

*Saeed Sadigh-Eteghad, Associate Professor of Neuroscience, Tabriz University of Medical Sciences, Tabriz, Iran*

Stroke is one of the vascular diseases of the brain that has been considered as a motor disability for years. Cognitive impairments caused by this disease are not usually evaluated in common clinical assessments. In recent years, assessment and rehabilitation tools in the treatment of brain diseases have made significant progress.

The development of various cognitive assessment softwares has resolved problems related to the examiner's judgment and patient's cultural differences and the level of education, which are affects the traditional test outcomes. Moreover, cognitive rehabilitation software in addition to increasing the accuracy of rehabilitation affects a wider domain of cognition.

In addition to traditional pen-paper tools, novel techniques such as neurofeedback, virtual reality, and electrical/magnetic/optical transcranial stimulations, can be effective in the improvement of the cognitive status of these patients. Studies have shown the effect of these interventions in the first six months after the disease occurrence. More detailed evaluations are necessary for the Identification of the exact effects of these interventions.

**Key words:** Ischemic Stroke, Vascular diseases

## **The role of lysosomes in human aging and longevity**

*Mohammad Bagher Rafi, Professor, Thomas Jefferson University, United States*

Several theories on the process of aging and human longevity have been proposed, but at this point, none of them appears to be fully satisfactory.

While genes and lifestyle have been the dominant factors affecting length and quality of life, recent studies have revealed the critical role of lysosomes in various cellular processes, including their degradative and recycling capabilities, adaptive responses to nutrient availability, stress resistance, programmed cell death, and plasma membrane repair, among others. Along with this multi-functional involvement in cellular and organismal life and death, lysosomal dysfunction also plays a major role in many age-related pathologies like Parkinson's and Alzheimer's disease and interferes with life expectancy. Therefore, improving the functional capacity of lysosomes will promote longevity and delay age-related symptoms.

Lysosomes are found in all eukaryotic cells except erythrocytes. They are widely known as the terminal location for cellular waste degradation, and they play a key role in the production of the metabolic building blocks that provide essential nutrients and anabolic materials during cellular starvation. Recent studies on lysosomal signaling pathways and their function in nutrient sensing, metabolic homeostasis, and cellular adaptation, have raised the lysosomal profile from a simple cellular organelle to the

cellular decision-making center, controlling cellular growth and survival and significantly influencing a healthy lifespan.

While lysosomes are involved in a variety of pivotal roles in cellular health and metabolism, in this presentation I am going to limit myself to discussing their three major functions: autophagy and longevity, nutrient homeostasis, and mitochondrial connection, all of which have a practical effect on aging and longevity.

**Key words:** Lysosome, Aging, Longevity

DAY 1, p.m. Session  
(TUE, MAY 10)

TIME	SPEAKER	TOPIC
11:55 - 12:15	Dr. Mostafa Farahbakhsh	The position of psychiatric care for the older adults in the Iranian health system
12:15 - 12:35	Dr. Reza Naghdi	Drug treatments in development for Alzheimer's disease
12:35 - 01:00	Dr. Arash Mohagheghi	Alcohol and substance abuse in older adults
13:00 - 13:25	Dr. Nazli Namazi	The roles of integrative medicine in controlling cardiometabolic risk factors in the older adults
13:25 - 13:50	Dr. Reza Mohammadasab	Persian medicine recommendation for older adults
13:50 - 14:10	Dr. Mustafa Ayazoglu	Healthy aging and physical activity
14:10 - 14:30	Dr. Amir Mohammad Jaladat	Evaluation of nutritional value of recommended food for the older adults in Persian medicine

## **The position of psychiatric care for the older adults in the Iranian health system**

*Mostafa Farahbakhsh, Assistant Professor of Psychiatry, Tabriz University of Medical Sciences, Tabriz, Iran*

With the development of health care system and control of infectious diseases, the elderly population is increasing. By 2050, the proportion of the elderly population will reach 22%. Mental disorders are common in old age. Based on the available evidence, the prevalence of mental disorders in the population aged 60 and older is approximately 20%.

Old age is faced with protective factors and risk factors and challenges. With age, life skills increase and problem-solving skills are strengthened. Dealing with diseases, raises people's knowledge. The elderly, on the other hand, experience different losses. Different illnesses, different medications, reduced socioeconomic function and increased likelihood of living alone prepare the ground for mental disorders.

In the elderly, the two categories of successful aging and mental disorders must be separated. Appropriate lifestyle in pre-aging courses, life skills training, proper communication skills training and empowerment in the field of self-care, people enter the aging course with the desired level of health. These skills can be applied in elderly-friendly centers in the Iranian health system. In East Azerbaijan, an anti-aging center has been set up in health centers. These centers train the elderly in homogeneous teams and participate in the implementation of health projects.

On the other hand, it improves the quality of life by screening common psychiatric diseases and their timely and appropriate treatment.

Iran's health system includes the public, private and cooperative sectors. The primary health care system in the form of health networks provides basic services to the population of Iran. In health centers, health centers, hospitals and specialized clinics, health workers, health care providers, psychologists, family physicians and psychiatrists provide the required services to the people in the form of a mental health program. Most of these services are performed in the form of interdepartmental teams. In the framework of the prevention program at different levels of primary, secondary and tertiary can be planned. At the fourth level of prevention, it improved the quality of services by providing guidelines. Developed successful aging by implementing health promotion guidelines. Identified and controlled risk factors for mental disorders. Diagnosis was performed in a timely manner to diagnose and treat the mental disorder in a timely manner.

Depression is common in the elderly and can be diagnosed and treated in the primary health care system. One of the most serious and significant disorders in old age is cognitive impairment. This disorder can be identified and cared for by designing and diagnosing this disorder in the primary health care system. The prevalence of major depressive disorder and cognitive impairment is 7% and 5%, respectively. One of the goals should be to pay attention to the independence of the elderly in daily life. Measuring their level of performance can be integrated into the primary health care system.

Studies show that the diagnosis and treatment of mental disorders in the elderly is not considered in the primary health care system.

Studies show that the diagnosis and treatment of mental disorders in the elderly is not considered in the primary health care system. The use of diagnostic instructions and tools enhances it. Another point is to pay attention to the mental health of elderly caregivers at home.

**Key words:** older adults, Depressive disorder, Cognitive impairment

## Drug treatments in development for Alzheimer's disease

*Reza Naghdi, Assistant Professor of Psychiatry, Tabriz University of Medical Sciences, Tabriz, Iran*

The number of individuals worldwide with Alzheimer's disease (AD) is growing at a rapid rate thus, new treatments are urgently needed. The current pipeline of drugs in clinical trials according to data of "ClinicalTrials.gov" for the treatment of AD was reviewed.

There are 126 agents in 152 trials assessing new therapies for AD: 28 treatments in Phase 3 trials, 74 in Phase 2, and 24 in Phase 1. The majority of drugs in trials (82.5%) target the underlying biology of AD with the intent of disease modification; 10.3% are putative cognitive enhancing agents; and 7.1% are drugs being developed to reduce neuropsychiatric symptoms. One of the most jaw-dropping reversals of guideline procedures in the history of the Food and Drug Administration (FDA) took place last June 7, when the agency announced that the drug aducanumab, a monoclonal antibody manufactured by Biogen and Eisai, biotech companies for the treatment of AD, had received marketing approval. Aducanumab (trade name, Aduhelm) is a monoclonal antibody whose main treatment claim is that it clears amyloid- $\beta$  accumulation from the brain. However, no convincing clinical evidence has been shown thus far that clearing amyloid- $\beta$  from AD brains results in any benefit to the patient. A new guideline describes evidence and clinical considerations for the use of aducanumab to treat patients with AD.

**Keywords:** Alzheimer's disease, Common Alzheimer's Disease Research Ontology (CADRO), Drug development, Aducanumab, Amyloid- $\beta$

## Alcohol and substance abuse in older adults

*Arash Mohagheghi, Assistant Professor of Psychiatry, Tabriz University of Medical Sciences, Tabriz, Iran*

Substance misuse among older adults as a distinct entity was first described in the research literature in 1964 but it has been assumed that individuals with life-long addictions either died early. Even today, substance use in the elderly is less diagnosed and treated. At the same time, cultural and social issues sometimes prevent the diagnosis and treatment of this disorder.

DSM-5 criteria for substance use disorder are considered identical for younger and older adults but there are several barriers (for both clinicians and older adults) that make it difficult to diagnose these disorders in the elderly and clinicians need to pay more attention to other signs and symptoms of possible use of substances to diagnose the disorders. In this short lecture, I will try to give a brief overview of the diagnosis and treatment of these disorders.

**Tobacco:** Quitting smoking at any age can have its potential benefits. In the elderly, due to physical condition and drug interactions, choosing the appropriate treatment to quit smoking requires special care and attention.

**Alcohol:** Due to the cultural and religious restrictions of alcohol, it seems that alcohol consumption is not common in the elderly of our country, on the other hand, this can cause the actual amount of alcohol consumption not to be reported. Alcohol consumption can sometimes be an attempt to treat some psychological conditions; at the same time,

alcohol abuse is sometimes caused by another medical disorder (such as behavioral disinhibition due to dementia) or it can cause other psychiatric disorders (such as mood problems and dementia). Benzodiazepines: Are among of the most common medications used to treat anxiety and sleep disorders in the elderly, but they are associated with serious complications such as the risk of cognitive problems and falls in the elderly. Prescribing as well as treatment of dependence of these medications should be done with great caution in the elderly.

Opioid Analgesics: The use of opioids in the elderly has a cultural history in our country. Due to the comorbidity of pain syndromes in the elderly, many drugs and opioid analgesics are used by the elderly, which may lead to opioid use disorders. The American Geriatric Society recommends that acetaminophen should be used as first-line and drugs such as gabapentin as a second-line medication to control pain in geriatric population. Due to the potential side effects of Tricyclic antidepressants and NSAIDs, it is recommended that the use of these drugs be limited in old age.

**Keywords:** Older adults, Alcohol, NSAIDs, Tobacco

## **The roles of integrative medicine in controlling cardiometabolic risk factors in the older adults**

*Nazli Namazi, Assistant Professor of Nutritional Sciences, Tehran University of Medical Sciences, Tehran, Iran*

Due to an increase in the levels of inflammatory and oxidative stress in aging, the risk of cardiometabolic disorders is enhanced. Frailty and sarcopenia are also associated with visceral obesity and the loss of muscle mass, which can lead to metabolic disorders such as diabetes, dyslipidemia, high blood pressure and other cardiovascular problems in the elderly. Although in conventional medicine, there are various recommendations and methods for both prevention and treatment of such diseases, due to the high prevalence of this type of chronic diseases and polypharmacy in aging, it seems that taking adjuvant therapies along with conventional treatments can help reduce these disorders better. Therefore, the aim of this study was to examine the roles of integrative medicine in controlling cardiometabolic risk factors in the older adults.

To collect evidence, PubMed and GoogleScholar were searched from 2010 to April 2022. The websites of universities in the field of integrative medicine were also examined.

Findings showed that some medicinal herbs, their active components (curcumin, alkaloids and estradiol, catechins, proanthocyanin, etc.) and dietary supplements (branched chain amino acids, vitamin D, selenium, vitamin E, omega 3, etc) can prevent sarcopenia and keep muscle mass. There is also evidence on the positive effects of some medicinal herbs, acupuncture, yoga, functional foods and nutraceut-

-ticals to improve metabolic status. The main possible mechanisms for complementary medicine in this field are reducing the levels of inflammatory factors and oxidative stress, which can prevent cell damage and subsequent disorders.

Integrative medicine compared to conventional medicine alone can lead to more beneficial effects on the management and prevention of cardiometabolic disorders, particularly in the elderly. However, more studies are needed to clarify its efficacy.

**Keywords:** Conventional medicine, Complementary therapy, Metabolic disorders, Aging

## Persian medicine recommendation for older adults

*Reza Mohammadinab, Assistant Professor of History of Medical Science, Tabriz University of Medical Sciences, Tabriz, Iran*

Health care, hygiene and treatment of diseases of the elderly is one of the most important issues in the history of medicine. Among the remnants of the ancient civilizations of Iran, Egypt, and Mesopotamia, interesting recommendations can be found for the treatment of the elderly, such as many herbal remedies for the treatment of dementia in the elderly. Three thousand years ago, the ancient Iranians cared so much about the elderly that they set a specific day of the year to pay their respects, honor, and give their thanks. After the extinction of the Sassanid Empire and the advent of Islam thanksgiving of the elderly was dedicated to Nowruz, because it was customary in the days of Nowruz to go to the elders for celebration.

In the Middle Ages, especially in the ninth and tenth centuries AD, following the extensive translation of Greek, Pahlavi and Hindi scientific works into Arabic, a new era of medicine began in the Islamic lands, which was mostly a combination of the three medical schools of Iran, Greece and India. Special attention was paid to the elderly, their health and geriatric medicine in the Islamic era in such a way that in most of the books of physicians of that time, a separate chapter entitled "Plans for the Elderly" is dedicated to the issues of elderly.

In the history of Islamic medicine of the Middle Ages, different stages of human life were classified into four categories: from birth to thirty

years of age; youth including thirty to forty years; the age of decline of power, which is up to age of sixty years; and the age of degeneration, which is associated with the occurrence of weakness in old ages beginning at the age of sixty and lasts until the end of life.

In *Firdous al-Hikmah* (Paradise of Wisdom), which is the first comprehensive medical book of the Islamic period, Ali ibn Rabban al-Tabari lists the diseases of old age separately and has interesting recommendations for the elderly. Tabari lists the diseases of the elderly as paralysis, insomnia, cough, weak eyesight, and kidney pain. He has also mentioned health recommendations for the elderly according to the temperature of four seasons.

Abu Bakr al-Razi, a famous Iranian physician, has specifically addressed the issue of maintaining the health of the elderly and treating their diseases. Razi considers stomach disturbances and indigestion to be important in the elderly, which can lead to death if not taken into consideration properly. Hence, he recommends adequate and proper nutrition and treatments to improve the health condition of the elderly. Avicenna, the most famous Iranian physician and philosopher, whose books have been translated into several European languages several times since the twelfth century, mentions the importance of old age in a separate chapter and offers advices for maintaining the health of elderly, some of the most important of which are: enough sleep, need for healthy and tonic food, more bathing compared to young people, caring for the gastrointestinal tract, massaging the limbs of the elderly, aromatherapy and the use of perfume, and finally a strong recommendation for walking and physical activity.

**Keywords:** Conventional medicine, Complementary therapy, Aging

## Healthy aging and physical activity

*Mustafa Ayazoglu, Kahramanmaras Hospital, Turkey*

Aging is an inevitable and irreversible period of human life that is experienced from birth to death. Aging is a transition from independence to physical and mental dependence, in which human beings are prone to all kinds of injuries and reduced quality of life. Lack of physical activity or inactivity is known as the fourth leading cause of worldwide. It causes at least 40 disorders or conditions of the disease and syndrome in the elderly; it is called the biggest public health problem of the 21st century. Regular physical activity is consumed as a medicine. The idea was first mooted by Exercise Is Medicine in 2007 and aims to make the American College of Regular Sports Medicine (ACSM) regular physical activity assessment as a standard part of the disease prevention and treatment paradigm for all patients and the elderly. The 2018 report of the Advisory Committee on Physical Activity Guidelines of the US Bureau of Disease Prevention and Health, showed that physical activity has a positive and therapeutic effect on a wide range of disorders and diseases in the body and reduces the risk factors for disease or improvement in Their condition is the most important factor in health outcomes, lifestyle and individual behavior. In choosing physical activity, parameters such as co-morbidities, physical environment (feasible, practical), accessibility, economic conditions, entertainment, suitability for group activities and social life should be considered.

A sports prescription should include the type of activity, intensity, duration, and frequency. Types of physical activity include aerobic, strength, stretching and balance exercises. In aerobic exercise, care should be taken not to exceed the target heart rate, which is defined as a range between minimum and maximum. Stress testing is not necessary in low- and moderate-intensity physical activity, but stress testing is recommended before intense physical activity in people with congestive heart failure. In uncured coronary artery disease and severe aortic stenosis, physical activity is prohibited or restricted. When chest pain occurs, heart rhythm disturbances, dizziness, weakness, fatigue and darkening of the eyes, severe hunger and severe joint pain, physical activity should be stopped and the relevant doctor should be consulted. There is no excuse for not doing physical activity, so that according to numerous studies, doing even a little physical activity is better than not doing it, and to have more physical activity is better and more useful than less physical activity. Physical activity is a pill that in addition to its numerous and proven benefits with minimal side effects, makes patients and the elderly feel better performing and sleeping.

**Keywords:** Older adults, Physical activity, Healthy aging

## **Evaluation of nutritional value of recommended food for the older adults in persian medicine**

*Amir Mohammad Jaladat, Assistant Professor of Traditional Medicine, Shiraz University of Medical Sciences, Shiraz , Iran*

There is strong evidence that the need for micronutrients and vitamins increases with age, and special attention to the diet of this population is of particular importance. In Persian Medicine, special dietary instructions have been provided due to the common problems of aging; However, it is not clear whether these dietary supplements can provide necessary micronutrients and minerals for this group or not, so this study has been designed.

In this review and library study nutritional suggestions of Persian Medicine for elderly are extracted from reliable sources, including Canon medicine, Zakhireh Khwarazmshahi and Mofareh-al-gholub, and then based the amount of micronutrients and minerals in these items is determined and compared with the recommended amount.

Elderly diet of Persian Medicine have foods with high nutritional value including meat, eggs, milk and vegetables like cabbage, beets and carrots along with olive oil, nuts and especially figs, walnuts and safflower seed, which can provide significant micronutrients, including vitamin E, folate, pyridoxine, calcium, vitamin C, fiber, and antioxidants to a considerable extent.

That special attention to these items can help ensure better health of the elderly.

**Keywords:** Older adults, Persian medicine, Micronutrients

*DAY 2, a.m. Session  
WED, MAY 11*

<i>TIME</i>	<i>SPEAKER</i>	<i>TOPIC</i>
<i>08:00 - 8:35</i>	<i>Dr. Ali Akbar Ghamari</i>	<i>Clinical manifestations of COVID-19 in older adults</i>
<i>08:35 - 09:00</i>	<i>Dr. Sanam Dolati</i>	<i>COVID-19 vaccines challenges</i>
<i>09:00 - 09:30</i>	<i>Dr. Azizeh Farshbaf Khalili</i>	<i>Nutritional challenges in COVID-19 infected patients</i>
<i>09:30 - 10:00</i>	<i>Dr. Hassan Soleimanpour</i>	<i>Evidence-based medicine and COVID-19 in Intensive Critical Unit</i>
<i>10:00 - 10:30</i>	<i>Dr. Hadi Hamishehkar</i>	<i>Pharmacology of COVID-19</i>

## Clinical manifestations of COVID-19 in older adults

*Ali Akbar Ghamari, Assistant Professor of Critical Care Medicine, Tabriz University of Medical Sciences, Tabriz, Iran*

The most common clinical manifestations of COVID-19 include fever, cough, dyspnea, fatigue, and myalgia. A few patients have developed severe pneumonia and they may present with acute respiratory distress syndrome (ARDS), extra pulmonary organ dysfunction, or even death. patients admitted to the intensive care unit (ICU) were older than non-ICU patients.

Overall, 69.5% of elderly patients had chronic medical illness, and the most common comorbidities included hypertension (43.8%), diabetes (25.7%), and cardiac disease (16.2%). Other symptoms included dyspnea (29.5%), diarrhea (9.5%), anorexia (8.6%), headache (8.6%), myalgia (7.6%), and vomiting (5.7%). Old-old patients required invasive mechanical ventilator support more than young-old patients (25.0 vs. 3.5%,  $p = 0.045$ ).

Elderly patients with COVID-19 may only have fatigue, myalgia, headache, or digestive symptoms, including anorexia, vomiting without fever, or cough. Therefore, clinical care for elderly patients should be aware of these non-classical presentations.

**Keywords:** COVID-19, ARDS, Older adults

## **Covid-19 vaccines challenges**

*Sanam Dolati, Assistant Professor, Tabriz University of Medical Sciences, Tabriz, Iran*

### **Vaccination**

The safest way to control a global viral pandemic is to protect over 70-75% of the population, and universal vaccination is the solution. With the outbreak of the Covid-19 virus, scientists in many countries began trying to make a coronavirus vaccine.

An effective vaccine has four characteristics: 1) Prevent the person from getting infected, 2) Prevent symptoms, 3) Prevent severe forms of the disease and 4) Prevent transmission to others.

The production of a new vaccine requires animal studies, and 3 main phases of clinical trials – phases 1 to 3. Phase 1 is to evaluate the safety of the vaccine and the ability of the vaccine to stimulate the immune response, which is performed on a limited number of people (several dozen people). The phase 2 is performed on a larger number (several hundred people) to check the safety and determine the appropriate dose of vaccine and type of injection. The phase 3 is to evaluate the side effects of the vaccine on several thousand people in different age groups, which can eventually be approved by the Food and Drug Administration (FDA) if it has efficacy more than 50%. Phase 4 monitors vaccine efficacy after the vaccine is available on the market.

### **Types of vaccines**

First-Generation Vaccines including live attenuated or killed and inactivated viruses. The attenuated strain of the virus in the body is likely to return to an infectious and dangerous form, leading to a permanent and deadly infection. Examples of this vaccine include the flu vaccine. The vaccines of Sinovac and Sinopharm are based on inactivated virus. The vaccine has recently been declared 86% effective in the UAE. Biofarma (Indonesia's pharmaceutical company) recently announced a 97 percent effectiveness of Sinovac vaccine. These vaccines can be stored at 2-8°C. Sinofarm and Sinovac vaccines are given in two doses 14 days apart.

Subunit vaccines are another type of vaccine that consists of several protein antigens or recombinant protein components. For better stimulate the immune response in this vaccines, adjuvants are needed. The Novavax's vaccine, NVX-CoV2373 contains Covid-19 virus's spike protein along with saponin adjuvant.

The third generation of vaccines is DNA-based. When the DNA enters the host cell, it expresses the virus spike protein using the transcription and translation mechanism of the cell. It does not require a cold chain and is resistant to environmental conditions. Disadvantages of this type of vaccine include the following: Due to the structure of DNA, it is likely to be located in the host cell genome, leading to the activation of oncogenes and the inactivation of tumor suppressor genes. Possibility of autoimmunity and similar conditions to lupus (anti-DNA antibody). INO-4800 vaccine in phase 2 clinical trial is one of these vaccines.

Viral vector-based vaccines in which part of a virus genome is inserted into another virus (adenovirus). Adenovirus is a virus that is weakened and has no reproductive power and is not dangerous. These vaccines are cheaper than other vaccines and can be stored at 2-8 degrees. Sputnik V-Gamaleya vaccines (Russia), Johnson & Johnson (American

company), Chinese CanSino vaccine and Oxford-AstraZeneca vaccine are vector-based vaccines. The Sputnik V vaccine has 91 percent efficacy. Sputnik V vaccine is given in two doses 21 days apart and AstraZeneca vaccine in two doses 28 days apart. Johnson & Johnson and CanSino vaccines are given as a single dose.

The new FDA-approved Pfizer-Biontech and Moderna vaccines are based on the mRNA molecule. Once the genome sequence of the covid-19 virus's spike protein has been identified, and when the relevant genetic code is available, synthetic RNA can be generated in the laboratory using specific selective enzymes. An mRNA molecule is an unstable molecule that to solve a problem is packaged in the structure of a lipid nanoparticle. After injection of the vaccine, the mRNA molecule uses cellular machinery to produce viral proteins that stimulate the immune response and cause to the production of antibodies and activation of T lymphocytes. The mRNA strand does not enter the host cell genome. As a result, it is less likely to cause cancer. It does not contain infectious particles. It is possible to mass produce it in a short time. These vaccines require a cold chain. Pfizer vaccine with 90% effectiveness needs to be stored at a temperature of  $-70^{\circ}\text{C}$ . The Moderna vaccine can be stored and delivered at a temperature of minus  $20^{\circ}\text{C}$  with 94.5% effectiveness. Pfizer vaccine is given in two doses at 21-day intervals and Moderna vaccine at 28-day intervals. Side effects of the Pfizer vaccine include an anaphylaxis-like reaction seen in people with severe allergies.

### **Immune response after vaccination**

Both antibodies and T cells are involved in the immune response to the virus;

the body's immediate response is driven by antibodies. While T cells need more time to react, they have a longer response time, so they are a solution for longer protection. When a person who has been vaccinated becomes infected, the immune system already has a humoral (or antibody-mediated response) and cell-mediated immunity and can detect the pathogen and show signs and immunological response to the pathogen earlier than the person who has not been vaccinated. Results of studies show that coronavirus-specific lymphocytes have an acceptable amount of immunological protection against the omicron variant. Studies show that although antibodies may have little neutralizing potential against variants which escape from the immune system, T cell lymphocyte-induced immunity can still maintain its protective potential. The vaccines tested provide at least five times better immunity than natural immunity with previous exposed to coronavirus. Completion of a 2-dose mRNA covid-19 vaccination series during pregnancy might help prevent covid-19 hospitalization among infants aged <6 months. According to the Centers for Disease Control and Prevention (CDC), the effect of the vaccination on reducing covid-19 death in the over-65 age group is 92% with two vaccine doses and is 99% after three vaccine doses.

### **Booster dose in Covid-19 vaccines**

When the administration of two doses of the vaccine provides adequate immunological protection, but over time this protective effect decreases, the booster dose should be used. After six months, as the antibodies decrease, it is recommended that the booster dose be injected for people who are at risk for covid-19.

Booster shots of covid-19 vaccine is very effective in preventing severe forms of the disease and hospitalization and death resulting from it. The booster dose significantly increases the immune response to the coronavirus, including the Delta variant. Recent studies show that a booster dose of coronavirus vaccine prepares effectively immunization against both delta and omicron variant. A third dose of coronavirus vaccine can reduce death by up to 90%. Booster shots should be given at least six months after the second dose of vaccine. The third booster dose shot was preferred in people over 60 years old, people living in nursing homes, people with underlying diseases including hypertension, cardiovascular diseases, diabetes mellitus, smoking, chronic obstructive pulmonary disease (COPD), malignancy, and chronic kidney disease, and people with immunodeficiency, transplant recipients, people who receiving immunosuppressive drugs. Subsequently, a third dose shot was authorized for all individuals over 18 years of age. A study by researchers found that people who received two doses of inactivated virus platform vaccine should inject a booster dose of a different platform vaccine to increase protection against omicron. In fact, the antibody produced by injecting a heterologous type of vaccine (another type of vaccine) is higher. The best vaccine as a booster is the Moderna vaccine, followed by the Pfizer vaccine. For those who have received the first and second doses of AstraZeneca, the best platform for the third dose is protein vaccines (such as Pasto-Covac Plus or SpikoGen in Iran). If the first and second doses of the vaccine are inactivated virus platform (such as Sinopharm), Pasto-Covac Plus or SpikoGen, or the vaccine itself, can be used for the booster, and there will be immunity in any case.

The fourth booster dose shot of covid-19 vaccine is approved for use in people over 70 years of old, people over 18 years with immunodeficiency, underlying diseases, cancers and also healthcare personnel at least 4 months after receiving the booster dose (third dose) of the approved vaccine. It is better to inject the same vaccine platform which injected in the third dose.

**Keywords:** COVID-19, Older adults, Vaccination

## Nutritional challenges in COVID-19 infected patients

*Azizeh Farshbaf Khalili, Assistant Professor of Nutritional Sciences, Tabriz University of Medical Sciences, Tabriz, Iran*

Proper nutrition and hydration are essential for human health. People who receive a well-balanced diet are more likely to be healthier because of stronger immune systems and lower risk of infectious diseases and chronic illnesses. COVID-19 infected patients tend to rapid muscle wasting due to infection and the inflammatory process that reduces muscle protein synthesis, hyper metabolism, and physical immobility. Malnutrition has been detected in two third of COVID-19 infected patients who admitted into the intensive care unit (ICU).

This review paper aimed to assess the nutritional challenges in adults during the COVID-19 pandemic. World Health Organization, COVID-19 Treatment Guideline Panel, European Society for Clinical Nutrition and Metabolism (ESPEN) guidelines as well as recently published papers in international and credible journals were reviewed for compiling this study.

In COVID-19 quarantine, there is a greater energy intake due to boredom and a food craving mostly looking for sugary comfort foods resulted from stressful state. Therefore, it is important to take care of nutritional habits, following a healthy and balanced nutritional pattern containing a high amount of antioxidants, minerals, and vitamins during this time. Anti-oxidants increase the number of T-cell subsets, interleukin-2 production, potentiated natural killer cell activity, and lymphocyte response to mitogen.

Furthermore, it is important to consume food containing or promoting the synthesis of serotonin and melatonin at dinner. A considerable variety of plant sources including leaves, roots, seeds, and fruits, like as bananas, cherries almonds, and oats contain melatonin and/or serotonin. These foods may also contain tryptophan, which is a precursor of serotonin and melatonin. Protein foods such as milk and milk products are the main sources of tryptophan. Tryptophan-rich sources help regulate sleep patterns, reduce appetite by inhibition of hypothalamic neuropeptide Y, and promote mood. Milk products such as yogurt could also augmented natural killer cell activity and reduce the risk of respiratory infections. It is noteworthy that in general, all dietary supplements are currently considered as possible candidates in the supportive treatment of COVID-19 and there is a need for further studies in this field.

All patients with COVID-19 should be evaluated within 72 hours of hospital admission and within 48 hours of ICU admission. These patients are prone to rapid muscle wasting due to infection and the inflammatory process that reduces muscle protein synthesis, hyper metabolism, and physical immobility. Adequate nutritional strategy, including adequate protein, energy, and stimulation of physical activity, is needed to prevent malnutrition. According to ESPEN, all critically ill patients with more than 48 hours in the ICU should be considered at risk for malnutrition. In patients who can receive 70% of their needs between the third and seventh day of hospitalization without the risk of vomiting or aspiration, the oral feeding method is preferred. Oral supplements should be used if nutritional needs cannot be met or if the patient shows nutritional risk through screening. Meals provided by the hospital should include unproces-

-sed or minimally processed foods, and from all food groups to ensure adequate supply of macronutrients and micronutrients that have been associated with good treatment results. Consumption of simple sugars and refined carbohydrates with high glycemic index should be limited, as these people may have hyperglycemia and hyperinsulinemia caused by drugs, infectious processes and / or comorbidities. Electrolytes such as sodium, potassium, magnesium, and calcium should be monitored frequently as they are associated with disease severity and nutritional therapy should be adjusted according to serum levels. Enteral nutrition should be used in patients who are unable to eat for more than 3 days or in people who consume less than 50% of their energy needs for more than a week. Critically ill patients in the ICU should receive enteral feeding within 24-36 hours of ward admission or 12 hours after endotracheal intubation and mechanical ventilation. Refeeding syndrome should be avoided. If enteral feeding is impossible or inadequate or contraindicated, parenteral nutrition is indicated and should be prescribed on an individual and case-by-case basis.

It is important to take care of nutritional habits, following a healthy and balanced nutritional pattern containing a high amount of antioxidants, minerals, and vitamins during COVID-19 pandemic. Adequate nutritional strategies, including adequate protein, energy, and stimulation of physical activity, is needed to prevent malnutrition.

**Keywords:** COVID-19, Hyper metabolism, Nutrition, Nutritional habits, Nutritional actions

## Evidence-based medicine and COVID-19 in Intensive Critical Unit

*Hassan Soleimanpour, Professor of Critical Care Medicine, Tabriz University of Medical Sciences, Tabriz, Iran*

Using of reliable and strong evidences has a key role in making the precise decisions in the area of medical sciences. Consequently, applying an identical approach can minimize the faults and guarantee the best decision which has made based on the best available evidences that has been primarily evaluated. For the first time, David Sacket and his colleagues have invented the term of Evidence-Based Medicine and defined the current definition of Evidence-Based Medicine as: Accurate, Clear, and Wise applying of the best available evidences for making decisions about patient care or combining the best research evidences with clinical skills and patient values. Evidence-Based Medicine consists of three main elements: published evidences, clinical judgment, and patients' values and preferences. The following contents are the relatively strong and credible evidence of the intensive care unit during the COVID-19 crisis:

- 1- Burden of COVID-19 in intensive care
- 2- Strategies to overcome the shortage of ventilators
- 3- In the case of lack of mechanical ventilation, is it possible to use only one mechanical ventilation device as a practical solution for several patients?
- 4- What are the available strategies of institutions to overcome the shortage? Intensive care personnel (doctors, nurses and other staff)?

- 5- What strategies can be used to reduce the exposure of healthcare workers to COVID-19?
- 6- Is the SOFA score recommended for triage of COVID patients in the ICU?
- 7- What are the family support strategies in the ICU?
- 8- Latest new findings and recommendations about Remdesivir and Favipiravir
- 9- A living WHO guideline on drugs for covid-19
- 10- Silent or 'Happy' Hypoxemia in COVID-19 patients
- 11- Role of artificial intelligence in managing of COVID-19 in the ICU
- 12- COVID-19 and steroids
- 13- Nutrition and COVID-19

**Keywords:** COVID-19, ICU, Evidence-Based Medicine

## Pharmacology of COVID-19

*Hadi Hamishehkar, Professor of Clinical Pharmacy, Tabriz University of Medical Sciences, Tabriz, Iran*

Coronaviruses are important human and animal pathogens. At the end of 2019, a novel coronavirus was identified as the cause of a cluster of pneumonia cases in Wuhan, China. It rapidly spread, resulting in a global pandemic. The effective pharmacotherapy can reduce the mortality and morbidity of COVID-19. Dexamethasone and other glucocorticoids, tocilizumab, baricitinib and remdesivir are used for the treatment of older patients with COVID-19. We aimed to review the mechanism of action, recommended dose, safety and efficacy of these drugs in the treatment of COVID-19.

**Keywords:** COVID-19, Treatment, Pharmacotherapy

DAY 2, p.m. Session  
WED, MAY 11

TIME	SPEAKER	TOPIC
12:30 - 13:00	Dr. Bina Eftekhar Sadat	Diagnostic methods for low back pain
13:00 - 13:30	Dr. Vahideh Toupchizadeh	Pharmacotherapy in low back pain
13:30 - 14:00	Dr. Yaghoob Salek Zamani	Rehabilitation modalities and procedure in low back pain
14:00 - 14:30	Dr. Neda Dolatkah	Nutrition and chronic pain

## Diagnostic methods for low back pain

*Bina Eftekhar Sadat, Professor of Physical Medicine and Rehabilitation, Tabriz University of Medical Sciences, Tabriz, Iran*

One of the most common musculoskeletal problems is low back pain, which requires accurate familiarity with the signs, symptoms and clinical examination to diagnose the correct treatment.

Because of the wide range of reasons, it is necessary to pay attention to different pain generators such as bones, ligaments, tendons, muscles, intervertebral discs ... and examine each one separately.

Always pay attention to "red phages" and "yellow flags" in the forefront of clinical examinations and careful examinations should be done for each of them. In addition, neurological and orthopedic examinations are necessary in this case; Special examinations related to posture and examinations related to function are also among the important cases that are always helpful in relieving chronic pain. Therefore, in this discussion, while reviewing the general cases, we will try to pay attention to the posture and function items.

**Keywords:** Low back pain, Musculoskeletal problems

## Pharmacotherapy in low back pain

*Vahideh Toupchizadeh Tabrizian, Professor of Physical Medicine and Rehabilitation, Tabriz University of Medical Sciences, Tabriz, Iran*

Low back pain is a symptom, not a disease, and has many causes. It is extremely common. Approximately 40% of people say they have had low back pain within the past 6 months, most episodes resolve with or without treatment and the great majority of people who have back pain do not seek medical care. Most studies of the various treatments for low back pain, particularly chronic low back pain, unfortunately have shown limited efficacy. Even the most commonly prescribed treatments, such as medications, exercise, and manipulation, in large trials tend to show improvements of only 10 to 20 points on a 100-Point Pain Visual Analog Scale. For this reason, most clinicians use multiple treatments on a particular patient in the hope that their cumulative effect will provide sufficient pain relief and an improvement in symptoms. Pharmacologic treatment includes management of the underlying disease process causing the pain and symptomatic treatment. Both the management strategies should run in parallel. Pharmacotherapy is the first way to pain control in LBP, can play a substantial role in both strategies. The most commonly prescribed are nonsteroidal antiinflammatory drugs (NSAIDs), muscle relaxants, antidepressants, and opioids. Antiepileptic medications, corticosteroids, and benzodiazepines are also used. It is essential to individualize the pharmacotherapy because the effect,

side-effect and toxicity profile for each drug shows marked variation from person to person. Each medication is given in adequate doses for the appropriate length of time. A medication should not be abandoned and regarded as being ineffective until the maximum possible dose that does not produce significant side effects is reached. Once adequate pain relief is obtained, the dose should be maintained for 2 to 3 weeks, while encouraging appropriate exercise and normal activity. If pain control is not achieved with adequate doses of a drug, it is advisable to discontinue that drug.

**Keywords:** Low back pain, Pharmacotherapy

## **Rehabilitation modalities and procedure in low back pain**

*Yaghoob Salek Zamani, Associate Professor of Physical Medicine and Rehabilitation, Tabriz University of Medical Sciences, Tabriz, Iran*

Low back pain is one of the most common complaints in the musculoskeletal clinics and can be present as acute or chronic manner. Other than noninvasive and invasive medical treatment, rehabilitation modalities and procedures are also have beneficial effects on the patient. This article has a brief overview on the variety of them, that are used routinely in rehabilitation clinics.

**Keywords:** Low back pain, Rehabilitation modalities

## Nutrition and chronic pain

*Neda Dolatkah, Assistant Professor of Physical Medicine and Rehabilitation, Tabriz University of Medical Sciences, Tabriz, Iran*

Nutrition is one of the most essential lifestyle issues associated with chronic diseases. Furthermore, poor diet is also considered a predicting, preserving, or underlying factor in chronic musculoskeletal pain. Clinicians face numerous challenges when managing pain (acute or chronic) in the elderly. Treating pain in older adults is a multifarious task because of the high frequency of multiple comorbidities, poly-pharmacy, and, socio-psychological vulnerability. Evidence intensely proposes that comorbid obesity is common in chronic pain situations, and pain complaints are common in obese persons.

Dietary intake is one key element that affects systematic inflammation in these patients. This session is focused on the following subjects: the relationship between overweight/obesity and pain in chronic pain patients, accession of the patient to medical nutrition therapy, recommended dietary patterns, supplementation of vitamin D and other micronutrients, and availability of botanicals, such as curcumin and gingerol.

These intermediations can help the pain therapist to create an adapted treatment, with maximum efficacy and safety, and also decrease the prescription of analgesic drugs. Health professionals should give more attention to nutrition as part of an overall intervention to impact inflammation, obesity, homeostatic balance, and central sensitization in people with chronic musculoskeletal pain.

To do this, dietary behavior and quality assessments should be involved in the patient examination procedure and nutritional education should be given to change feeding behaviors toward healthier diets. Additionally, losing weight, seems to be favorable for pain and associated quality of life.

**Keywords:** Nutrition, Diet, Chronic pain

DAY 3  
THU, MAY 12

TIME	SPEAKER	TOPIC
08:30 - 08:55	Dr. Shima Sum	Technology & Ageing: Creating enabling environments for the challenges of Aging
08:55 - 09:20	Dr. Nasibeh Zanjari	Social consequences of the prevalence of Covid-19 in the older adults
09:20 - 09:45	Dr. Hossein Matlabi	Older adults rights
09:45 - 10:10	Dr. Mohammad Ali Morowati	Aging and media
10:10 - 10:40	Dr. Alireza Choobineh	Ergonomic design for the older adults
11:05 - 11:30	Dr. Kamran Mansouri	Regenerative medicine & stem Cell in geriatric medicine

## **Technology & ageing: Creating enabling environments for the challenges of Ageing**

*Shima Sum, Associate Professor, Babol University of Medical Sciences, Babol, Iran*

The consequences for the increase in care services required for the predicted number of older people particularly those with dementia is alarming. One approach to this emerging crisis is the development of technologies to promote their healthy ageing and compensate for their physical, mental and cognitive deficits. The United Nations (UN) International Day of Older Persons 2021 theme “Digital Equity for All Ages” predicates the need for access and meaningful participation in the digital world by older persons. Digital technologies refer to a wide range of new technologies ranging from the internet, mobile phones, and all the other tools to collect, store, analyze, and share information digitally. Recent report indicate that older persons experience digital inequity to a greater extent than other groups. Meanwhile, risks have become apparent such as cybercrimes and misinformation threaten the human rights, privacy, and security of older people. Therefore, universal access to this technology is one important step, but the more important goal is making this technology usable and beneficial for elderly adults. As emphasized by UN using proper technology by seniors is one important aspect of human rights which reduce ageism. To active this goal some specific points should be considered including development of new technologies to overcome dificities of ageing; overcoming access and literacy barriers; and also, accountability to

highlight an intersectional person-centered human rights approach for a society for all ages. Nowadays Gerontechnology and assistive technologies are common terms in the field of ageing. Gerontechnology is defined as an interdisciplinary field linking existing and developing technologies to the aspirations and needs of aging and aged adults. Gerontechnology supports “successful aging”, and is a response to the combination of the aging of society and rapidly emerging new technologies. Technologies may be used to improve the quality of life for older adults, allowing them to age in place and remain connected to their loved ones. More broadly, it can help create an inclusive labor and living environment for older adults to lead healthy and productive lives. Assistive technology is also defined “an umbrella term for any device or system that allows an individual to perform a task they would otherwise be unable to do or increases the ease and safety with which the task can be performed”. This is a very generic description of assistive technology and clearly includes such items as handrails, electronic memory aid, community alarm systems, computers, telephones, light and motion sensitive night-lighting, multi-sensory environment, telecare, telehealth, anti-fall devices, fall detectors, alarm and pagers, tracking devices, robotic pets, bed alarms and so on. The use of assistive technology as an aid to communicate, care support and as a therapeutic tool covers following goals: independence, prompts and reminders; safety and security; telecare and telehealth; and therapeutic interventions. The biggest benefit of technology to ageing is the freedom of choice, empowering older adults to maintain autonomy, choose the lifestyle they want and promote dignity which will be discussed.

**Keywords:** Gerontechnology, Technology, Aging

## **Social consequences of the prevalence of Covid-19 in the older adults**

*Nasibeh Zanjari, Assistant Professor of Health and welfare, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran*

By the end of 2019, the outbreak of the corona virus from Wuhan, China created widespread panic around the world. Increasing morbidity and mortality, especially among vulnerable groups such as the elderly, have raised concerns among them and their families with a greater emphasis on quarantine. All these problems in addition to the physical problems of old people, led to socio-economic and psychological problems. Therefore, the aim of the present study was to investigate the social consequences of Covid-19 among the elderly. This study will review the keywords related to the elderly and corona virus social consequences, searched in Scopus, WOS and PubMed databases. The related articles were selected and their results were classified.

**Findings:** The most important social consequences of Corona are isolation and loneliness, problems related to digital literacy, access to services and discrimination, and elder abuse. Staying away from the right information can also lead to self-neglect of the elderly during Covid-19 pandemics. The social effects on vulnerable older people such as those lacking financial resources, the elderly with disabilities, small businesses, and the elderly recovering from corona virus disease. In Iran, the elderly have mentioned their most important challenges in socio-economic problems, including loneliness, lack of interaction, and financial problems during the corona virus outbreak.

Due to the importance of the impact of social problems on the welfare and health of the elderly, it is necessary to make policies and documented interventions at three levels: macro, family, and individual. Macro-level policies include cash and non-cash social support, strengthening the health system and reducing inequality of access to services for vulnerable elderly, creating conditions for remote cognitive-behavioral interventions and rehabilitation after the corona pandemic; At the family level, including training in daily contact with the elderly and adherence to care protocols for the elderly; At the individual level, it includes technology education, resilience and the promotion of successful aging.

**Keywords:** Older adults, Corona virus, Social consequences, Technology

## Older adults rights

*Hossein Matlabi, Associate Professor of Gerontology, Tabriz University of Medical Sciences, Tabriz, Iran*

The world's population structure is aging. By 2050, the world's population aged 65 and over is projected to triple. Data on the rate of population aging show that Iran is the second country in the world in terms of percentage increase in the population aged 60 and over between 2015 and 2050. As people get older, they experience changes that affect all areas of their lives. An important consequence of these often overlooked life changes is the impact on the human rights of the elderly.

There are several special conventions by the UN General Assembly that focus on specific population groups, including the Convention on the Elimination of All Forms of Discrimination against Women, the Convention on the Rights of the Child, the Convention for the Protection of Migrant Workers and Members of Their Families, and the Convention on the Rights of Persons with Disabilities. To date, there is no Convention on the Rights of the Elderly.

In 1991, the United Nations published the Principles on the Elderly, which detailed five areas in which the rights of the elderly should be prioritized and guaranteed: independence, participation, care, self-actualization and dignity. The Madrid International Plan of Action on Aging provides for the rights of the elderly, but although it has been ratified by the UN General Assembly, it is not binding on member states, contrary to conventions. Governments have only a

moral responsibility to adhere to its recommendations, which focus on key issues related to the rights and quality of life of the elderly.

In 2010, the UN General Assembly established a Working Group on Aging. The task of this group is to consider existing international human rights frameworks for the elderly, identify gaps in policies and services, and devise ways to address them. Discrimination, poverty, violence and abuse are among the major challenges it faces. The group is also considering the possibility of developing an international legal instrument to promote the rights and dignity of the elderly. Based on the recent assessment of global policies and the situation of the elderly, there are many gaps in terms of their rights and countries' commitment to them. Therefore, there is a need for a new legal document to protect the rights of the elderly.

**Keywords:** Older adults, Aging, Rights

## Aging and media

*Mohammad Ali Morowatisharifabad, Professor of Health Education and Promotion, Shahid Sadoughi University of Medical Sciences, Yazd, Iran*

The older adults are one of the age groups that are affected by the media in various ways. Despite the fact that television is still one of the most used media by the elderly, today the use of new media among the elderly is increasing, which requires more attention in this area. Some theories explain the effects of media on individuals, among which social learning theory, cultivation theory and Agenda-setting Theory are the most important. Although the media influences all aspects of the elderly lifestyle, the evidence suggests that they have little effect on the part of the lifestyle that requires more physical activity, while their effectiveness on other aspects of health such as healthy nutrition and social relations are significant. In contrast to the positive effects of the media, the image that the media presents of the elderly has significant effects on both the elderly and those around him. One of the problems that is seen in the media is presenting the image of elderly people as sad, disabled and inactive people who can have bad effects on successful aging in society.

**Keywords:** Aging, Media, Theory, Lifestyle

## Ergonomic design for the older adults

*Alireza Choobineh, Professor of Occupational Health Engineering, Shiraz University of Medical Sciences, Shiraz, Iran*

Getting old is an inevitable part of life. Aging is a process or set of processes that affects virtually all functions and systems of the body. Aging is a period of a person's life that, despite valuable experiences, causes a person to be incapacitated and lacking in independence due to the age-related deterioration. Moreover, Aging can affect all of the senses (hearing, vision, taste, smell, touch). In the meantime, ergonomics can recognize the abilities and limitations of this age group and create more harmony between the characteristics of these people and the living environment, job, public transportation, etc.

In the Iranian society, which the population of the elderly is rapidly increasing, the need to consider this group in terms of ergonomics and elderly-friendly designs in all related areas is important to increase the quality of life and independence of the elderly. These items can include electronic equipment and technologies such as cell phones and computers, public transportation, urban space, ancillary equipment needed by the elderly, and so on.

This presentation will briefly address age-related ergonomic physical and cognitive changes, and tips on elderly-friendly design needed to improve quality of life, increase productivity, and ensure the safety of this age group.

**Keywords:** Older adults, Quality of life, Ergonomic design

## Regenerative Medicine & Stem Cell in Geriatric medicine

*Kamran Mansouri, Associate Professor of Molecular Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran*

Regenerative medicine seeks to find new ways to diagnose and treat disease to be able to move from traditional medicine that focuses on diagnosis and treatment with chemical drugs and to some extent biotechnology toward to personalized medicine and even precision medicine, in which stem cell products will play an important role.

Finding modern and appropriate treatments for diseases, especially chronic diseases (such as the common chronic diseases in old age) have been one of the most important issues. On the other hand, limitations related to organ transplantation have made a serious need for advanced therapeutic strategies. In this respect, researchers have recognized the benefits of stem cells as a suitable tool. Accordingly, the application of stem cells for the treatment of various diseases has been considered in many countries around the world especially Iran.

The purpose of this presentation is to examine the strategies and challenges around the research and treatment opportunities using stem cells in mentioned center.

**Keywords:** Geriatric medicine, Regenerative medicine, Stem cells, Exosome

# Projects Program

DAY 1, a.m. Session  
WED, MAY 11

Number	Title	Presenter	Time
1	Study of developing and validating a Persian brief screening tool for cognitive disorders among Iranian aging people in primary care settings	Dr. Ali Fakhari	9:30-9:50
2	The implementation of Cognitive Rehabilitation Therapy (CRT) on cognitive frailty of community dwelling of older adults	Dr. Maryam Chehrehgosh	09:50-10:10
3	Prevalence of multimorbidity, polypharmacy and related risk factors in people over 50 years of age in a combined population of "Azar Cohort study" and "Tabriz longitudinal study on Aging"	Dr. Elnaz Faramarzi	10:10-10:30
4	Mitochondrial transplantation in combination with mitochondrial boosters, MitoQ and melatonin, as a surviving strategy to counteract myocardial reperfusion injury of aged rats	Dr. Reza Badalzadeh	10:30-10:50
5	The effect of astrocyte -derived exosomes and reelin glycoprotein on neurogenesis and neural tissue regeneration in the animal model of hippocampal photothrombotic stroke	Dr. Mohammad Karimipour	10:50-11:10
Break			11:10-11:40

*DAY 1, p.m. Session  
WED, MAY 11*

Number	Title	Presenter	Time
6	Detection of biomarkers for delirium in old patients	Dr Ailar Nakhband	11:40-12:00
7	Evaluating the efficacy of T cell-derived exosomes from young and old Individuals on cancer cells proliferation, angiogenesis and metastasis	Dr. Tohid Kazemi	12:00-12:20
8	Evaluation of the protective and anti-aging effect of curcumin-loaded niosomes against oxidative stress and mitochondrial dysfunction in breast cancer stem cells	Dr. Nosratollah zarghami	12:20-12:40
9	Study of the effects of Citrullus colocynthis (L.) hydroalcoholic extract on anxiety-like behavior and hippocampal oxidative stress markers in aged mice	Dr. Mojtaba Ziaee	12:40-13:00
10	Literal biomimetic nanobioelectronic nose for detection of exhalation biomarkers associated with Alzheimer's disease	Dr. Peyman Keyhanvar	13:00-13:20
11	Evaluation of the toxicity effect of Crocus sativus and Melissa officinalis in rats	Dr. Alireza bagerzadeh	13:20-13:40
End of the first day			

*DAY 2, a.m. Session  
THU, MAY 12*

<b>Number</b>	<b>Title</b>	<b>Presenter</b>	<b>Time</b>
1	Evaluation of Berberine loaded grape nano-vesicles effects on young and elderly individuals mesenchymal stem cell aging profile status	Mohammad Sadegh Soltani-Zangbar	8:30-8:50
2	Evaluating protective effects of Melatonin plus Quercetin on senescing of mesenchymal stem cells by down/up-regulating of age-related genes	Amir Valizadeh	08:50-09:10
3	The association of dairy products consumption and Longitudinal Changes in Cardiovascular Risk Factors in the elderly	Mohammad Nosrati-Oskouie	09:10-09:30
4	The association of dietary acid load and osteoporosis in the elderly	Mohammad Nosrati-Oskouie	09:30-9:50
5	The Aging Urban Brain: Mapping the cities through the senses of its consisting older adults	Sama Rahnemayan	09:50-10:10
6	Designing Conceptual Framework and the Age- friendly Health System Assessment tool for Iran: Case Study of Tehran City	Badrye Karami	10:10-10:30
7	The prevalence of potentially inappropriate prescribing among older adults in community settings: An overview of systematic review	Nafiseh Ghassab-Abdollahi	10:30-10:50
8	Association between dietary diversity with cognition function and healthy aging: A systematic review	Roghayeh Molani-Gol	10:50-11:10
Break			11:10-11:40

*DAY 2, p.m. Session  
THU, MAY 12*

Number	Title	Presenter	Time
9	Anti-blood retention vibrator socks for elders	Mahdi Hannaniyan	11:40-12:00
10	Organizing an automatic wheelchair consisting smart bottoms and systems (robot wheelchair) in order to do body massages to protect musculoskeletal complications in elder people (Entertainment-Health Multifunctional Robot Wheelchair)	Nasrin Hosseinzad	12:00-12:20
11	Detection of elders brain disorders by recognition of speech and written patterns	Mohsen Rezaei Aghdam	12:20-12:40
12	Cortical and Subcortical Structural changes in MCI converted to AD using T-1MRI data	Jafar Zamani	12:40-13:00
13	Evaluation some of serumproteins to detect cerebrovascular event	Mahsa Makouei	13:00-13:20
End of the second day			

## Selected Academic Projects

1

Mitochondrial transplantation in combination with mitochondrial boosters, MitoQ and melatonin, as a surviving strategy to counteract myocardial reperfusion injury of aged rats

*PI: Dr. Reza Badalzadeh*

*Professor of Physiology, Tabriz University of Medical Sciences*

2

Prevalence of multimorbidity, polypharmacy and related risk factors in people over 50 years of age in a combined population of “Azar Cohort study” and “Tabriz longitudinal study on Aging”

*PI: Dr. Elnaz Faramarzi*

*Associate Professor of Nutritional Sciences, Tabriz University of Medical Sciences*

3

The implementation of Cognitive Rehabilitation Therapy (CRT) on cognitive frailty of community dwelling of older adults

*PI: Dr. Maryam Chehrehgosh*

*Ph.D. in Gerontology, Golestan University of Medical Sciences*

4

Evaluation of the protective and anti-aging effect of curcumin-loaded niosomes against oxidative stress and mitochondrial dysfunction in breast cancer stem cells

*PI: Dr. Nosratollah zarghami*

*Professor of Clinical Biochemistry, Tabriz University of Medical Sciences*

5

The effect of astrocyte -derived exosomes and reelin glycoprotein on neurogenesis and neural tissue regeneration in the animal model of hippocampal photothrombotic stroke

*PI: Dr. Mohammad Karimipour*

*Associate Professor of Anatomical Sciences, Tabriz University of Medical Sciences*

## Selected Student Projects

1

Cortical and Subcortical Structural changes in MCI converted to AD using T-1MRI data

*PI: Jafar Zamani*

*Ph.D. candidate in mechanical engineering, Amirkabir University*

2

Designing Conceptual Framework and the Age- friendly Health System Assessment tool for Iran: Case Study of Tehran City

*PI: Badrye Karami*

*Ph.D. candidate of health service management, Tehran University of Medical Sciences*

3

The Aging Urban Brain: Mapping the cities through the senses of its consisting older adults

*PI: Sama Rahnemayan*

*Medical student, Tabriz University of Medical Sciences*

4

Evaluation of Berberine loaded grape nano-vesicles effects on young and elderly individuals mesenchymal stem cell aging profile status

*PI: Mohammad Sadegh Soltani-Zangbar*

*Ph.D. of immunology, Tabriz University of Medical Sciences*

5

Evaluating protective effects of Melatonin plus Quercetin on senescing of mesenchymal stem cells by down/up-regulating of age-related genes

*PI: Amir Valizadeh*

*Ph.D. candidate of biochemistry, Tabriz University of Medical Sciences*

6

The prevalence of potentially inappropriate prescribing among older adults in community settings: An overview of systematic review

*PI: Nafiseh Ghassab-Abdollahi*

*Ph.D. candidate of gerontology, Tabriz University of Medical Sciences*

7

The association of dairy products consumption and longitudinal changes in cardiovascular risk factors in the elderly

*PI: Mohammad Nosrati-Oskouie*

*Ph.D. candidate of nutrition, Tabriz University of Medical Sciences*



*Arg-e-Alishah, Tabriz, Iran*