REALTH AND LABORATORY MAGAZINE





YOUR DAILY DOSE OF SCIENCE

SPECIAL EDITION 10

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TURKISH STAR ALPER GEZERAVCI'S ADVENTURE IN SPACE





NIKOLA TESLA THOUGHT HE HAD RECEIVED A SIGNAL FROM INTELLIGENT ALIENS



BILINGUAL PEOPLE HAVE HEALTHIER BRAINS IN OLD AGE



TRADITIONAL SPORTS HER-ITAGE OF TURKEY FOLLOW THE TRACES OF CULTURE

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LabMedya

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In addition to the Labmedya

WHAT IS LABMEDYA ? www.labmedya.com/english A REVOLUTIONARY STEP IN SCIENCE: HUMAN EMBRYO PRODUCED IN THE LABORATORY

Scientists have developed human embryo models from stem cells grown in the laboratory.

The models offer a unique opportunity to study the critical first week after a natural embryo attaches to the uterine wall.

Fertility, early pregnancy termination and a significant proportion of developmental birth defects occur at the beginning of pregnancy, soon after the fertilized egg implants in the uterine wall.

Studying the early stages of embryo formation could therefore be essential to avoid these problems. But ethical and technical challenges prevented the study of these critical stages of human embryo development.

To overcome this, scientists have begun to create artificial embryos from stem cells in the laboratory.

Jacob Hanna, a molecular geneticist at the Weizmann Institute of Science in Israel, said: "Negative results appear in the first month. In the remaining 8 months of pregnancy, there is mostly growth," said Jacob Hanna, a molecular geneticist at the Weinstein Institute of Science in Israel: But that first month is still largely a black box. Our stem cell-derived human embryo model offers an ethical and accessible way of looking into that box.

In the new study, published in the peer-reviewed scientific journal Nature, stem cells from humans were transformed into complex structures that mimic human embryonic development.

The models incorporated all known components of early human embryos, including the epiblast, hypoblast, extraembryonic mesoderm, trophoblast and yolk sac.

"Here, we used pure human embryonic stem cells that have not been genetically modified," Hanna and his colleagues wrote in their research paper:

"We began to test our capacity to create natural embryo-like structures that could mimic the different stages of human development in the womb.

"Many pregnancy failures occur in the first few weeks, often before a woman even knows she is pregnant. Many birth defects also occur during this period, but they are discovered much later."

Our models can be used to uncover the biochemical and mechanical signals that ensure correct development at this early stage, and how this development can go wrong.

On the other hand, labgrown creatures are illegal in many countries. So the work also raises serious ethical and legal issues.

Teams that want to develop embryos in the lab can usually only grow these constructs for 14 days. The law does not allow them to grow them any longer.

There is a race among scientists to create such embryo models.

In previous months, two separate research groups had developed embryos from stem cells. However, not all components of the embryo were created in those studies.

"This is the first embryo model with structural compartments and morphological similarity to the human embryo at day 14," Hanna added.

On the other hand, Dr. Peter Rugg-Gunn, who studies embryo development at the Babraham Institute, said the study was "impressive" and "important" but noted that not all features of early human embryos are perfectly replicated.

For example, the trophoblast, the precursor to the placenta, was present but not properly organized.

"This embryo model cannot develop if transferred to the uterus because it has skipped the stage needed to attach to the inside of the uterus," Rugg-Gunn said.

Source: Independent Turkish, Science Alert, Guardian





TURKEY FULL OF NATURAL RICHES MEDICINAL HERBS AND NATURAL PRODUCTS FOR HEALTH



Turkey is a country that attracts attention with its unique natural riches. Among these riches are medicinal plants and natural products that are important for health. For thousands of years. people have been using these medicinal plants and natural products, which grow thanks to Turkey's geographical diversity and climatic characteristics, for health and well-being. Here is an exploration of Turkey's natural riches that are important for health:

The Medicinal Plants of Anatolia:

Anatolian lands are a geography where medicinal plants have been growing for thousands of years. These plants, which



grow in different regions of Turkey, play an important role in traditional Turkish medicine and alternative medicine practices. For example, plants such as thyme and sage relax the digestive system, while plants such as nettle and yarrow strengthen the immune system. Anatolia's medicinal plants have inspired natural treatment methods as well as modern medicine.

Natural elixir of the Black Sea:

The Black Sea region is famous for its lush forests and abundant rainfall Medicinal plants grown in this region have positive effects especially on skin health and respiratory tract. Plants such as linden, chamomile and rosehip, known as the natural elixir of the Black Sea, are natural products that people have used for centuries to find solutions to health problems. At the same time, thanks to the abundant rainfall climate of the Black Sea, the natural and pure nature of the plants grown in the region is also remarkable.



Aegean's Health Depot:

The Aegean region is known for its abundant sunlight and fertile soil. Plants grown in this region



such as olives, grapes, thyme and sage contain important components for health. Especially olive oil is considered as the health store of the Aegean. Olive oil is rich in unsaturated fatty acids and antioxidants that support heart health. In addition, the Aegean climate and soil structure increase the nutritional value of plants and make them beneficial for health.

Nutritious Treasures of the Mediterranean:

The Mediterranean region is an important part of a healthy and balanced diet. Plants grown in this region, such as olives, pomegranates, thyme and rosemary, form the basis of the Mediterranean diet. Mediterranean herbs are rich in antioxidants. vitamins and minerals. In addition, the oils of these plants contain important components that protect heart health and have protective effects against cancer. The nutritious treasures of the Mediterranean are an indispensable part of a healthy lifestyle.

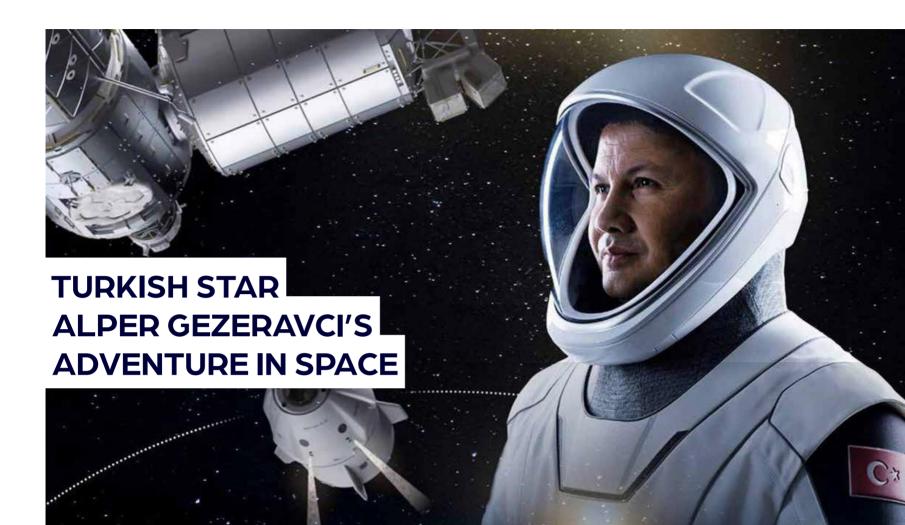
Turkey's natural riches are full of medicinal plants and natural products that are important for health. These plants, which grow in various regions of Anatolia, have been used for thousands of years for people's health and wellbeing purposes. In addition to medicinal plants, Turkey's natural products are also an important source for health. Especially products such as olive oil, pomegranate juice



and natural honey form the basis of a nutritious and healthy diet. Turkey's natural riches represent a valuable heritage that contributes to human health, and the protection and utilisation of these riches is an important responsibility for future generations.

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Turkey has contributed to space research and exploration for many years, but has reached a turning point with Alper Gezeravcı becoming the first Turkish astronaut to work in space. Alper Gezeravcı is a figure that has been called the pride of Turkey and his adventure in space provided an important opportunity to promote Turkey's scientific and technological potential abroad.

Alper Gezeravci's Space Adventure:

On 15 April 2023, Alper Gezeravcı made history as the first Turkish astronaut sent into space as part of a project carried out by Turkey's National Space Agency (MUA). Gezeravcı's mission in space was to conduct scientific research, examine living conditions in space and conduct studies on space technology.

While boarding the spacecraft, Alper Gezeravcı proudly carried Turkey's flag and represented his country's name in space. During his time in space. he carried out various experiments, analysed the effects of life in space and communicated with the Earth to transmit scientific data. He also collaborated with various media and communication platforms to promote Turkey's potential in space technology and space research abroad.

During Alper Gezeravcı's

time in space, various events and seminars were organized to encourage and inspire young people in Turkey to pursue science and technology. These events played an important role in raising the interest of younger generations in space science and technology and showcasing Turkey's potential in space exploration.

At the end of his time in space, Alper Gezeravci returned to earth in good health and with success. He was welcomed with great enthusiasm and pride in Turkey and various conferences and events were organized about his experiences in space. Gezeravci served as an ambassador to introduce Turkey's potential in space exploration and technology to the world and represented his country's name internationally.

The Importance and Impact of the Mission in Space:

Alper Gezeravcı's mission in space provided an important opportunity to promote Turkey's scientific and technological potential abroad. Turkey's advances in space research and technology have attracted international attention and demonstrated the country's scientific and technological capacity.

Gezeravcı's adventure in space provided an important opportunity to increase Turkey's potential in the field of space exploration and technology and to encourage young generations in science and technology. Gezeravci's work and communication activities during his time in space highlighted Turkey's leadership and innovation in space exploration.

In conclusion, Alper Gezeravci's adventure in space provided an important opportunity to promote Turkey's scientific and technological potential abroad and demonstrated the country's advances in space exploration and technology. Gezeravcı's mission in space reinforced Turkey's leadership in space exploration and technology and laid a foundation for the country's future achievements.



ONE PERSON IN GERMANY WAS VACCINATED AGAINST COVID 217 TIMES

It was reported that a 62-yearold man in Germany was vaccinated against Covid 217 times, despite doctors' advice to the contrary. According to the case published in The Lancet Infectious Diseases, the vaccines were purchased from private clinics over a 29-month period.

Researchers from the University of Erlangen-Nurember reported that the man in question had no problems.

"We learnt about this case from newspaper reports. We then contacted him and told him that we would like to have him undergo some tests in Erlangen. He was very interested," said Dr Kilian Schober from the university's Department of Microbiology.

Blood and saliva samples were taken from the case, and experts also analysed frozen blood samples that had been stored in recent years.

"At the time we conducted the study, at his insistence, the case was again given Covid vaccines. We then had the opportunity to use the samples to determine exactly how the immune system responded to the vaccine."

The public prosecutor in the city of Magdeburg collected evidence of 130 vaccines with the person in question and opened a forgery investigation, but no charges were brought.

Covid vaccines cannot cause infection, but can teach the body how to fight the disease.

Vaccines whose vector is Ribonucleic acid (mRNA) show part of the genetic code of the virus to the cells of the body.

The immune system is then able to recognise the virus and knows how to fight it when it actually encounters it.

Dr Shober was concerned that stimulating the immune system with such a large number of vaccinations could cause fatigue in certain cells. However, the researchers found no such symptoms in the 62-year-old man. There were also no signs that he had Covid.

Experts emphasised that they were not encouraging overvaccination and that the tests they had carried out on the case were not sufficient to draw general conclusions.

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NIKOLA TESLA THOUGHT HE HAD RECEIVED A SIGNAL FROM INTELLIGENT ALIENS

TEN REALES TRANSFI

Nikola Tesla, known for his work on alternating current, was a great inventor, mechanical engineer and physicist. His inventions have been shown to work better than expected even 100 years after he noted them. However, no one can be right 100 per cent of the time, and Nikola Tesla was also largely wrong most of the time.

For example, despite his pioneering work on alternating current, Tesla did not believe in electrons. Instead, he thought atoms were the smallest building blocks of the universe and argued that if they existed, they could only do so in a perfect vacuum. He believed in the 19th century view that "ether" or "ether" conducts electric currents.

There is also the time when he believed he recorded a cosmic ray travelling at 50 times the speed of light – but today we will talk about the time when he thought he was capturing radio signals sent by intelligent aliens.

In 1899, Tesla caught a strange signal on his equipment.

"Even now, from time to time, I can vividly recall the event and see my device as if it were really in front of me," Tesla wrote about the incident. "My first observations terrified me, because there was something mysterious, not to say supernatural, and I was alone in my laboratory at night."

In short, he heard beeps. Specifically: Beep. Beepbeep-beep-beep. Beepbeep-beep-beep.

"The changes I noted were occurring periodically

and with such a clear suggestion of number and order that they could not be attributed to any cause known to me at the time," the author continued, writing that he knew of possible sources of electrical disturbances, such as those caused by the Sun, but did not see them as potential causes.

"After a while the thought occurred to me that the irregularities I had observed might be due to intelligent control. Although I could not decipher their meaning, it was impossible for me to think that they were purely accidental. The feeling that I was the first to hear one planet greeting another kept growing in me."

Tesla tried to do more to investigate the signal and talked about sending the answer "four", playing a long-distance counting game with supposedly intelligent aliens.

Tesla, of course, did not receive signals from aliens. At first, people suggested that the signal must have come from Earth, because it came at a frequency that the ionosphere would not allow it to pass through, and Tesla was ridiculed for this.

But more than a century after Tesla found the signal, a team recreated Tesla's device and believed that the source could at least be of planetary origin.

"We think it is entirely reasonable to identify Tesla's signals as the detection of dense kilometric (VLF) emissions originating from Jupiter," the team wrote in 2003.

"Significant work still needs

to be done to convince sceptics," they continued. "However, the bottom line is that when you listen to kilometric signals from Jupiter with one of Tesla's Colorado Springs receivers, you occasionally hear 'Beep... Beep-Bip... Beep-Bip-Bip-Bip'! Moreover, extraterrestrial right circularly polarised kilometric signals penetrate the Earth's ionosphere during sunspot minima. Tesla was in the right place, at the right time, doing the right thing, and had the right equipment to detect these unusual electrical signals of planetary origin. It was the scientific community that was unprepared."

Source: https://www. iflscience.com



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Seventy per cent of Turkey's population lives in earthquake zones. A part of the North Anatolian Fault Line, which cuts the north of the country from east to west, passes under the Marmara Sea. The Mürefte Earthquake occurred on 9 August 1912 at the western end of the North Anatolian Fault Line and the Gölcük Earthquake occurred on 17 August 1999 at the eastern end, and the middle section of the line was stressed. It is now expected that the centre of the fault line will also break and the "Great Marmara Earthquake" will occur. In short, the most important reason for expecting an earthquake in Istanbul is the earthquakes that occurred in this region in the last 100 years.

It is not certain in which segment of this fault line the earthquake will occur, but Prof. Dr. Eser Çaktı, Head of the Department of Earthquake Engineering at Boğaziçi University, draws attention to two possibilities:

"There are some segments in the Marmara Sea. These are tiny little pieces of the North Anatolian Fault. They are called segments because of their different geological, geophysical and tectonic properties. There are two big segments that are expected to affect Istanbul. One of them is the Central Marmara segment. The other is the Islands segment."

In 2004, US geophysicist Tom Parsons conducted one of the most important studies on the timing of earthquakes to date. According to Parsons, there is a 62 per cent probability that an earthquake larger than 7 will occur in the Marmara Sea by 2034.

LOSS OS LIFE

The rate of loss of life and injuries resulting from an earthquake varies depending on the magnitude, location and time of the earthquake, the ground and the durability of the buildings on these grounds. Therefore, a clear loss of life estimate cannot be made for a 7.5 magnitude earthquake scenario.

According to the report, an earthquake with

a magnitude of 7.5 could kill an average of 14,000 people if it occurs at night and 12,500 people if it occurs during daylight hours. In such an earthquake, 8 thousand people are expected to be seriously injured. In addition to this number, approximately 40 thousand more people will need to be hospitalised.

URBAN TRANSFORMATION PROJECTS

In 2012, an urban transformation project was launched across Turkey. Urban transformation projects have been completed in hundreds of thousands of buildings, especially government offices, schools and hospitals. Work continues.

Murat Kurum, Minister of Environment and Urbanisation, said on 17 August 2020, "Since 2012, we have transformed 1 million 410 thousand houses in Turkey. We continue our projects to transform risky buildings in Istanbul. There are 1.5 million houses in Turkey that need urgent transformation. 300 thousand of them are in Istanbul. Within 5 years, we will ensure their transformation."

EARTHQUAKE CAN BE PREDICTED 8 SECONDS IN ADVANCE

Tayfun Kahraman, Head of IBB Department of Earthquake Risk Management and Urban Improvement, says that they have designed an early warning system together with Kandilli Observatory. This system will notify the earthquake at most 8 seconds in advance.

"Early warning is not a very likely situation for Istanbul," Kahraman said, explaining the reason for this as follows:

Because Istanbul and the fault line where the earthquake is expected are very close to each other. After the S waves, the Pwaves will reach Istanbul within 7 - 8 seconds at most at the time of the eartquake, which is the main destructive waves. In this case, there is such a reality. You connat take very clear measures. An earthquake of this magnitude, can cause a derailment, no matter how strong, your metro line or construction is, because, metro lines operated on rail systems can be slowed down and stopped. Infrastructure works for these ara currently being carried out.

"However, despite the problems in infrastructure, we are developing other solutions. For example, we are developing solutions to transer groundwater in Istanbul to Gathering and tempory shelter areas with an earthquake-resistant system."

Sources:

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QUANTUM COMPUTERS COMPUTING REVOLUTION OF THE FUTURE

Recently, quantum computers have started to blow a wind of change that has affected the world. This technology creates great excitement with its potential to process at speeds and capacities that traditional computers cannot reach. In 2023, important steps may have been taken for the commercial use of augntum computers. This could be a revolutionary development in the field of information processing and could have groundbreaking results in industrial applications.

FUNDAMENTALS OF QUANTUM COMPUTER TECHNOLOGY

Quantum computers operate using the fundamental properties of quantum mechanics, rather than the binary system used by classical computers. In this way, they can work much faster and more effectively to solve specific problems. In particular, quantum computers offer significant advantages in areas such as complex optimisation problems, molecular modelling and big data analysis.

POTENTIAL AND ADVANTAGES OF QUANTUM COMPUTING

Quantum computers can offer various opportunities and advantages in many sectors. In particular, it is possible to utilise the potential of quantum computers in areas such as finance, medicine, logistics and artificial intelligence. Quantum computers can be of great benefit in areas such as analysing complex financial models, analysing molecular structures and solving logistics problems.

USE OF QUANTUM COMPUTING IN THE FINANCE AND TRADE SECTOR

In the financial sector, quantum computers can be of great benefit in areas such as analysing complex financial models and optimising risk management processes. In addition, optimising trading strategies, market forecasting and trade analytics applications can also be improved with the use of quantum computers.

The Role of Quantum Computing in Healthcare and Pharmaceuticals

Quantum computers are also revolutionising the health sector. In areas such as the analysis of molecular structures, disease modelling and treatment planning, quantum computers can help achieve groundbreaking results. In addition, the use of quantum computers in drug discovery and personal medicine applications is of great importance.

APPLICATIONS OF QUANTUM COMPUTING IN LOGISTICS AND TRANSPORT

Quantum computers also have the potential for a major impact in the logistics and transport sector. In areas such as route optimisation, inventory management and supply chain optimisation, quantum computers can increase efficiency and reduce costs. This can contribute to logistics processes becoming more effective and efficient.

EFFECTS OF QUANTUM COMPUTING IN ARTIFICIAL

INTELLIGENCE AND MACHINE LEARNING

Quantum computers also have the potential for great impact in the field of artificial intelligence and machine learning. Quantum computers can play an important role in areas such as deep learning and the development of complex algorithms, strengthening artificial intelligence applications and analysing big data.

As a result, 2023 could be an exciting milestone for the commercialisation of quantum computing. This technology can lead industrial and economic transformations by offering various opportunities and advantages in many sectors. However, some technical, security and ethical issues related to the commercial use of quantum computers need to be considered.





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Urfa cuisine, which is among our rich cultural heritage from the past to the present, is counted among the top five cuisines of the world. Urfa cuisine, one of the cornerstones of our culture, has an important place in our country. The historical and cultural accumulation is one of the most important factors that make the cuisine of Sanlıurfa region important. Şanlıurfa, which is a candidate to be a UNESCO gastronomy city with the theme "The oldest cuisine in the world", uses this slogan because it is the land where wheat was first planted and grown.

Urfa cuisine includes the flavours of Christian, Jewish, Armenian, Assyrian and Arab cuisines as well as Muslims. "Tirit", "Çiğköfte", "Keşkek", "Jewish Meatballs", "Borani" are the best examples. The culinary culture of Şanlıurfa is as old



⊅ TiriiT



⊘ ÇİĞKÖFTE



as the history of the city.



JEWISH MEATBALLS



7 BORANİ

Clarified butter, bitter isot, bulgur, and currant juice are among the indispensables of Urfa cuisine. Spices, flour and rice are also frequently used. There are dozens of varieties of vegetable dishes from this region. However, it is generally famous for its meat-based dishes, meatballs and kebab varieties. Meat is also used in vegetable dishes. Especially every part of the slaughtered animal is utilised. For example, when a kid or lamb is slaughtered, roasting is made from its meat and served to guests; "Kelle-Paca" is made from its head and feet; "Kırk Kat" or "Stuffed Belly" from its belly; "Mumbar" from its intestines, "Lıklıkı" from its internal fat, "Liver Kebab" from its liver, "Stuffed Spleen" from its spleen. "Tuluk", "Hide", "Fur" from its skin.

Traditionalism is given importance in the region and women usually cook the meals. The kitchen is also characterised as an area belonging to women. If a kebab is made at home or raw meatballs are kneaded, this is done by a man. From an early age, girls help their mothers, serve and learn how to set the table. During Ramadan, when iftar meals are prepared, fasting women let their children taste the flavours of the food. In this way, it is ensured that girls develop their taste buds and get used to the kitchen at an early age.

In Şanlurfa cuisine, which is one of the first to come to mind when it comes to kebab, oil is always added to the dishes by eye. At the same time, ingredients such as salt, sugar, spices and water are hand-adjusted and unmeasured. Since this is a situation that requires expertise, almost all the dishes of Urfa cuisine are delicious.

Urfa cuisine, whose dishes are as glorious as the name of the city, also has many stories. For example, the legendary stories of Balıklı Lake, Mount Nemrut and çiğköften are integrated with Urfa. Especially the



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food of the queue night is quite famous. In Şanlıurfa, the meetings of groups of friends of various ages or professions, which take place once a week in the house of a friend, are called "queue night" or "queue travelling". The person whose turn it is tries to host his guests in the best way by covering all the expenses of the night. The main dish of these nights with music or conversation is çiğköf. In Urfa cuisine, çiğköfte takes the centre stage and a table without çiğköfte is unthinkable. The food served at weddings is called Supha meal, and the food served by the groom's side to the guests attending the wedding is called Aspap (Esvap) meal. The purpose of this meal, which is prepared for at least 300-400 people, is not only to entertain relatives, but also to feed the hungry and poor. Lamb ribs, rice pilaf with grape pudding and

zerde dessert are served as a meal in the süphada.

In today's social change process, the traditional dishes of Urfa cuisine are kept alive without being lost. Besides the beauty of the flavours of Urfa dishes, being nutritious is also important for a healthy life. Here are some of the delicious flavours of Şanlıurfa ...

LIVER KEBAB

INGREDIENTS:

- 7 1 kg beef liver
- 7 Salt
- ↗ Dry mint
- 7 Cumin
- One head of garlic
- 7 Half a glass of olive oil
- 7 Chilli flakes

7 Kebab skewer

Preparation:

Buy liver from the butcher or market. (If it is lamb liver, it is necessary to buy a set, that is, the kidneys, lungs and heart are inside). Then it is chopped for shish kebab and washed in a strainer. When the water leaks out well in the strainer, put it on a tray and add dried mint, a head of garlic cloves. Add salt, chilli flakes, half a glass of olive oil and cumin. String them on skewers and cook them in the barbecue or oven.



OPEN MOUTH

INGREDIENTS:

For the dough;

- 7 2 water glass flour
- 1 tablespoon of yoghurt
- 7 1 tablespoon olive oil
- 7 1 teaspoon salt

For the filling;

- 7 200 g lamb mince
- 7 1 dry onion
- 1 teaspoon of tomato paste
- ⊿ 1egg
- 7 Chilli flakes
- 7 Allspice
- 7 Black Pepper

Preparation:

Add red pepper flakes, allspice, black pepper, tomato paste and minced onion into the minced meat and knead it. Roll out the dough kneaded with flour, water, yoghurt and olive oil into the size of a tray. Use a teapot lid or a cutting mould to cut out smooth rounds. Spread walnut sized pieces of minced meat into the centre of the dough. Fold the edges of the dough with a nail. Put them into the oil which starts to heat up and frv them by placing the side with minced meat first. It is turned upside down in between. Remove the fried open-faced doughs on a paper towel, then place them on a plate and serve.



CHEESE HALVA

INGREDIENTS:

- Half kg unsalted Urfa cheese
- 7 1 water glass of clarified butter
- 2 cups granulated sugar

Preparation:

Dissolve the granulated sugar with a glass of water. After washing and slicing the cheese into thin slices, drain the water Pour the oil into a pan and heat it over low heat, then add flour in it and stir continuously for about half an hour. After roasting the flour until it turns pink, pour melted sugar into it and mix well When the halva reaches to the consistency of halva, open the centre and add cheese, cover it with halva and cover the lid of the pan. When the cheese melts, mix it and put it on the serving plates.



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WORLD'S FIRST ARTIFICIAL INTELLIGENCE CABIN CREW INTRODUCED

"It shows the infinite possibilities of technology"

New Al-powered cabin attendant will "reduce travel stress" for passengers (Qatar Airways)

Qatar Airways broke new ground by introducing the world's first artificial intelligence cabin crew.

Qatar Airways presented Sema 2.0, the artificial intelligence cabin employee, to the participants at the ITB Berlin International Tourism Fair held on 5-7 March in Berlin, Germany. Sema 2.0, which can be accessed through the airlines' digital platform QVerse, will offer passengers support on flights and travel planning, in addition to baggage authorisation procedures and check-in process.

Passengers will also be able to learn answers to frequently asked questions on many topics from Sema 2.0.

A CV has also been created for the programme, which was designed in partnership with New Zealand-based artificial intelligence company UneeQ. Accordingly, Sema 2.0, born in Doha, the capital of Qatar, was recruited after undergoing special training at Qatar Airways.

Babar Rahman, assistant director of the airlines' marketing department, said the following about the artificial intelligencesupported software: "The introduction of Sema 2.0 emphasises the importance of creating personal connections with our passengers. We believe that these intimate and friendly interactions will increase customer satisfaction.

Danny Tomsett, CEO of UneeQ, said that Sema 2.0 embodies the company's principles and that the programme is "a testament to the endless possibilities of artificial intelligence".

It was reported that the Alpowered programme will develop further over time as it chats with passengers, and will be able to give more accurate answers by processing the newly learned information.

Independent Turkish, Gulf News, Harper's Bazaar Arabia

SYNTHETIC OF TURKEY'S MOST VALUABLE MINERAL PRODUCED



A synthetic version of the Dolomite mineral, which scientists have been trying to replicate for 200 years, has been produced. Scientists have successfully produced Dolomite mineral in the laboratory, which occurs naturally and develops over long periods of time in geological environments. Dolomite is called Turkey's most valuable mineral.

Dolomite can also be found in Italy's Niagara Falls, Dover's White Cliffs and Utah's Hoodoos. Scientists have been working for 200 years to synthetically produce Dolomite, a calcium magnesium carbonate sedimentary rock.

The success in the production of dolomite in the laboratory centred on eliminating defects in the mineral structure. Scientists have discovered that water, as in nature, is an effective tool for solving these defects. Using atomic simulations, scientists revealed how strongly or loosely water adheres to the surface of dolomite.

"If we understand how dolomite grows in nature, we can learn new strategies to promote crystal growth of modern technological materials," said Wenhao Sun, Dow Early Career Professor of Materials Science and Engineering at the University of Michigan.

"Our theory shows that if you periodically resolve defects during growth, you can rapidly grow defect-free materials," Sun said. This study was published in the journal Science.

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TURKISH PHYSICIAN WHO ENTERED THE MEDICAL LITERATURE WITH 'BEHÇET'S' DISEASE ORD. PROF. DR. HULUSİ BEHÇET_

The name of a blood vesselspinflammation disease calledTu'Behçet's' comes fromerHulusi Behçet, the Turkishlittscientist who introduced thisdisease to the world.

Ord. Prof. Dr. Hulusi Behçet, one of Turkey's most famous dermatology specialists, is the only Turkish scientist to have entered the world medical literature.

HULUSI BEHÇET'S INVENTIONS

Hulusi Behçet, who managed to write his name in golden letters in the history of Turkish medicine, is known for his studies on 'Behçet's disease' named with his surname. Since he was the first person to diagnose this disease, he announced his success to the whole world.

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The birth date of the famous doctor is mentioned as 20 February 1889 in the sources. The place of birth is stated as Istanbul.

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Behçet graduates from Istanbul University Faculty of Medicine in 1910. In 1914, he entered GATA and started to specialise in dermatology and veneral diseases.

Between 1914 and 1918, he worked as assistant chief physician at Kırklareli Military Hospital. He then transferred to Edirne Military Hospital and served as a dermatology specialist.

It is known that the famous doctor, who participated in various trainings related to his field abroad, received training on skin diseases in Budapest in 1922. Afterwards, he continued to improve himself with the programmes he attended at Berlin Charite Hospital.

In 1923, after returning to Turkey, he became the chief physician at Hasköy Hospital for Sexual Diseases. After working for 1 year in this position, he moved to Vakıf Gureba Hospital and worked as a 'dermatology specialist'. In this process, he is known for his studies on 'syphilis' disease and the articles he published.

In 1933, the scientist completed his professorship and established the Skin Diseases and Syphilis Clinic under the roof of Istanbul University. He continues his professional life here as a professor. Meanwhile, in 1937, he discovered and introduced to the world the health problem known as 'Behçet's Disease', which is a kind of blood vessel inflammation.

There is no definitive cure for this disease, which manifests itself with inflamed wounds on the skin layer and tissues in various parts of the body.



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HEALTH AND LABORATORY MAGAZINE

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Turkey is an important centre of thermal and spa tourism with its unique natural resources. For thousands of years, people have been travelling to Turkey's thermal destinations to benefit from the health and tranquility of these healing waters. The thermal and spa resorts in the country are equipped with modern facilities, while at the same time offering a peaceful escape in nature.

PAMUKKALE: THE SPLENDOUR OF WHITE PARADISE



One of the most famous thermal and spa centres in Turkey is Pamukkale. Located in Denizli province, Pamukkale is known

worldwide for its white travertine terraces and thermal waters. Located next to the ancient city of Hierapolis, Pamukkale offers visitors a historical and natural beauty. The flow of hot thermal waters offers visitors the opportunity for health and relaxation, while at the same time allowing them to have a unique experience by walking on white travertines.

MYSTERIOUS THERMAL WATERS OF CAPPADOCIA



Cappadocia is famous for its fairy chimneys and underground cities, but it is also noted for its healing thermal waters. Thermal

hotels in regions such as Ürgüp, Göreme and Nevşehir offer visitors a unique experience. In thermal facilities surrounded by the natural beauties of Cappadocia, you can take relaxing baths, benefit from massage services and get away from stress. The healing waters combined with the unique atmosphere of Cappadocia offer visitors an unforgettable holiday experience.

HEALING WATERS AND THERMAL SPRINGS OF AFYON



Afyonkarahisar is one of the important centres of thermal and spa tourism in Turkey. The city appeals to visitors seeking health

and tranquility with its rich thermal resources and various spas. Gazlıgöl, Ömer-Gecek, Termal, and Sandıklı spas in the city offer treatment and rehabilitation for different health problems. While Afyon's thermal facilities are equipped with modern facilities, they also offer views surrounded by natural beauty.

YALOVA'S NATURAL PARADISE



Yalova, located in the Marmara region, is one of the important thermal centres of Turkey. Yalova's healing waters and thermal springs attract the attention of visitors, especially due to its proximity to Istanbul. Thermal facilities offer modern accommodation facilities, while at the same time offering a natural environment surrounded by greenery. In addition to thermal resorts, the Thermal National Park in Yalova offers visitors the opportunity to enjoy outdoor activities and wildlife.

Turkey is a globally recognised destination for thermal and spa tourism. Surrounded by natural beauty, thermal resorts offer a unique experience to visitors seeking health and tranquillity. From Pamukkale to Cappadocia, Afyon to Yalova, thermal and hot spring resorts in various regions of Turkey are places where people have been seeking health and well-being for thousands of years. These unique destinations reinforce Turkey's leading position in thermal and spa tourism.



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Exhibition









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HEALTH AND LABORATORY MAGAZINE

ARTIFICIAL INTELLIGENCE: THE INTELLIGENT WORLD OF THE FUTURE

Artificial intelligence (AI) has been at the centre of technological developments in recent years. leading to radical changes in many areas of our lives. The year 2023 may be an important turning point in terms of the further spread of artificial intelligence technologies and their effective use in almost everv sector. This year, a great momentum is expected to be gained in the field of artificial intelligence and a hopeful vision for the future is expected to be put forward. People are full of excitement and curiosity about the changes that artificial intelligence technologies will bring.

INDUSTRIAL APPLICATIONS OF ARTIFICIAL INTELLIGENCE

Artificial intelligence technologies offer many opportunities in the industrial and commercial field. Smarter and more flexible production systems can be established with the use of artificial intelligence for automation systems, automating business processes and increasing productivity. This can increase the competitiveness of businesses and support economic growth. Al algorithms used in production lines can be continuously optimised to increase efficiency and quality, which can reduce costs

ARTIFICIAL INTELLIGENCE IN HEALTHCARE

Artificial intelligence is also revolutionising the healthcare sector. With big data analysis and machine learning methods, early diagnosis of diseases and optimisation of treatment plans may be possible. Al-supported medical imaging systems can speed up the diagnostic process and increase accuracy by extracting meaningful information from radiological images. In addition, artificial intelligence can also be used in the management and planning of healthcare services, helping hospitals to use their resources more effectively

ARTIFICIAL INTELLIGENCE IN EDUCATION

Artificial intelligence has a great potential for impact in the field of education. With the use of AI to monitor student performance. identify student needs and customise teaching materials, a more efficient and effective approach to education can be adopted Adaptive learning systems can offer a customised learning experience in accordance with the individual learning needs of students. In addition, Al-powered robots can support teachers in classroom management and student interaction.

The year 2023 offers a great opportunity for AI technologies to become more widespread and more deeply integrated into human life. With the effective and responsible use of these technologies, we can say that they have the potential to overcome many challenges faced by humanity. In the smart world of the future, artificial intelligence can guide human life in a better, more sustainable and fairer way.



YOUR DAILY DOSE OF SCIENCE

BILINGUAL PEOPLE HAVE HEALTHIER BRAINS IN OLD AGE

Researchers note that learning a second language at an early age can lead to better brain health in the future and may even increase resistance to cognitive impairment.

Bilingualism is the ability to speak two languages fluently. And apparently, it also has many health benefits.

As we age, our body changes completely. The skin becomes thinner, muscles lose their mass and strength, the elasticity of the lens of the eye is lost, etc. But many changes also occur in the human brain: the number of neurons decreases, their connections with each other weaken and the level of neurotransmitters changes.

A new study shows that learning an additional language in youth may be the key to improving brain health in old age.

"Learning a second language causes structural and functional changes in the brain that lead to age-related cognitive decline, affecting speech, processing speed, memory and planning abilities," says Yow Wei Quin, lead author of the study.

According to the authors of the research paper, the human brain can cope with age-related changes on its own. This is facilitated by what is called cognitive reserve.

This can be achieved through cognitive training, which maximises brain performance by using existing neural connections or creating new neural connections. This type of training also includes learning an additional language.

HOW DOES LEARNING A SECOND LANGUAGE AFFECT BRAIN HEALTH?

The researchers selected 46 young adults and 50 older adults for their study based on the following criteria they were all right-handed, had normal or corrected-to-normal visual acuity, healthy colour vision, no history of neurological or psychiatric illness, and at least three years of formal education.

In addition, older participants were screened for abnormal cognitive decline using the Singapore version of the Montreal Cognitive Assessment.

Each volunteer underwent a behavioural testing session in which they had to complete four neuropsychological tasks measuring general cognitive abilities, followed by an MRI scan.

Analysing all the data obtained, the scientists found that early bilingualism (learning two languages in early childhood) and better social cognitive performance in both young and old people were associated with greater grey matter volume, greater cortical thickness and greater surface area in these brain regions.

In summary, the researchers explained that the earlier a person starts learning a second language, the more positive structural changes occur in their brain and the more cognitive reserves are built up to protect cognitive functions from the effects of ageing.

Kaynak: https://www.nature. com/articles/s41598-023-48710-4#Sec2



HEALTH AND LABORATORY MAGAZINE



Turkey has boasted a rich sporting heritage for centuries. This heritage is not limited to modern sports, but also includes deep-rooted and colourful traditional sports. These sports are deeply rooted in the history, culture and lifestyle of Turkish society. We invite everyone living abroad to discover and experience this unique heritage. Here is our guide for a journey into the world of traditional sports in Turkey:

OIL WRESTLING (KIRKPINAR):

One of Turkey's oldest and most traditional sporting events, oil wrestling has been of areat importance throughout history. Kırkpınar Oil Wrestling is organised once a vear in Edirne and is one of the most important symbols

of Turkish sports culture. This event, where wrestlers compete against each other by oiling their bodies, is not only a sporting event, but also a cultural feast. Spectators from all over the world come together to watch this spectacular show and dive into the depths of Turkish culture.



JAVELIN THROWING:

Javelin throwing, which has a history of thousands of

years, is an important part of the Turkish shooting tradition. The athletes. who aim to hit the target with a long spear called javelin on horseback, both exhibit their skills and keep the spirit of traditional Turkish ancestral sports alive. Javelin throwing is especially popular in various regions of Anatolia and still takes place in many events. This sport combines the nobility of the horse with the excitement



of the sport and gives the audience unforgettable moments

ARCHERY (TURKISH ARCHERY):

Archery is a sport and martial art that Turks have skilfully practised throughout history. Traditional Turkish archery is the art of learning and practising the subtleties of bow and arrow use. This sport requires not only physical skill, but also mental focus and spiritual balance. Turkish archery is still practised by many people today and even successfully represented by Turkish athletes in international tournaments. While archery continues to live on as a part of Turkish culture, it also inspires archery enthusiasts around the world.



SWORD AND SHIELD:

Sword and shield is a sport developed by the Turks to improve their combat skills. Often involving historical combat techniques and strategies, this sport requires both physical strength and mental sharpness. Athletes armed with traditional clothes fight each other using sword and shield and offer an unforgettable show to the audience. While

keeping the Turkish warrior tradition alive, this sport also attracts history and culture lovers.



WRESTLING:

Turkish wrestling is one of the cornerstones of Turkish sports culture. It has evolved and changed over the years and remains popular in Turkey in both traditional and modern versions. Especially in the Black Sea region, classical wrestling as well as oil wrestling attracts great interest. Turkish wrestling is a sport that requires endurance, strategy and physical strength, and Turkish athletes are recognised worldwide for their achievements. Wrestling is a symbol of unity and solidarity in Turkish culture and provides spectators with exciting competitions.

Turkey's traditional sports are not only sports, but also a reflection of culture and history. These sports symbolise the sense of unity and solidarity, solidarity and strength of Turkish society. We invite everyone living abroad to discover and experience this rich sports heritage of Turkey. Remember, Turkey's sport is not just a competition, it is also a way of life!





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