# Laboratory Magazine

CANAN DAGDEVIREN: A YOUNG TURKISH SCIENTIST WHO HAS MADE HER MARK IN A SCIENTIFIC BREAKTHROUGH IN MEDICINE

# TURKEY'S SCIENTIFIC RESEARCH OUTPUT K BOOMING

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2016: Turkey's year of mega projects



Two Turkish scientists have received top US award 16



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Prof. Dr.

SEVIL ATASOY was

**UN International** 

**Narcotics** Control

elected to the

**Board for the** 

second time

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# WHY **LABMEDYA** MAGAZINE?

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We would like to summarize to you the first and only publication laboratory sector for Turkey.

LabMedya, as can be understood from its name, is a publication which has been serving as a media channel in laboratory sector for approximately 8 years and which is followed with a huge interest and curiosity. It has become a publication each issue of which is looked forward to as its contents cover completely independent, free and sectoral issues. It is published between 10.000 and 13.000 issues every two months in glossy and each page being colored. Our publication is mailed to the name of the person directly by mail as a free of charges.

In addition, our publication can be read online and interactively through our web page and mobile application. Also soft copies are sent via e-mail to approximately 30.000 people in the sector which are in our mail bank.

To sum up, the number of people which we reach is over 40.000 in total.

LabMedya, which is also popular in social media is followed more and more every day. In our Facebook page, current news about sector, science, health and technology are posted nearly every day and attract huge attention.

Our vision is to become a publication which will attract attention of people, which will be read and each issue of which will be looked forward to in all terms. In this context, our content and design are prepared in a way to attract people's attention and not to bore people. Our aim is to reach every laboratory and everybody related with laboratory sector in Turkey and Turkish Republics. Labmedya, participate in many exhibitions at home and abroad, and is followed.

As LabMedya, we have made our way into Mobile Application and Tablet Publication by following the developing technologies. In tablets or smart phones, LabMedya can be read more interactively and in a more detailed way.

LabMedya web site appears at the top in many searches with its satisfactory content. Thus, it has a good hit rate. Also, as all issues of LabMedya are loaded in our web site, our users can download and read old issues from our web site.

Also we have another magazines:

**BioMedya** : Biotechnology and life sciences magazine.

**Labsektor** : Laboratory sector magazine. This is only for companies.

**CleanroomNews** : Cleanroom Techonology Magazine.

**MaintanenceNews** : Industrial Maintenance Technology magazine



# TURKEY'S FIRST LABORATORY ASSOCIATION, LABSIAD, ACCELERATES ITS STUDIES

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THE LABORATORY PRODUCTS MANUFACTURERS AND BUSINESSMEN ASSOCIATION (LABSIAD) IS DISCUSSING THE PROBLEMS OF THE ITS INDUSTRY. Founded as the first association of the industry in 2015, LABSIAD is struggling with the problems related to the industry as an organized power.

LABSIAD Chairman Ahmet T. Öğretmen pointed out that they overcome the problems more easily by acting jointly with the organized power established by the gathering of industry companies. "In particular, the owners of the companies came together to exchange ideas so that they began to take more solid decisions by taking a firm action," Öğretmen said. Öğretmen further added that LABSIAD is concerning about the industryrelated problems and looking for the ways to solve the problems. "We have created an environment where the advantages and disadvantages of the industry can be talked and discussed. We are looking for solutions to these problems under the roof of the association.

We are trying to voice the problems of the industry with a single and strong voice. It is one of our aims to support domestic production in the laboratory industry and introduce our domestic production companies operating abroad. Since the first day of the establishment of our association, we have been receiving a very density of application.

The number of our members are now over 100 with the manufacturers, importers, dealers and companies providing service and calibration services in the laboratory industry," he concluded.





# Turkey's diet gurus and their healthy living tips

YOU MAY HAVE SEEN THEM ON BILLBOARDS, IN THE NEWSPAPER OR AS GUESTS ON TURKISH TALK SHOWS, BECAUSE THE FOLLOWING HEALTHY LIVING AND NUTRITION SPECIALISTS HAVE QUICKLY BECOME HOUSEHOLD NAMES SYNONYMOUS WITH LOSING WEIGHT AND FEELING GREAT

While it may easily be assumed that the Turks are a healthy bunch, given their Mediterranean diet and active lifestyles, Turkey actually has a serious obesity problem with nearly 30 percent of the population overweight, the highest figure among European countries. While the government has implemented a number of inspirational programs to get people moving more and eating better, the airwaves also devote a significant amount of time to discussing ways to eat better and live healthier and a number of healthy living and nutrition professionals have become the most read and most written about public figures.

There are two in particularly wellloved and respected specialists in eating and living healthy that through their books have been inspiring and teaching people how to implement simple changes to see big changes in their health. If you have not heard of these Turkish diet divas yet, it is high time you do because their advice and suggestions may very well set the stage for serious life and health improvements.

#### **CANAN KARATAY**

Canan Efendigil Karatay has fast become a household name with her diet that focuses on eating healthy with an emphasis on low glycemic foods and consuming high protein.

Born in 1943 in Elazığ, Karatay studied internal medicine at Istanbul University and then went on to receive her specialist training in cardiology at the Liverpool Regional Cardiac Center. A well-respected doctor in her field, Karatay has created a diet that has for many become the guidelines to reclaiming their health.

With six books to her name and over 1 million editions in print, Karatay and her aptly named "Karatay Diet" have become household names in Turkey. Karatay's diet proposes a number of controversial tips such as eating all types of protein regardless of calories and consuming healthy fats. She believes breakfast is indispensable, snacking superfluous and that we should only have two and at most three meals a day. She argues that Turks eat way too many carbohydrates and that cholesterol is not as bad for the body as it is assumed.

#### BOOKS

Karatay's break out first book, aptly entitled, "Karatay Diyeti" (The Karatay Diet) was released in the spring of 2011 and was a best-seller and has remained one of the most popular books for healthy living in Turkey. It boasts "the ABC's" of losing weight based on scientific facts.

"Karatay Diyetiyle Yaşam Boyu Sağlık" (Lifelong Health with the Karatay Diet) was her second book released in the fall of 2011, and carries the motto, "Goodbye to being overweight, hello to happiness." This book is a continuation of Karatay's diet plan, which, according to the cover has a near 100 percent success rate.

Her third book, titled "Karatay Mutfağı" (Karatay's Kitchen) and released in 2012, is a cookbook on how to prepare the low glycemic and healthy meals and ingredients she recommends. In it she provides instructions on healthy cooking methods and on how to prepare homemade items such as butter and yogurt, which she so wholeheartedly recommends in a healthy diet.

In 2013, Karatay's book, "Karatay Diyetiyle Obezite ve Diyabete Çözüm Var!" (There are Solutions to Obesity and Diabetes with the Karatay Diet), shared pertinent tips on how to tackle obesity and diabetes through adopting a healthy lifestyle. The book's motto: "The 20 simple steps that will save your life."

"Karatay Diyetiyle Beslenme Tuzaklarından Kurtuluş Rehberi" (The Guidebook to Escaping the Traps of Nutrition with the Karatay Diet) is Karatay's fifth book, which goes into further detail into the causes of hormonal imbalances and metabolic disorders by explaining how healthy proteins, fats and carbohydrates should be consumed and their positive effects for optimal health.

Karatay's latest book, released in 2016 is titled "Canan Karatay'la Şifa Bulanlar" (Those who Reclaimed their Health with Canan Karatay) and is a compilation of 50 success stories of people from a variety of age groups who have successfully adopted healthier lifestyles resulting not only in weight loss, but with many giving up their meds and even eradicating illnesses.

#### AYŞEGÜL ÇORUHLU

Ayşegül Çoruhlu is Turkey's aficionado on the Alkaline Diet. A biochemistry and anti-aging specialist, Çoruhlu's "Alkali Diyet" as it is referred to in Turkish and doubles as the name of her bestselling book, has contributed significantly to the trend of maintaining the optimal alkaline and acidic balance, otherwise known as PH levels.

Born in 1969, Çoruhlu graduated from the Istanbul University School of Medicine. She then went on to specialize in biochemistry at Şişli Etfal Hospitaal and then attended the master program of Biomedical Engineering at Boğaziçi University. She went on to become a biochemistry specialist at Amerikan Hospital and was also the lab chief at Interned Policlinic, where she devised a check-up program for preventative medicine. This included anti-oxidant, food sensitivity, hormone and genetic tests, which made her one of the first to implement this type of anti-aging approach, which she went on to coach pharmacists and doctors on in seminars.

She has since been sharing her wisdom in her two bestselling books,





"Alkali Diyet" and "Tokuz Ama Açız," which explains the biochemistry of dieting from a cellular level. Çoruhlu's alkali diet is based on the theory that the human body is programmed to be slightly alkaline and that excessive acidity is the cause of a wide variety of ailments ranging from cancer, cholesterol, osteoporosis, obesity, and more. The solution is simple: eat more alkali and less acidic foods and Çoruhlu's books explain in detail just how to do it.

"Alkali Diyeti" was released in 2012 and was revolutionary in making the terms "alkaline" and "acidic" regularly fall off of everyone's tongues. In her book, she explains why maintaining an ideal PH balance is important, how excessive acidity can lead to serious ailments and how to implement easy changes to bring more alkaline foods into our diets.

Çoruhlu's second book, "Tokuz Ama Açız" (We are Full, but we are Hungry), was released in 2013 and goes even further into detail on how to implement and alkaline heavy diet for long-lasting weight loss and health benefits

# TURKEY'S SCIENTIFIC RESEARCH OUTPUT IS **BOOMING**

Answers come from analysis and a joint research evaluation event with Elsevier and Hacettepe University By Tayfun Basal and Gamze Keskin Over the last decade, Turkey's GDP (gross domestic product) has grown significantly, prompting the government to increase its R&D spending. Turkey increased its research and development expenditure from 0.54 percent of GDP in 2001 to 0.86 percent in 2011, according to the Turkish Statistical Institute (TUIK). As part of long-term plans, the government has set a goal to increase the share of R&D investments to 3 percent of GDP by 2023, the centennial of the founding of the Republic of Turkey. But, what about the quality of this research?

To answer this question, Elsevier organized a research performance and evaluation event March 12 in collaboration with Hacettepe University in Ankara, Turkey. The theme of was "Turkey and Turkish University's Research Outputs in the Context of International Trends in Science and Collaboration Opportunities."

Elsevier Chairman Youngsuk "YS" Chi began his presentation with a quotation that reflects Turkey's motivation for investing in scientific research:

Science is not a luxury which is the preserve of developed countries ... Technology and innovation are key to achieving long-term economic and social development. The quotation is from The Royal Society report Knowledge, Networks and Nations, which surveys the global scientific landscape in 2011. Addressing the audience at the opening session, Chi said: "Three decades of economics studies have conclusively demonstrated that investments in both basic and applied research pay off with very large net positive economic impacts, though lags can be from 20 to 30 years in basic science in particular."

The event was held for the first time in Turkey, with the participation of representatives from government, research institutes, universities and university libraries as well as researchers and public policy experts. Its main goal is to enable delegates to present and discuss Turkey's research performance.

At the same time, the event provides a forum for in-depth conversation on research evaluation, innovation and policy management, and an opportunity to share best practices on how to capture and analyze information scientific research output and use it to develop research strategy.

#### EXAMINING TURKEY'S RESEARCH OUTPUT

During the event, rectors and vice rectors of leading universities in Turkey, YS Chi and Elsevier SciVal Consultant Jörg Hellwig presented revealing statistics – some in visual form – about Turkish universities and Turkey's research output.

In research output, Turkey ranks number 18 of the world's top 20 countries (based on number of articles published between 2006 and 2010) and is already a definitive global competitor. Although it is on the lower end in terms of the number of articles published, it is at the top in terms of the rate of growth – at number 4, behind only China, India and Brazil.

There is not only global growth in the quantity of Turkey's research output but also in the quality. This graph shows the percentage of total papers that have been cited, in 4-year increments since 1996. All the countries on this graph have had growth in the proportion of papers that have been cited over the entire 15-year period. Nearly half (49.9 percent) of Turkish papers were cited between 2006 and 2010.

In this way, Turkey surpasses two of the world's most rapidly growing



economies: India, which had 46.4 percent growth, and China, which had 37.7 percent. Despite its smaller GERD (gross domestic expenditure on R&D), Turkey is producing proportionately more "quality" papers.

Going deeper into the analysis of Turkey's research output, findings show that Turkey is good at chemistry, engineering and medicine.

Research in Turkey has also become increasing interdisciplinary, as shown by a 2011 study conducted by Elsevier. This trend can be seen on the SciVal Spotlight country map for Turkey, which shows scientific production from 2007 to 2011.

The bubbles represent research competencies, while their position and the different colors of the lines within them show the disciplinary mix involved.

The key to increasing the international scientific influence is to increase international collaboration. Although Turkey's growth of research output is increasing rapidly, it has long way to go to be a leader in international collaboration compared to other developed and developing countries like Brazil, Iran and Italy.

During his presentation on "Turkey's academic output performance, impact and collaboration overview," Hellwig also indicated that there is a correlation between international collaboration and strength of Turkey. He said that if Turkey increases the level of international collaboration in scientific research, it will be "paid back" with a high amount of international research funds.

Hellwig, who led this research as SciVal Consultant, explained his conclusions: Turkey is investing in R&D, but not as much as other countries. The number or researchers and students is steadily growing, while the percentage of PhD graduates remain stable.

Turkey is the leading country in the Middle East – far outpacing other SMIT countries in impact and output. The SMIT countries – South Korea, Mexico, Indonesia and Turkey – are considered the four emerging markets with the most potential for growth after the BRIC countries (Brazil, Russia, India and China), based on population growth and position economic growth.

Turkey's strengths are within medicine and chemistry – whereas the strong activity in agricultural and biological sciences does not reflect as a strength.

Turkey's level of international collaboration needs to be increased. The event The meeting was called "Trends

in International Cooperation within the Framework of Outcomes and Opportunities in Turkey and Turkish Universities"

Keynote Speakers Professor Dr. A. Murat Tuncer. Rector of Hacettepe University (Ankara, Turkey) Youngsuk "YS" Chi, Chairman of Elsevier (London) Professor Andrea Bonaccorsi, Executive Board, National Agency for the Evaluation of Universities and Research Institutes (ANVUR) and Full Professor at the University of Pisa (Italy) Dr. John Green, Honorary Researcher, İmperial College (London) Professor Mustafa Güden, Rector of Izmir Higher Technology Institute (Turkey) Professor Cem Saraç, Vice Rector of Hacettepe University (Ankara, Turkey) Professor Hasan Mandal, Vice Rector of Sabanci University and Director of Research and Graduate Policies (Istanbuk, Turkey) Jörg Hellwig, SciVal Consultant at Elsevier (Frankfurt, Germany) Learn more about this meeting on the event website: elsevierturkiye.com/etkinlikler Download the presentations.



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#### A TURKISH MUSICIAN FROM TURKEY'S WESTERN RESORT TOWN OF BODRUM CLAIMS THAT HE IS THE BIOLOGICAL FATHER OF

BRITISH POP STAR ADELE.

Mehmet Asar said in an interview that Adele's mother Penny Adkins visited Bodrum, a renowned holiday destination for Britons, in 1987, the same time he was working as a cab driver in the town. Asar claimed that the young woman in the photo is Penny Adkins."I toured Bodrum coves and Pamukkale with Penny Adkins and her friends for two weeks. She introduced herself to me as a nurse. At the time, we liked each other. We were together for two weeks. Then she extended her vacation, returning to England a month later. She came to Bodrum again twice, staying for a month. When she was leaving, she wanted me to come with her. However, I told her that I wanted to live in Bodrum instead of England and she could stay here if she wanted to. She returned to England, we spoke on the telephone for a couple of times, but it was both hard and expensive to make international calls at the time. We lost touch afterwards. The time we had been together corresponds with the time Adele was born," Asar said.

Asar stated that he noticed that he was Adele's father when he looked up the background of the British star online after she won the Grammy awards last year. "When I looked up for her family, I was shocked to learn that her mother was the same women I had been with years ago. The woman I loved was Adele's mother, she hadn't changed over the years. When I looked through Adele's moves, when she raised her right during concerts, I saw the third and fourth fingers of her right hand are adjacent... I became even more surprised because my right hand's third and fourth fingers are also adjacent when I raise it. In addition, the highlights she makes when she is singing are similar to mine, which could also be genetic," he added. Asar said that he worked as a public employee after working as a cab driver and continued working as a local artist after his retirement.

DELI

The 52-year-old man said that he had never got married, and had spent years thinking about Adkins.

"Now I'm coming forward because I want Adele to learn the facts. I invite her and her mom to Bodrum. They can come and spend their vacation here and we can meet. I think I am Adele's father, I feel it. I can even carry out a DNA test if she wants too," Asar said.

He emphasized that he has no expectations from Adele whatsoever. "I'm from Bodrum and I'm a wellendowed man. I just want my daughter to know the facts."

In an interview with Dutch TV in December 2015, Adele stated that she has Turkish, Spanish and English backgrounds, but she did not elaborate further.

Adele's father Marc Evans left Penny Adkins when Adele was two years, with Adkins raising her daughter by herself.

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TURKEY, LIKE "SIMIT"

MOST-CONSUMED

(TURKISH BAGELS)

AND ROASTED

CHESTNUTS.

STREET FOOD IN

**ENJOY DIFFERENT** 

POPPING UP ON

A SAVIOR FOR





# TOP 10 STREET FOODS IN TURKEY

Sena ALKAN - ANKARA

#### WET BURGERS

Forget all the burgers you've seen in the past since you are about to meet a Turkish-style wet burger (sloppy joe), which is very delicious. In Taksim Square at the beginning of İstiklal Street, dozens of small takeaway shops sell wet burgers.

#### **BAKED POTATO**

One of the most famous street foods in Istanbul is the baked potato, known as "kumpir" in Turkish. A huge baked potato is cut in half and filled with butter and cheese for the base. The seller then asks for your preferred filling - from a mind boggling range of ingredients, including corn, pickled red cabbage, pickles, Olivier salad, yogurt, jalapenos, olives, etc.

#### **KANLICA YOGURT**

A widely consumed food in Turkey, yogurt is a main ingredient in nearly all dishes in Turkish cuisine. Istanbul's Kanlıca neighborhood has been famous for creamy, tasty yogurt since 1893. Kanlıca yogurt has no additives and is good for the digestive system. Top your yogurt with honey, powdered sugar, jam or you can try plain Kanlıca yogurt.

#### **GRILLED & BOILED CORN**

Many street sellers stand grilling ears of corn. Fried corn is very popular to eat while strolling down streets, along with boiled corn, which is put into a paper box and - according to your preference - you can add toppings, such as ketchup or red pepper.

#### **FISH SANDWICHES**

Istanbul fishermen have been catching fish in the Golden Horn. In the last 50 years, a tradition arose that sees freshly caught fish from the Marmara Sea cooked and sold on fishing boats. Eating a fish sandwich is a must if you visit Istanbul's historic peninsula, which includes Eminönü.

#### SIMIT

Simit is a staple food item readily accessible to the public from town bakeries, simit wagons or men on the street that balance a massive tray on their heads. Simit is a nice starter for any day.

#### **ROASTED CHESTNUTS**

Roasted chestnuts signal the cold days of winter. Dozens of streets sellers roast chestnuts and put them in a paper bag. The smell of roasted chestnuts will make you want to eat more and more.

#### LAHMACUN

Lahmacun is one of the most popular fast foods in Turkey. With thin-crispy dough and a delicious combination of minced meat, lamb or beef, mixed



with fresh chopped onions, garlic, parsley, peppers and tomatoes, it qualifies as one of the healthier fast foods around. Also known as "Turkish pizza," lahmacun is a unique combination of fresh ingredients and complimentary spices, including paprika, red pepper flakes and occasionally cinnamon.

#### GÖZLEME

Made of hand-rolled dough that is lightly brushed with eggs and butter and filled with various toppings, such as minced beef, chopped lamb, fresh or smoked seafood and vegetables (spinach, zucchini, eggplant, onion and potato or mushrooms and cheese), these delicious "fillings" are sprinkled onto the dough before the dough is closed up and fried.

#### KOKOREÇ

A midnight meal, kokoreç can be found on any street corner, though it is not a traditional meal on restaurant menus. Made from the intestines of lambs and cooked with a variety of spices and flavors, kokoreç is the sandwich of the night owl. It is cooked like döner over a charcoal fire, which gives it an extra rich taste.

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#### As Mustafa Kemal Atatürk says;

"We shall take science and knowledge from wherever they are and each nation will introduce them to their members. Registration and conditions do not apply to science and knowledge"





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In addition to the Labmedya

WHAT IS LABMEDYA ? www.labmedya.com/en

CANAN DAĞDEVIREN IS A SUCCESSFUL SCIENTIST WHO HAS REPRESENTED OUR COUNTRY ON THE INTERNATIONAL PLATFORM OF SCIENCE. CANAN DAĞDEVIREN, THE INVENTOR OF THE WEARABLE CARDIAC PACEMAKER HAS BEEN PLACED ON THE 30 UNDER 30' LIST OF SCIENTISTS OF FORBES MAGAZINE, ONE OF THE MOST PRESTIGIOUS MAGAZINES PUBLISHED IN THE USA. DAĞDEVIREN. WHO BECAME KNOWN FOR THE SCIENTIFIC RESEARCH SHE CONDUCTED IN MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) IS KNOWN AS THE FIRST TURK TO BE AWARDED YOUNG ACADEMY MEMBERSHIP OF HARVARD UNIVERSITY.

# **CANAN DAĞDEVİREN:** A YOUNG TURKISH SCIENTIST WHO HAS MADE HER MARK IN A SCIENTIFIC BREAKTHROUGH IN MEDICINE

Canan Dağdeviren explains her introduction to the world of science as follows, "The 'wearable pacemaker' that was one of the projects that I was involved in during my doctorate term is a childhood dream of mine. My grandfather passed away as a result of cardiac failure at the age of 28 which I find out at the age of 5 and at that age I determined that I would be 28 years old when I realized my dream. Until the age of 28 I wanted to do something for patients with cardiac problems and worked to this end. Perhaps it is a small step but I believe that in the future many application areas will be manifested'.

The scientific invention of the 'wearable pacemaker' which puts her on the Forbes list is a flexible and ultra slim piezoelectrical integrated tool (PZT MEH) which generates and stores electrical energy with the movements of the heart, lungs and diaphragm. This material, which is attached to a plastic surface compatible with the human body, is a hundred times thinner than a strand of hair and can be folded and twisted like paper. A collaborative effort with Arizona University Sarver Heart Center successfully tested the flexible instrument on sheep, calves and pigs whose heart size is similar to the human heart. Furthermore, in the control experiment conducted to prove compliance with a living metabolism, it was observed that the muscle cells of mice could grow on the instrument without problems. The device, which can maintain its mechanical strength even when folded and twisted 20 million times, can store energy on a battery of 3.8 volts. This technology opens up new doors for technology that is now available in large size, costly without any mechanical proximity to the heart. The fully flexible tool which folds and bends like paper can establish a close contact with organs with curved lines. Thus, a system with high energy efficiency is created that does not limit the movement of organs. Current pacemakers have a life span of 5 to 7 years, and if the battery fails, the whole mechanism needs to be replaced with a risky operation. However with this device, the heart, lungs, or diaphragm produce the energy needed to operate the tool. The fact that it is wearable means that it is really compatible with the body.

Canan Dağdeviren who made this significant scientific development spoke about her passion for science as follows; "I dream of carry out successful works in a short time. Currently I am working on a needle-like battery that can benefit patients with Parkinson's disease and other brain diseases. The trials with monkeys last week were very successful. I am very excited and hopeful. I lost a dearly beloved aunt to breast cancer in the recent past. I made her a promise. After my brain project I will focus on early detection of breast cancer. The design of the tool is practically completed. During this work my greatest support has been the messages and prayers from the beautiful people of my solitary and beautiful country. It is motivating to experience the unifying force of science. Awareness for science has increased which is wonderful. I endeavor to give the support to students that I did not have during my years as a student. In a way I am returning to the past. I am experiencing the joy of being a small part of omniscient science with the work that I have done and will do. I am full of serenity for being able to help people I do not know: for me being involved in science means infinite love, passion, the true mentor in life. It means unrequited service to mankind. Therefore, the reason why something is done is more important than where it is done. Due to my work I do not think that I will adopt a sedentary life. As Mustafa Kemal Atatürk says; We shall take science and knowledge from wherever they are and each nation will introduce them to their members. Registration and conditions do not apply to science and knowledge"

#### **CANAN DAĞDEVİREN**

Graduated from Hacettepe University, Department of Physics Engineering in 2007. In 2009, she completed her graduate studies in Sabancı University Materials Science and Engineering Program. She was awarded the Fulbright Ph.D. Scholarship when it was awarded for the first time in 2009 and began her Ph.D. in Materials Science and Engineering at the University of Illinois in Urbana, Champaign (UIUC). During her Ph.D., she worked on flexible and foldable, adherable / wearable electronic devices that fall within the scope of physics, electronics, chemistry, materials, mechanics and medicine and that can be inserted in the body and worn on skin. Currently, she is a postdoctoral researcher at MIT and Harvard Universities.



# PROF. DR. **SEVIL ATASOY WAS ELECTED TO THE UN** INTERNATIONAL NARCOTICS Control Board is comprised of 13 members and has the authority to CONTROL BOARD FOR THE SECOND TIME

PROF.DR. ATASOY RECEIVED THE MOST VOTES IN THE UN AND BYPASSED THE US AND RUSSIAN CANDIDATES.

Üsküdar University Vice Rector Dr. Sevil Atasoy has been re-elected to the United Nations' 13-member International Narcotics Control Board. In the elections held in New York, Prof.Dr. Atasoy bypassed all 16 candidates, including the candidates of the US and Russia. The board also has the authority to issue an embargo.

Üsküdar University Vice Rector Dr. Sevil Atasoy was re-elected to the United Nations (UN) International Narcotics Control Board to serve between 2017-2022 Prof. Dr. Atasoy who was nominated by the Ministry for Foreign Affairs bypassed all 16 candidates in the election held in New York and got the highest number of votes. The United Nations International Narcotics Control Board is comprised of 13 issue an embargo.

54 countries participated in the election. Prof. Dr. Atasoy won the election with 40 votes out of 54 followed by the US and Russian candidates.

Prof. Dr. Sevil Atasoy who is the Director of Üsküdar University Violence & Crime Prevention

Research Center (SIDAM) and had undertaken the presidency of the board previously has been elected to the position for the second time. Prof. Dr. Atasoy will serve during 2017-2022. Prof.Dr. Atasoy served during 2005 – 2010 and was the first Turkish citizen to undertake the presidency and is also the second woman to serve as president during the history of the board exceeding a century.

Üsküdar University strives to combat addiction

Studies are being carried out within Üsküdar University regarding addition and toxicology.

The target of Üsküdar University Addiction Research Center (ÜSBAUMER) is to carry out scientific research in the field of addiction, generate projects and be a partner in executed projects. Thus ÜSBAUMER aims to inform and raise awareness in all parts of the community either directly or through distance learning by organizing inhouse training courses, conferences, workshops, seminars and certification programs for national and international organizations, natural and legal entities.

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# 2016: TURKEY'S YEAR **OF MEGA PROJECTS**

DAILY SABAH

# WITH THE COMPLETION OF ISTANBUL'S THIRD TRANSCONTINENTAL BRIDGE, THE ISTANBUL-İZMIR HIGHWAY PROJECT, THE WORLD'S FOURTH LONGEST SUSPENSION BRIDGE, PLUS THE EURASIA AND ILGAZ MOUNTAIN TUNNELS, IT CAN BE SAID THAT 2016 WAS TURKEY'S YEAR OF MEGA PROJECTS

#### THE THIRD BRIDGE FOR THE BOSPORUS: AUG. 26

Istanbul's Yavuz Sultan Selim Bridge, which cost nearly \$3 billion to construct through the build-operate-transfer finance model, opened on Aug. 26 as the world's longest suspension rail bridge in its class. It will lead to \$1.75 billion a year in savings through reduced travel times and energy costs.

The bridge was completed within a record-breaking 27-month time frame, nine months ahead of schedule, and it is first of its kind completed in such a time frame. More than 6,500 workers and engineers worked diligently on the construction of the Yavuz Sultan Selim Bridge. The total length of the bridge is 2,164 meters.

Located at the Bosporus' entrance to the Black Sea, the 1.4 kilometer bridge will carry eight lanes of traffic and two rail lines between Europe and Asia, when the Northern Marmara Motorway Project, the next two phases of which will see 257 kilometers of roads, is completed by the end of 2018. The height of the tower in the village of Garipçe on the European side is 322 meters and the tower in the Poyrazköy district on the Asian side is 318 meters high.

This third Bosporus bridge was named after Selim I, the 16th century sultan known for his expansion of the Ottoman Empire. It follows the July 15 Martyrs' Bridge, previously the Bosporus Bridge, and the Fatih Sultan Mehmet Bridge, in spanning the important waterway.

#### **NEW HIGH-SPEED TRAIN STATION IN** TURKEY'S CAPITAL: OCT. 29

On the 93rd anniversary of the founding of the Republic of Turkey, a new station for high-speed trains in capital Ankara was inaugurated to provide services to 50,000 passengers a day.

The \$235-million station, which was built in two years through the public-private partnership model, is among a set of leading infrastructure projects planned as part of a series of objectives for Turkey's centennial in 2023

According to Turkish State Railways, the facility also boasts 134 hotel rooms and over 200-rentable areas for restaurants, coffee shops, entertainment venues, stores and offices. Twelve office spaces and a parking lot for 1,910 vehicles are also among the other facilities of the station, distinguished for its modern architectural style. The station will be directly linked to means of mass transit, such as a suburban rail system and the subway.

The station has a closed area of 194,460 square meters and consists of eight floors, including the basements, three platforms and six high-speed lines.

OSMANGAZI BRIDGE: JUNE 30 Osmangazi Bridge, a landmark road bridge over Turkey's Marmara Sea, cuts travel time between Istanbul and the country's western provinces. It opened to traffic on June 30, forming part of a new six-lane Istanbul-Izmir highway, with a cost of around \$6.3 billion. Completed within a 39-month period, the Osman Gazi Bridge aims to decrease the over concentration of industrial operations in Kocaeli's Gebze and Dilovası districts The 421 kilometer highway project is being

built through a public-private partnership as the first road project in the country to be procured under the build-operate-transfer model.

The project began with an interchange (2x5 lanes) that was built 2.5 kilometers after the Gebze Interchange on the Anadolu Highway, and ending at the Otogar Intersection on the Izmir Highway. The bridge reaches a height of 252 meters and the bridge's deck is 25.93 meters long, with a main span length of 1,550 meters. Totaling 2,682 meters, the Izmit Bay Bridge has the fourth-largest main span in the world. It will eventually cut the average travel time between the Aegean coastal province of Izmir and Istanbul, which are 480 kilometers apart, from 10 hours to approximately four.

Kenan Sofuoğlu, a world-renowned Turkish motorcycle racer, broke a racing record on the bridge prior to the inauguration ceremony, managing to hit the 400 kilometer per hour mark on his sports bike within 30 seconds.



#### SATELLITE: DEC. 5

Turkey launched its second military surveillance satellite, the Göktürk-1, from the Kourou Launch Center in French Guiana on Dec. 5.

A military intelligence satellite system that will enable Turkey to obtain high-resolution images from any part of the world without any geographical restrictions, Göktürk-1 is designed to provide secure transmission of the said images to ground units. In addition to its use for military intelligence, the satellite will also provide images for civilian purposes. Turkey's first sub-meter resolution discovery surveillance satellite project, Göktürk-1 was developed primarily to fulfill the needs of the Air Force's Command. Costing a total amount of 261.5 million euros (\$273.6 million), the Göktürk-1 satellite will expedite the fight against terrorism due to its ability to receive high-resolution images. The satellite, which circumvents the earth approximately every 90 minutes, is expected to take more than 60,000 images per year. Every time it passes over Turkey, the satellite will transfer the photographs and images taken while in orbit to the Air Force Command's satellite ground station.

A more improved version of Göktürk-2, which can take black and white images at 2.5 meters (8.2 feet) and color ones at 5 meters, Göktürk-1 will be able to capture images in black and white at a 50-centimeter (19.6inch) resolution and in color at 2 meters. The satellite, which will be able to capture 358

frames per day in high resolution, will have a lifetime of seven years.

Designed to transmit images at a higher resolution compared to similar models in orbit, the Göktürk-1 satellite will also perform remote-sensory tasks for public institutions and organizations in many fields, including environment and construction monitors, agricultural cultivation, municipal applications, border control and cadastral activities.

#### **EURASIA TUNNEL UNDER THE BOSPORUS: DEC. 20**

Eurasia Tunnel, Marmaray's sister, is the first road tunnel for automotive-transit access between the Asian and European sides of Istanbul under the Bosporus. It reduces the travel time between the two sides to 15 minutes and opened on Dec. 20 with a grand ceremony

Eurasia Tunnel, which cost \$1.3 billion, will create a business volume of TL 1.5 million for the Turkish economy and save 52 million hours of time in traffic. The time saving potential is one of the great features provided by the tunnel. Thanks to its extra capacity, it will shorten travel time and save about 52 million hours of time per year for passing the Bosporus.

The amount of vehicular emissions (carbon monoxide, carbon dioxide, nitrogen oxides, particulate matter, et cetera) released will be reduced by approximately 82,000 tons per year thanks to the project. A total of 60 subcontractors are also working on the project, employing 800 people a day. of TL 1.5 million per day for the Turkish economy thanks to the expenditures made during the construction work. During the excavation of approximately 2 million cubic meters, 700,000 cubic meters of concrete and 70,000 tons of iron were used. Construction of the titanic-infrastructure project took over four years. The total length of the project is 14.6 kilometers and the most crucial part, the Bosporus crossing, is 5.4 kilometers long.

Constructed with the most advanced design, technology and engineering applications, the tunnel is designed to withstand earthquakes of a magnitude up to 7.5 on Richter scale and tsunamis. Furthermore, with its advanced security features, it can be used as a shelter when necessary.

#### **ILGAZ TUNNEL OPENS: DEC. 26**

The Ilgaz Mountain project, consisting of two tunnels - one 5,370 meters (17,618 feet) long and the other 5,391 meters long - was constructed to connect Turkey's west Black Sea and central Anatolia regions, as well as the Black Sea to the Mediterranean, thus constituting an important point in the northsouth corridor. Stretching hundreds of meters underground, the tunnel has lessened the difficulty of getting around the 875-meter high Ilgaz Mountain, which was a major obstacle for drivers.

The tunnel will significantly reduce traveling time on the Ilgaz Mountain motorway, from 35 minutes to eight minutes, cutting the existing route by 5.4 kilometers (3.4 miles). After the tunnels opened, the route on the Ilgaz Mountain, which is 16.8 kilometers long, will shorten to 11.4 kilometers.

Ilgaz Tunnel is expected to provide 345.655 hours per annum, making up for previous lost time, as well as save 8.3 million liters (2.19 million gallons) of fuel annually. Moreover, the tunnel is estimated to contribute approximately TL 40 million (\$12 million) to the Turkish economy. Furthermore, the tunnel will make significant contributions to the industrial entities in the region by carrying the products of factories in central Anatolia to the Black Sea region and facilitate the transportation of the products brought to Inebolu Port to the central regions of Turkey.

#### **UPCOMING PROJECTS IN 2017**

1915 Çanakkale Dardanelles Bridge President Recep Tayyip Erdoğan, speaking at the opening ceremony of the Eurasia Tunnel, announced that the foundation of the bridge linking Gelibolu on the European side and Lapseki on the Anatolian side will be laid in March 18, 2017. Previously, Ahmet Arslan, the minister of transportation, maritime affairs and communication, confirmed that the last phase of the pre-project survey has been reached and they will receive the bids for the construction of the bridge in Jan. 2017. The bridge will be tendered as a build-operate and transfer model. The 1915 Çanakkale Bridge is planned to be 352 kilometers (218 miles) long covering the Kınalı-Tekirdağ-Çanakkale-Gelibolu-Balıkesir Motorway. At the initial phase bids for the 100 km long part of the bridge, which will link Malkara-Gelibolu-Çanakkale, will be accepted.

#### TURKSTREAM NATURAL GAS PIPELINE

After years of development, followed by a period of political uncertainty, Russia and Turkey have finally re-agreed to push ahead with the Turkish Steam pipeline, which is estimated to cost \$15.1 billion. The decision was reached at the 2016 World Energy Conference (WEC) in Istanbul and sealed with an intergovernmental agreement signed by Energy Minister Berat Albayrak and Russian Energy Minister Alexender Novak in the presence of President Recep Tayyip Erdoğan and Russian President Vladimir Putin. The 909 kilometers of new pipeline will travel beneath the Black Sea linked to 177 miles of onshore pipes transporting gas from Russia via Turkey to Europe.

The project, which has been in the planning stages since 2014, is expected to reach deliverability of 63 billion cubic meters of natural gas annually once operational. Gazprom expects total costs on the project to reach \$15.1 billion. Alexey Miller, Gazprom's chairman, said the first phase of undersea pipe lying will start in 2017 and could be completed as early as 2019. Gazprom will be working alongside Turkey's BOTAS to complete the project. BP's CEO Bob Dudley, speaking at the WEC, also expressed his eagerness to get involved with the Turkish Stream, citing the pleasing results of BP's involvement on another Turkish-involved project, the Trans Anatolian Natural Gas Pipeline (TANAP).

Recently, after the Turkish Grand National Assembly and President Recep Tayyip Erdoğan approved the TurkStream project, it was reported that the Russian government ratified the draft bill on the approval of the TurkStream pipeline project. Now, TurkStream will be voted out in the State Duma, the lower wing of the Russian parliament, in January





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# TURKEY'S TOP CEOS WARN OF SERIOUS ECONOMIC RISKS, URGE MAINTENANCE OF KEY INSTITUTIONS



"[The measures taken so far] may lead to a short-term cure, but are not enough to save tomorrow," said Turkish Industry and Business Association's (TÜSİAD) high advisory board president, Tuncay Özilhan, on Jan. 12.

"The global funds, which enabled our country to grow in a rapid manner in the first half of the 2000s, have now veered back. In a bid to ease the economic problems, our economic administration has taken a series of measures," Özilhan said at a general board meeting of their organization, but noted that the measures were insufficient.

"It may now be possible to refloat the struggling companies in the shortterm, but this cannot be sustained," he added.

Özilhan noted that it is a must to maintain the rule of law, meritocracy, pluralism, justice, robust bureaucratic institutions, secularism, freedom of speech and economic stability in order to enhance economic recovery and attract foreign investment.

"Uncertainties and political risks can thus be minimized, pushing down interest rates and inflation, making the Turkish Lira a valuable currency and increasing the investment inflow into our country," he added at the meeting in Istanbul, where the association elected a new president, Index Group CEO Erol Bilecik, to replace Cansen Başaran-Symes.

#### **EMPHASIS ON SECULARISM**

Başaran-Symes also underlined the importance of the maintenance of a number of crucial institutions, including secularism, for the sake of an economic recovery and social peace.

"It is not possible for Turkey to prevent its engulfment by the pains of the Middle East without the existence of secularism ... Turkey cannot overcome the escalating security concerns by constantly extending the state of emergency," she said in her speech.

Noting that Turkey was once seen an exemplary country by its neighbors, she said: "If we want to raise our competitiveness, we must make it possible for our qualified people to work peacefully in Turkey."

She also said Turkey should "never quit its European Union agenda."

"More importantly, Turkey can only secure its future welfare by renewing its institutions, enhancing the rule of law, showing respect to human rights and property ownership rights and adopting smart economic and technological policies which will enable Turkish businesses to become more competitive. We are transferring all of our missions to TÜSİAD's new board," she added.

Leading businesspeople Ali Koç, Simone Kaslowki and Murat Özyeğin were appointed as the new vice presidents of the association. Bilecik emphasized the importance of democratic rule, rule of law and education on the road to making Turkey a prosperous country in his first speech as the new TÜSİAD president.

The Turkish Lira has lost around 10 percent of its value just since the beginning of 2017, becoming the worst-hit emerging currency, amid several concerns about Turkey's political reforms, its sluggish economy, rising inflation and terror attacks.

#### **NOW OR NEVER**

Many businesspeople and economists recently called for the easing of uncertainties to return the economy to a growth track.

Amid rising economic and financial concerns, President Recep Tayyip Erdoğan reiterated his call on the business world to invest, produce and increase employment by taking risks today as there might otherwise be nothing left to risk tomorrow.

"I am here calling for the business world to invest, to create new jobs and to cause economic activity to rebound ... If they do not take these risks now, they will have nothing to risk tomorrow," he said in a speech in Ankara on Jan. 12.

TURKEY'S TOP CEOS HAVE WARNED OF THE SERIOUS ECONOMIC RISKS FACING THE COUNTRY, NOTING THE URGENT NEED FOR TURKEY TO STRENGTHEN KEY INSTITUTIONS AND DECREASE POLITICAL UNCERTAINTIES.

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# TWO TURKISH SCIENTISTS HAVE RECEIVED TOP US AWARD

U.S. PRESIDENT BARACK OBAMA HAS NAMED 102 SCIENTISTS AND RESEARCHERS AS RECIPIENTS OF THE PRESIDENTIAL EARLY CAREER AWARDS FOR SCIENTISTS AND ENGINEERS (PECASE), THE HIGHEST HONOR BESTOWED BY THE UNITED STATES GOVERNMENT ON SCIENCE AND ENGINEERING PROFESSIONALS IN THE EARLY STAGES OF THEIR INDEPENDENT RESEARCH CAREERS. As part of the annual event, Obama awarded two Turkish scientists, Nurçin Çelik of the University of Miami and Sinan Keten of Northwestern University, on Jan. 9. "I congratulate these outstanding scientists and engineers on their impactful work," President Obama said in a statement marking the awards announcement for 102 scientists and researchers.

"These innovators are working to help keep the United States on the cutting edge, showing that Federal investments in science lead to advancements that expand our knowledge of the world around us and contribute to our economy," he added.

Çelik's research interests include dynamic data driven multi-scale adaptive simulations, modeling and control of complex systems, distributed federation of multiparadigm simulations, modeling and control in emerging applications (distributed power networks; solid waste management and recycling systems).

She graduated from Istanbul's Boğaziçi University in 2006 before receiving her Master's degree in systems and industrial engineering at the University of Arizona two years later, and completing her PhD in 2010 at the same university.

Keten's focus lies in nanostructured polymeric materials and biomolecular and bioinspired materials.

He also graduated from Boğaziçi University before receiving his Master's in Engineering and PhD from the Massachusetts Institute of Technology.

Speaking after receiving the awards, both Çelik and Keten expressed pride in receiving their prestigious acknowledgment.

The awards, established by President Clinton in 1996, are coordinated by the Office of Science and Technology Policy within the Executive Office of the President. Awardees are selected for their pursuit of innovative research at the frontiers of science and technology and their commitment to community service as demonstrated through scientific leadership, public education, or community outreach.

# MOON'S ACTUAL AGE CONFIRMED BY SCIENTISTS FROM FRAGMENTS OF LUNAR ROCK

A new study about the actual age of the Moon has confirmed by the scientists through the rocks found and collected by the Apollo 14. They have figured out the precise age of the Moon than ever before, from the rocks gathered in the mission.

According to Space.com, similar estimates from the previous studies have raised an argument that the moon emerged 150 million to 200 million years after the solar system was born. But the recent study published in January 11, says, based on the analysis of the fragments of zircon found in the rocks collected from the moon, reveals that the moon formed 4.51 billion years ago, 60 million years after the solar system took shape.

The researcher in UCLA's Earth, Planetary and Space Sciences Department and the lead author of the study Melanie Barboni, told Space.com that "We are really sure that this age is very, very robust."

In the article posted in The Verge, Barboni stated that the moon technique involved breaking down the chemical components of a mineral within the lunar samples called zircon. It helps the scientists to figure out the important event happened in the Moon's formation just by studying zircon when it solidified.

The chemical signatures of zircon allowed the scientists to estimate the occurrence of the solidification of the Moon. The team dated samples radiometrically, by measuring how much uranium had decade into lead and how hafnium had decade into various daughter isotopes.

The researchers manage to date back gigantic impact that would have created a massive ocean of liquid magma that eventually merged into the earth and the Moon, a key process that is often considered as the beginning of the Moon's life.

Based on the analyses made by Melanie Barboni and her team, the age of the Moon is 4.51 million years, give or take 10 million years. "We were able to correct for everything that was a problem before, the people said about zircon could not be used", Barboni said.

However, Dr. Richard Carlson, director for the department of terrestrial magnetism at Carnegie Institution for Science, told The Verge that the results of Barboni's study was not enough to settle the debate on Moon's age. Carlson has few concerns about the technique used to analyze zircon as well as the assumptions made in the study.

"It is just a very complicated problem they are addressing me, which is why we still do not have a clear answer to such obvious question as the age of the moon", Dr. Carlson explain.

But, Barboni still says that it makes sense for the Moon to be old. If some scientists think that life formed as late as 4.1 billion years ago, then the giant impact occurred much earlier than the first emergence of lifeforms, and the Earth has more time to evolve for the right conditions for life to thrive. Zircon has already been found to be valuable for dating rocks on Earth. This type of rock that crystalizes from magma, dated 4.374 billion years old, and remains relatively unchanged. It is though to have been crystalize when the Moon is still volcanically active. magma from lunar interior erupted onto space and eventually cooled and crystalized into zircon.



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# EBRD SAYS IT HAS INVESTED 9.4 BILLION EUROS IN 2016, WITH TURKEY AMONG TOP RECIPIENTS



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THE EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT (EBRD) STATED ON JAN. 13 THAT IT INVESTED A TOTAL 9.4 BILLION EUROS ACROSS 378 PROJECTS IN 2016, MATCHING ITS RECORD AMOUNT SET IN 2015.

The top countries of EBRD investment included Turkey, Kazakhstan, Egypt, Poland and Bulgaria, while spending in Ukraine dropped sharply.

The EBRD stepped up its financing in local currencies with 93 local currency projects in 2016 compared with 80 a year earlier. It also maintained a strong level of investment in small businesses that are seen as key to ensuring underlying economic strength and providing job opportunities, according to the statement. The EBRD increased the number of its projects in the least advanced

transition countries to 114 in 2016 from 102 a year earlier, it added.

In Turkey, the bank said it focuses on investing in energy efficiency and renewable energy and supporting energy sector reforms, improving the quality of infrastructure with the participation of the private sector, scaling up private sector competitiveness through innovation and improved corporate governance, promoting regional and youth inclusion, promoting gender equality to support long-term growth potential, and deepening capital and local currency markets.

# **TURKEY'S FIRST** SPERM BANK FOR GOATS FOUNDED

TURKEY'S FIRST SPERM BANK FOR GOATS HAS BEEN FOUNDED IN THE CAPITAL ANKARA IN ORDER TO PROTECT THE SPECIES OF THE ANKARA GOAT.

The project, which is carried out by Ankara University, received support from the Scientific and Technological **Research Council of Turkey** (TUBITAK) worth 240,000 Turkish Liras.

Elite flocks will be founded with artificial insemination in the Ankara Goat Sperm Bank, founded through the cooperation of Ankara University's Faculty of Veterinary Science lecturer Prof. Ali Daşkın, Consiglio Nazionale delle Ricerche (CNR), and TÜBİTAK.

The number of high-technology Ankara goats - which has a high value in the world, especially in the textile industry - has been on a steady decline in Ankara and the surrounding provinces and is now near extinction.

While the number of such Ankara goats is decreasing in Turkey, it has

been on the rise in North Africa, the U.S., Canada, New Zealand, France and Russia, according to Daskin.

"With the computer software developed as a part of the project, we've reached sperms with highest level of gene quality via embryo transfers, collective insemination, and methods like embryo creation in laboratories. In the sperm bank the prevention of diseases can be possible," Daşkın told daily Hürriyet, adding that the farmers could apply to the goat sperm bank.

"Farmers can apply to the goat sperm bank at Ankara University if they want to inoculate high quality goat sperm into their goats.

In this way, the Ankara goats started to provide 3.5 kilograms of wool rather than just a kilogram as before," he added.



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