



# MEDICAL

TBILISI STATE MEDICAL UNIVERSITY

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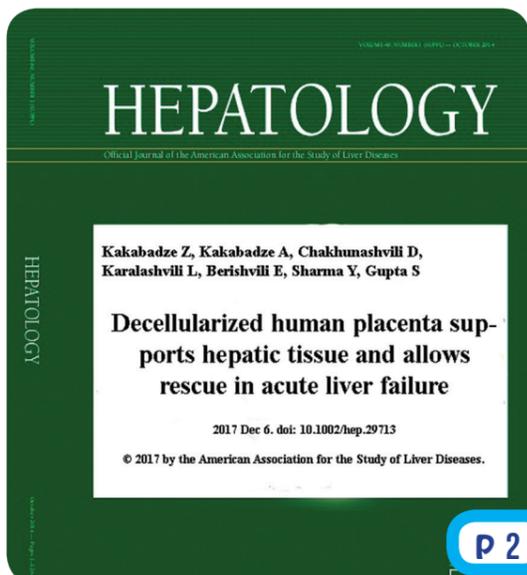
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# Newspaper



## Another success of the Tbilisi State Medical University on scientific arena

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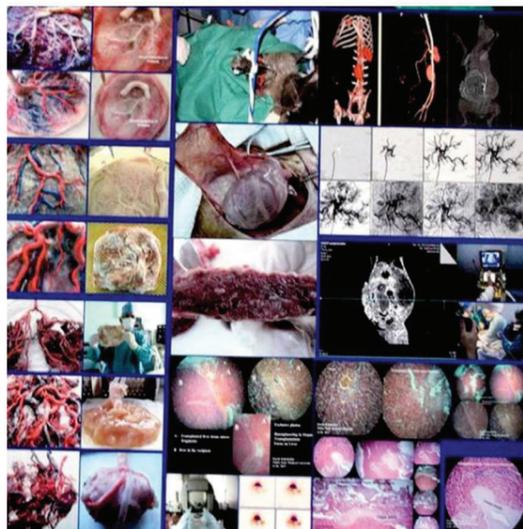
## Science

## Another success of the Tbilisi State Medical University on scientific arena



## Health News

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## News &gt; Reuters Health Information

## Decellularized Human Placenta Useful for Liver Tissue Engineering

By Will Boggs MD

December 21, 2017

NEW YORK (Reuters Health) - Decellularized human placenta has been shown to support hepatic tissue growth and provide sufficient tissue for rescue in an acute liver failure model. The capacity of a scaffold to carry transplanted liver tissue containing all cell types and functions will be of enormous value, Dr. Sanjeev Gupta from Albert Einstein College of Medicine, Bronx, New York, and Dr. Zurab Kakabadze from Tbilisi State Medical University, Tbilisi, Georgia, told Reuters Health in a joint email. "This approach using tissue units, as opposed to seeding with one cell type at a time, differed fundamentally from previous efforts for creating an organ," they said.

In December, 2017, a unified scientific article titled "Decellularized Human Placenta Supports Hepatic Tissue and Allows Rescue in Acute Liver Failure" has been published in the Hepatology journal by the staff members (Kakabadze Zurab, MD, PhD, Professor, Head of Department, Department of Clinical Anatomy, Tbilisi State Medical University; Ann Kakabadze, PhD, Invited Lecturer, Researcher Department of Clinical Anatomy, Tbilisi State Medical University; David Chakhunashvili, MD, PhD Assistant Professor, Department of Clinical Anatomy, Tbilisi State Medical University; Lia Karalashvili, MD, Invited Lecturer, Researcher Department of Clinical Anatomy, Tbilisi State Medical University; Ekaterine Berishvili, MD, PhD, Invited Professor, Researcher, Department of Clinical Anatomy, Tbilisi State Medical University; Yogeshwar Sharma, PhD Researcher Yeshiva University; Sanjeev Gupta, MD, PhD Professor Yeshiva University) of the Department of Clinical Anatomy, Tbilisi State Medical University, and Yeshiva University (Bronx, NY, USA). Over the past five years, the study has been conducted at the Department of Clinical Anatomy of the Tbilisi State Medical University under the guidance of Professor Zurab Kakabadze. The study was based on the creation of liver support system and its use in the cases of acute liver failure. Currently, various liver support systems such as Molecular Adsorbent Recirculating System (MARS), Plasma diafiltration (PDF), Bio-artificial Liver (BAL) and other systems are being used throughout the world. Despite the frequently acquired positive results, these systems do not fully meet the requirements of clinicians. Georgian and American scientists have developed the concept of a liver support system based on other principles, including the creation of bioengineered liver from a human placenta extracellular matrix and liver micro fragments.

For studying the bioengineered liver, the studies have been conducted at the Tbilisi State Medical University. First of all, the organ and tissue decellularization protocol has been developed, also the method of acquiring, cultivation and recellularization of cell and tissue micro fragments has been improved. The functional analysis of the bioengineered liver has been performed both in vitro and in vivo conditions. For the above mentioned, an experimental study on 20 sheep has been conducted through creating 85% hepatectomy model. The animals were divided into two groups: in the animals of the first group, after creating the hepatectomy model, the acute

liver failure was treated with complex, drug therapy; in the animals of the second group, the bioengineered liver has been used for the treatment of acute liver failure, that itself has been heterotopically implanted in the body of a study subject.

Post-operatively, various routine-laboratory and biochemical studies, angiography, doplerography, computed topography scan and radioisotope studies have been conducted. The fragments of the bioengineered liver have been studied on various time periods by using scanning electron microscopy, histological and immune histochemical methods.

The conducted studies have demonstrated, that the liver created by using bioengineering methods can be effectively used in the cases of acute liver failure.

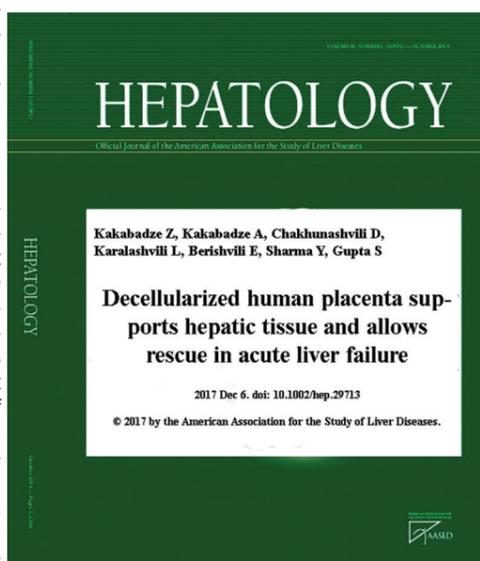
On December 21th, 2017, the correspondent Will Boggs of the international news agency Reuters has shared an interview with Professor Zurab Kakabadze and Sanjeev Gupta, concerning the new treatment concept that has been developed by them, and new vision for the treatment of acute liver failure. The interview has been followed by a wide variety of international medical journals and newspapers.

As it is noted by Will Boggs, Georgian and American scientists, through bioengineering methods were able to create liver, for which a human placenta extracellular matrix (scaffold) has been seeded with liver micro fragments have been used. Bioengineered liver that has been created with bioengineering methods, significantly differs from the currently existing liver support systems, since human placenta itself is a natural material that possesses a well-developed vascular network and more importantly, vascular pedicle in the form of umbilical arteries and vein. Additionally, the

scientists have used not isolated hepatocytes, but micro fragments containing whole range of liver cells.

In the near future, this method can become an alternative of the liver support systems. Professor T.L. Maiti has responded to Will Boggs's interview, noting that a liver created by the Georgian and American scientists can solve the problem associated with the donor organ deficiencies. He also said that the human placenta extracellular matrix (scaffold) opens new avenues and perspectives in the field of tissue bioengineering.

Article has been prepared by  
Lia Karalashvili and  
David Chakhunashvili



## Tbilisi State Medical University hosted the Information day European Cooperation in Science and Technology (COST) and other Funding Opportunities in EU Programmes

The Information day "European Cooperation in Science and Technology (COST) and other Funding Opportunities in EU Programmes" organized by the representatives of COST and "Horizon 2020" was held at Tbilisi State Medical University.

European Cooperation in Science and Technology (COST) is an EU-funded programme that enables researchers to set up their interdisciplinary research networks in Europe and beyond. COST provides funds for organizing conferences, meetings, training schools, short scientific exchanges or other networking activities in a wide range of scientific topics.

Representative of European Cooperation in Science and Technology (COST) introduced the audience with detailed information on Funding Opportunities in the "COST" program. Ms. Inga Dadeshidze, the representative of the COST Association, COST Science Officer, provided information on the opportunities and guidelines proposed by COST. National NCP coordinator of Horizon 2020 programme in Georgia, Ms. Natia Gabi-



tashvili introduced Marie Skłodowska-Curie actions - Research Fellowship Programme and Ms. Maia Okujava National Contact point for Health, demographic change and wellbeing and Associate Professor of TSMU Department of Pharmacotherapy, presented the main directions of Work Programme 2018-2020, Health, demographic change and wellbeing.

The Information Day was attended by: Professors of Tbilisi State Medical University, Vice Rector of TSMU Professor Rima Beriashvili. Prof. Rima Beriashvili Vice-Rector of TSMU addressed to the audience and thanked them for their interest. She also expressed her thankfulness to representatives of „COST“ and „Horizon 2020“ for organization such fruitful meeting. According to Prof. Rima Beriashvili the University Administration has always been actively involved in promoting different programs, attracting international partners and co-financing programs and in future, TSMU will continue to make every effort in development of medical science and increase involvement of the youth in scientific activities.



## Spacer Festival 2017 - Create Your Success



On December 20, 2017, within the frames of "Speaker Festival 2017" the Seminar on "Effective Communication Master Class" led by international trainers: Haseeb Hasan, Zaufy Hasan and Amal Hasan was held at Tbilisi State Medical University. The speakers have been working for years in direction of effective communication management. At the seminar they represented - "Relationship Management Program", focused on five essential aspects: relationships with family members; relationships at work; relationship with the community; re-

lationship with yourself; relationship with the universe. Any imbalance between these five dimensions negatively affects our lives. Any person can learn and refine the art of relations with the conscious effort and correct communication. The speakers shared with the audience how to manage and maintain relationships, how to turn negative communication into positive; what are the tools for successful communication and how to get the best from our relationships. The training seminars were designed for the audience of any age groups and included the theoretical and practical tests. It should be noted that "Speaker Festival 2017" was held on December 18 - 22. Within the frames of the Festival, Georgian and foreign speakers hosted the audiences at different Universities of Georgia.



## Conference Organized by the International Atomic Energy Agency (IAEA)



On December 11-16, 2017, Prof. Tamar Sanikidze, Professor of TSMU Department of Physics, Biophysics, Biomechanics and Informative Technologies; David Nadareishvili Director of I. Beriashvili Center of Experimental Biomedicine and Giorgi Ormotsadze Doctor of Biological Sciences visited Vienna (Austria) to participate in the Conference on "Radiation Protection in Medicine" organized by The International Atomic Energy Agency (IAEA) – and presented report on "The ways of solving the scientific and educational problems of patient and staff radiation protection in Georgia from the position of Bone Decision (2012)".

## The Election of Rector and Chancellor of Tbilisi State Medical University



On January 9, 2018, Professor Zurab Vadachkoria has been elected on the position of Rector of the Tbilisi State Medical University for a new term by the Academic Council of Tbilisi State Medical University. Rector will commence fulfillment of his powers on February 13, 2018.

On December 18, 2017, Professor Zurab Orjonikidze has been elected on the position of Chancellor of Tbilisi State Medical University by the Representative Council of Tbilisi State Medical University.



The students and staff of Tbilisi State Medical University congratulate you on your election and wish you great success!

## Important International Recognition

The Center Of Clinical Skills And Multidisciplinary Simulation Department of Tbilisi State Medical University, became the member of SIM Center Directory. Due to this remarkable success and news, couple of questions were given to the head of the Center, professor Irma Manjavidze:

— Prof. Irma, Clinical Skills and Multidisciplinary Simulation Department is a well-equipped center that brings unique educational opportunities to the students. The previous academic year you have started at newly repaired an upgraded environment, what kind of opportunities do new space offer to you?

— I would like to emphasize that the learning environment and the existing equipments in the center meet the global requirements and standards in medical education. (WFME 2015).

Learning using manikins, models and simulators is an integral part of medical education with an increasing number of healthcare institutions and medical schools embracing simulation-based learning. There has been significant interest, acceptance, and use of simulation recently as a learning tool and as an assessment for accreditation. A set of conferences, workshops and trainings devoted to simulation based learning are held worldwide where participants can share their experience.

What are advantages of learning on manikins and simulators? This is a main question today.

Teaching on simulators and manikins has many advantages including: medical procedures can be repeated many times, that is important in terms of patient safety; it imitates the real environment that offers an additive benefit to the traditional didactic instruction therefore enhance performance; by attend-

ing just one class the student has a chance to see different clinical cases thus can gain experience in a short period of time.

Over the last two years, students have been trained in the renovated centre, that meets international standards. The classes take place under the supervision of the professional academy staff and invited teachers of the centre, the students performance is evaluated by using special evaluation checklist. The classes can also be observed from monitoring rooms. Indirect surveillance and assessment is less stressful for students and the student is more free to conduct the procedure.

From 2011-2012 academic year, clinical skills course is involved in the main curriculum of the Faculty of Medicine. Nowadays second, fourth and sixth year students have classes at clinical skills center. Their training course consists of differ-



ent fields of medicine including the following topics: adult patient care, pediatric patient care, patient transportation, resuscitation, first aid, gynecology and obstetrics, neonate resuscitation, newborn's care, surgery, ophthalmology, otology, heart and lung auscultation, functional tests of respiratory system,

The syllabuses of various courses are made to meet the standards defined by "Medical Educational Program Branch Characteristics" (<http://www.eqe.ge/res/docs/medicina.pdf>) as well as considering knowledge and experience of the second, fourth and sixth years students and also taking into account the existing resources.

— Both Georgian and foreign students of the TSMU are attending classes at your center. You are involved in the implementation of a modern type of examination, namely, OSCE (an objective structured clinical examination) in medical education. Are you planning to add other disciplines to exciting one. - And what can you say about American MD Program (USMD) students? What are your goals for the future in terms of educational process?

— Since 2014, at the end of each semester Clinical Skills Center and Department of Obstetrics and Gynecology have been organizing Objective Structured Clinical Examination (OSCE) in Obstetrics and Gynecology for the fourth year students of the Faculty of Medicine. The environment for holding such type of exam is considerably improved in the new center. In the future we are going to carry out OSCE in pediatrics and therapy.

As for American MD Program (USMD), from December 2017 we have initiated the integrated course in Cardiology, which aims to improve skills of USMD students by means of integration into their

curriculum the module of "Clinical Course" with using manikins, models, trainers and simulators

Also I would like to mention recently purchased High Quality Abdominal Examination Trainer designed in the UK. It can be used to teach and practise abdominal examination including palpation, auscultation and percussion. This trainer is also ideal for OSCE preparation and assessment and will simplify the process of studying abdominal pathologies for the students of Faculty of Medicine.

— It's a great news that, that you have gained international acknowledgement. Being the only member of International European Directory of Simulation Centers from the former soviet countries is a huge honor. What would you like to say about this? Please tell our loyal readers about your future plans?

— Yes, it's really amazing, because as you have pointed out earlier we are the single centre from the whole Post-Soviet countries who entered into the European Directory of Simulation Centers (<http://www.ssih.org/Home/SIM-Center-Directory/Area/EUROPE>), starting 2017.

We don't take this for granted, we really understand that with great powers and relationships come great responsibilities so we are ready to work even harder to use this amazing opportunity as much as we can and not to disappoint the people who accepted us and believe in us.

The goals that we have achieved is the result of great staff and team work, their hard work has really paid off. Our main goal is and always will be to meet time requirements. We can't really express in words how supportive and helpful the Administration of TSMU was, we would not succeed without their support.

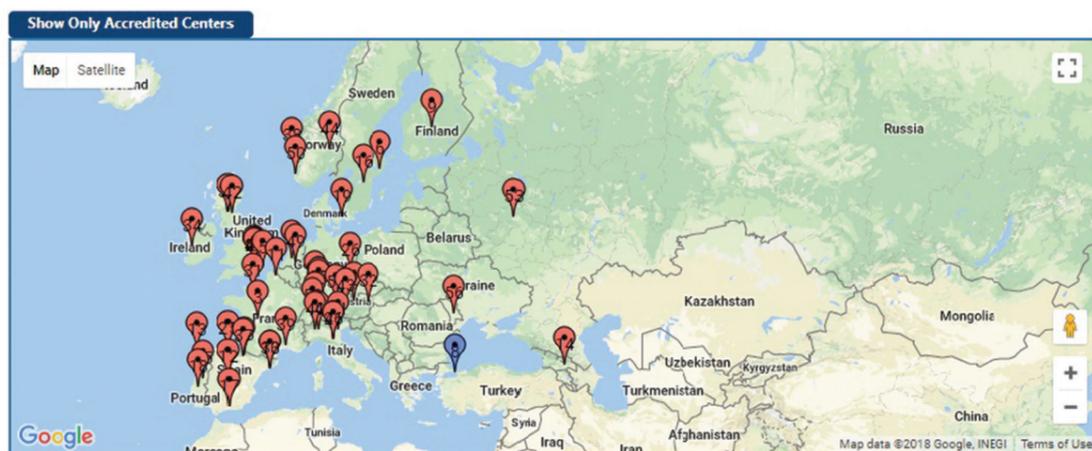
Manana Pkhaladze

### SIM Center Directory

#### Sim Center Europe

Submit your Sim Center to our directory. Learn how your center can achieve accreditation

Programs accredited by SSH are highlighted in gray



PIN	INSTITUTIONAL AFFILIATION	SIM CENTER NAME	LOCATION	ACCREDITATION
2	alpha medical concepts	AMC-Sim & medsimgroup	Linz, Austria	
43	Paracelsus Medical University Salzburg	Paracelsus Medical University Simulation Center	Salzburg, Austria	
32	Medical University of Vienna	Pediatric Simulation Training Vienna	Vienna, Austria	
19	Danish Institute for Medical Simulation at Copenhagen University Hospital Herlev	Danish Institute for Medical Simulation	Copenhagen, Denmark	
9	Central Finland Health Care District	Center of Medical Expertise	Jyväskylä, Finland	
31	University Hospital of Caen and Normandy-Caen University	Normandie Simulation en Sante (Norsims)	Caen, France	
11	Université de Lille	Centre de simulation PRESAGE	Lille, France	
3		Anatomy Biomechanics Simulation Lab	Poitiers, France	
27		it-SimS	Toulouse, France	
39	Nîmes University Hospital and Montpellier-Nîmes Medicine Faculty	SIMHU Nîmes	Nîmes, Occitanie, France	
14	Tbilisi State Medical University	Clinical Skills Center	Tbilisi, Georgia	
26	University Hospital Dresden	Interdisciplinary Medical Simulation Center	Dresden, Germany	
22	University of Heidelberg, Department of General, Visceral, and Transplantation Surgery	Heidelberg Laparoscopy Training Center	Heidelberg, Germany	

## No one looks back on their life and remembers the nights they had plenty of sleep



This is the shortest recap I can give you about my life changing 6 years at TSMU.

As a proud Alumnus of this institution I would like to say it is the PEOPLE who I met, the excellent TEACHERS who taught me, the FRIENDS I made for life that will always keep me going.

As my friends and I from the class of 2015 reflect our days of sleepless last minute cramming, last minute rehearsals for cultural events, late night midnight birthday celebrations, we realize we actually never really both-

ered that we had less sleep. We simply loved it. Those are the memories we cherish. Nothing felt sweeter than passing an exam you all pulled an all-nighter for, together. We all enjoyed and learned and grew into such mature individuals in just 6 years. To the surprise of our parents.

As I am prepping for the next stage in my post undergrad life... taking more ex-

ams... working and studying even more than I ever had to do in my 6 years...my advice to all of you is..

It never gets easier you just get better at dealing with life. Make friends, work hard, dance and sing your heart out because at the end of the day, life may provide the wind but it is US who control the direction of its sail. Be wise. Be smart. And don't forget to have the time of your life at TSMU.

GOOD LUCK AND ALL THE VERY BEST.

## EVERY TIME YOU LOOK IN THE MIRROR

Every time you look in the mirror, you see yourself! That's the simple idea and purpose of that thing framed in your dresser or hung on your bathroom wall. (Totally relatable!)

With that being said, have you ever thought a little into the fact that every time you look in the mirror, it's the face that someone would be staring into while they are counting backwards while being put to sleep for you to save their lives in the table?

The face that would hesitantly walk to a person. To solemnly tell her how sorry you are that she missed her chance of bidding goodbye to her husband and the father of her children?

Or maybe a miracle-lit face which would be sharing the joy of fatherhood to that anxious man who had been spending the past eight hours hovering outside the labor room?

Looking at ourselves, we are to realize that we are all future doctors. While some of us already have an idea on how our profession is going to be, the rest (like me) are still procrastinating that occasionally haunting fear of becoming a doctor with the present day student life that seems fun and off the responsibility radar. But whoever you are; tall for the mirror frame or short to reach for its base, overdressed for a lecture or in wrinkled scrubs running late for rotations and the geeky one who's the teacher's pet or the geeky one

who cruises in the ocean of the music gushing from those large headphones at class.

Every time you look in the mirror to tuck in your shirt, gel your strands of hair, match them earrings to your well knit sweater or wear that white cape not everyone gets to wear everyday for work, remember to;

adorn yourselves with passion for what you know, compassion to understand another's aching soul, a wide smile in your eyes like it's your first day on the field and the confident curving strides in your embrace no matter the epidemic that hits your way. And every time you look in the mirror, don't ever forget to glue that God-given wisdom- not above in your head, rather in your heart where indeed the gift of healing your are called to assist in is waiting for you to unwrap.

**SHARON CRISTABEL**  
Faculty of Medicine  
5TH Year Student



## The year had gone by me, just like the train moving past me, so fast that it's almost a blur

The year had gone by me, just like the train moving past me, so fast that it's almost a blur.

I remember reaching this foreign abode and feeling lonely and out of place. I am bewildered by how much of everything had changed.

It had been pouring cats and dogs the day I reached my destination, a place I had been forced to call home for the next six years. My heart was pounding loud, my breath quickening and thickening with each intake, I was petrified of change and here change was grinning at me.

I didn't know what I know now, that day has been the turning point of my life. I would now say with wholehearted fulfillment that Georgia had started to grow on me. All the unfamiliarity

has become the familiarity, I smile at. Change has happened around me and within me. Not everyday is enjoyable but it's bearable, sometimes the feeling of abandonment is inescapable, during those times I take a breath and realize the personal growth I'm experiencing and immediately I feel a lot better. Coming to Georgia is the best and worst decision I had made for myself, because no matter how much I try, I will never be the person I was before Georgia happened to me, because growth hurts and that's undeniable. And sometimes just sometimes growth and change is everything.

**Sahana Saravanabawan**  
Faculty of Medicine  
Second Year Student

## Choose the Right University and Course

Decisions regarding university are often considered daunting; they shape a student's future and drive it towards a specific direction, making it an absolute necessity to choose a suitable course that will stimulate your ambition and help bring you closer to your goals.

The Tbilisi State Medical University USMD course has achieved and went beyond what many students' expectations. Not only did it help them set an outline for the way they would like to pursue their studies, but it also provided immense support from the administration who handled personal and academical worries graciously. Not to mention the professors who were willing to help with every step of the way and were not hesitant to offer their advice and assistance. Furthermore, the students themselves were ever so welcoming and helpful, always trying to build effective relationships that lessen the stress of living away from home. In regards to personal experience, the USMD course has been an irreplaceable and valuable step my pursuit of becoming a capable doctor who will one day be



able to give back to the community that nurtured me and gave me the opportunity to meet incredible people of varying nationalities and age groups who only made the journey even more exciting and insightful.

To conclude no matter how intimidating it may seem to be able to choose the right university and course, it remains to serve as the foundation of our future and it is essential to spend time in order to cater the experience to your personal preferences.

**Sarah Faisal Ghazi**  
TSMU-USMD  
The 1st Year

## My Choice is American MD Program



As we grow older, we have to make serious decisions and choosing the university is one of them. My choice is American MD Program. After one semester of studies, I realized that it is the place where I am supposed to be. This is the place, which I can call my second home. Every day I meet people from all over the world with different cultures and it is amazing that all of us are connected with each other with one goal, one dream and one purpose – to change the world and to see smiles on the faces of healthy people. USMD is great challenge for each of us. No one knows what future holds, but here are specialists, which are following us step by step and trying to make our studies easier. Medicine is the profession which worth sleepless nights and hard work, but in this program, it doesn't seem so difficult anymore.

**Liza Vardiashvili**  
TSMU-USMD  
The 1-st Year

## THE POWER OF A HEALTHY MIND

We've heard innumerable times the power of a mind but how much thought do we really put into it? Often times, it's only but a gentle reminder to think before we answer a question, or a small nudge of a compliment of the theories we build up in our heads. We pass it for a statement or an unimportant fact like the many others that we keep at the back of our minds certain that we'll never need it in life. But the power of a healthy mind isn't to be dismissed so simply. In our minds are a million invisible cogs and wheels constantly working to keep ourselves in place, to keep your eyes reading word after word, line after line, turning this alphabet into meaningful sentences. The power of the mind is not up for debate- but what is of importance is how we put it to use. A mind is what we make of it. Give it a chance and it can take you to unimaginable heights, but this very mind with the wrong kind of influence can take you down too. That's where we come back to the title- the power of a "healthy" mind. "Healthy" is much an objective term as subjective. We know how to keep our diets healthy and you probably thought it's as far from your mind as it could possibly be, but did you know that this



too plays a role in keeping your mind healthy? Mental health isn't something that we can catch, fix or repair- it's what we can influence with everything else that we do. So improve your diet, stimulate your mind, exercise regularly, care for yourself and your emotions, avoid harmful substances, and build healthy social relationships. Our minds shape us, and a healthy mind is a healthy you. Start today, be healthy- physical fitness is nothing without good mental health; with a healthy mind your opportunities grow and without opportunities who would we all really be?

**ZULAIHA ZUHAIR**  
Faculty of Medicine  
5th Year Student

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