

**University of Traditional Medicine
Student Scientific Society (SSS)
Yearly Report
2022-2023 Academic Year**

1. During the reporting year, the UTMA SSS staff has been renewed and replenished with students with outstanding scientific and organizational activity. The SSS continued to actively collaborate with the UTMA Department of Science, as well as to work with the facilitators to organize scientific activities and involve students in scientific works and research projects. On 2022 October 15, the first meeting with facilitators took place, a number of important issues were discussed. More details on this meeting are available in the SSS Meeting record from October 15 2022 (ՈՒԳԸ արձանագրություն 2022թ. Յոկտեմբերի 15). See the topics addressed during the meeting below.



The slide features a teal header with a white box containing the text "MEETING WITH FACILITATORS". On the left and right sides of the header are circular logos: the UTMA logo on the left and the Rod of Asclepius logo on the right. Below the header, the word "AGENDA" is centered in bold. The agenda items are listed in a numbered format.

MEETING WITH FACILITATORS

UNIVERSITY OF TRADITIONAL MEDICINE OF ARMENIA
DEPARTMENT OF SCIENCE

AGENDA

1. Introduction
2. Decision of the Work Format and Means of Communication
3. UTMA OS Event Participation & Organization
4. Introduction to Research Directions of the UTMA (Interim)
5. Student Research Formats, Abstracts
6. Formal Organization of Student Research Groups

2. Three student research groups were formed:
- **Emergency medicine** - group leader: Tuba Shaikh
 - **Endocrinological Gynaecology** - group leader: Ziyad Tariq Jamal, SSS President
 - **Neuroscience** - group leader: Rohini Zadbuke



Meeting of the SSS president Ziyad T. Jamal with the newly elected facilitators.

3. In close collaboration with the head of the UTMA Department of Science, V.S. Grigoryan, M.D., many UTMA students were involved in scientific activities and research projects, have participated in local and international scientific events, conferences, seminars, had presentations and scientific publications.

 - UTMA students have actively attended multiple scientific events, including BIO-SEE Bioimaging seminars and conferences held in L.A.Orbeli Institute of Physiology NAS RA, “Leading Force of Science” scientific events organized by Enterprise Incubator Foundation, and others.



UTMA students in L.A.Orbeli Institute of Physiology, attending a seminar on Bioimaging, organized by Bio-SEE International Bioimaging Society.



UTMA Students attending “The Leading Force of Science” scientific event, organized by EIF.



UTMA students attending a conference at the L.A.Orbeli Institute of Physiology NAS RA.

- UTMA students Rohini Zadbukey and Harshil Kotadia have passed Confocal Microscopy (advanced bioimaging technique) practical trainings organized by Bio-SEE International Bioimaging Society
- SSS Member AnjanKumar P.V. - became a member of a research group (led by V.S.Grigoryan, head of the Department of Science) and actively participates in the theoretical and experimental research. Topic: nerve tissue engineering. In this framework, the research group led by V.S.Grigoryan, has been awarded 2 research grants: EIF-PMI Faculty Funding and AESA research grant.



The scientific report of AnjanKumar P.V. during the UTMA Student Conference, about his scientific and experimental works.



EIF-PMI Faculty Research Funding award (PI: Vahan Grigoryan, M.D.).



Participation of AnjanKumar P.V. in experimental works.

- UTMA student M. Kamali - was involved in a research project conducted in L.A.Orbeli Institute of Physiology NAS RA. The research project is in the field of skin tissue engineering, and was awarded ANSEF research grant (PI: Karabekian Z.I., Ph.D., Prof.).
- SSS Member Ashish Ghanesh Bhoir - participation in ESMO International Oncology Conference



The certificate, awarded by European Society of Medical Oncology (ESMO) to UTMA student, SSS member Ashish G. Bhoir, for attending ESMO conference.

- Shogher Harutyunyan (UTMA student, facilitator) - participation in international contest with essay, topic: Relevance of the Effects of Environmental Factors in Oncology (ВЛИЯНИЕ ФАКТОРОВ ОКРУЖАЮЩЕЙ СРЕДЫ НА ОРГАНИЗМ ЧЕЛОВЕКА: ОБЗОР С ТОЧКИ ЗРЕНИЯ ОНКОЛОГИИ).
- SSS member Rohini Zadbuke - Poster, co-authored by R.Zadbuke and the Head of the Department of Science V.Grigoryan, was awarded 2nd place during “Modern Methods of Biovisualization in Physiology and Medicine” international conference, Yerevan.



The poster presentation was awarded 2nd place during Bio-SEE International Bioimaging Conference held in Yerevan.

- Increased activity of students has been noted in terms of applying and participating in local and international scientific projects (including exchange projects, grants, conferences, seminars etc.)



UTMA students, together with the UTMA Head of the Department of Science, during a BIO-SEE Scientific Seminar, Yerevan.

- Students, including SSS members have actively participated and represented the UTMA during the “Education and Career” EXPO, which was held on April 5-7 2023, in LOGOS Expo Center.
- SSS Secretary Samuel Adomah - Represented the UTMA during the 31st IMSC - International Medical Students’ conference, Krakow, Poland.



Samuel Adomah, during the 31st IMSC - International Medical Students’ conference, Krakow, Poland.

- In collaboration with the UTMA Department of Science, student visits to different organizations were held, including: L.A.Orbeli Institute of Physiology, as well as the Armenian Red Cross Society, where the students had the chance to get introduced to the major works carried out in these organizations.



The visit of the UTMA students / SSS members to the Armenian Red Cross Society.

- SSS also actively participated in the organization of UTMA Science Department's "UTMA Open Science" event series, as a part of the Organizing Committee, which included the head of the Department of Science, SSS members and selected facilitators.



Meeting of the Organizing Committee of the "UTMA Open Science" Project. Preparatory works.

During the reporting academic year, the 3rd and 4th Open Science Events were successfully organized, where the SSS played a substantial role.

- 3rd event was held on 2022 October 20. The invited lecturers were Dr. D.Arsenyan and L.Guroghlyan, the founders of QaylTech Company (Armenian manufacturer of rehabilitation equipment). Topic: Modern technologies in rehabilitation.



- On 2023 March 9, the 4th event of the “UTMA Open Science” took place. The invited lectures were from the Armenian Red Cross Society: Dr. Z.Khudoyan (head of the First Aid Department) and G.Hovhannisyan (instructor). This was a scientific-practical masterclass on the topic of First Aid.

- Discussion on Student Research groups.
- Presentations
 - Current status
 - Readiness level. Are they relevant for sending to conferences?
 - Next steps
- Dr. Zara Khudoyan Open Science Event
- Preparation to the event. Announcement and online registration
 - Filming? Registration desk?
 - Preparing questions for the discussion
- SSS members changes.
- Candidates? Agreements.
- Scientific Council meeting
- Z. Tariq and R.Zadbuke participation
- Preparation for Conference in Spring
- Share ideas, brainstorm
 - Decide the topic. Make a plan.
 - Apply for grants.
- Facilitators level of activity.
- How to measure and make more efficient? Comments.

On 23 February 2023, The SSS had a meeting with the head of the Department of Science, where preparation works were discussed and addressed. The meeting agenda is presented.



UTMA SSS, as well as facilitators have actively participated in the works of the organization and coordination of “UTMA Open Science” events. It was actively attended by UTMA students, as well as guests from other universities and organizations. See the official Youtube channel of the UTMA Department of Science (<https://www.youtube.com/@utmascience>) for more details.



Meeting of SSS members with the head of the Department of Science. Topic: monitoring of the status of Student research groups and their activity.

- In cooperation with the department of Science, Yearly Student Conference was organized, under the title “Integrative Medicine, Based on Evidence”, where SSS was a part of the Organizing Committee.



Preparatory works for the “Integrative Medicine, Based on Evidence” UTMA Student Conference. Audition and selection process.

The Conference took place on 25th of May 2023. It had the following directions:

- 1. Bioengineering and Regenerative Medicine,**
- 2. Healthy Lifestyle**

The Agenda of the event is fully presented below:

9:30 - 10:00	REGISTRATION
10:00 - 10:05	Opening Remarks, Vahan S. Grigoryan - Head of the UTMA Department of Science
10:05 - 10:15	"Teamwork and Management in Medicine", Liana A. Vardanyan - Leading Specialist of the Foreign Relations Department
SECTION I - BIOENGINEERING AND REGENERATIVE MEDICINE	
10:15 - 10:40	"Spinal Cord Tissue Engineering", M. Kamali, Ph.D. - Tissue Engineer, UTMA student
10:40 - 11:00	"Peripheral Nerve Tissue Engineering", AnjanKumar PuthanVeettil - UTMA Student
11:00 - 11:20	"Dental stem cells and craniofacial reconstruction", Erfan Aghaei - Head of UTMA Student Council
11:20 - 11:40	"Bioengineering Approaches in Hypovolaemic Shock", Tushar Mathur - UTMA Student
SECTION II - HEALTHY LIFESTYLE	
11:40 - 12:00	"Sports Medicine: Injuries to Cruciate Ligaments of the Knee.", Ali D. Al Jaza - UTMA Student
12:00 - 12:20	"Breast Cancer: Screening and Treatment Modalities", Ziyad J. Tariq - UTMA SSS President

12:20 - 12:40	"Molecular Pathology in Diagnosis of Breast Cancer", Sheba M. Roymon - UTMA Student
12:40 - 13:10	"Health Effects of Smoking", Samuel Adomah - UTMA SSS Secretary
13:10 - 13:30	BREAK
13:30 - 15:00	STUDENT SCIENTIFIC DEBATE
15:00 - 15:15	Scientific Debate Results and Certificate Awarding
15:15 - 15:30	Closing Remarks



- The first SSS project was established - the Debate Club (project author and coordinator: SSS Secretary Adomah S.N. The format and evaluation criteria are innovative and fully developed by the author of the project, considering and combining the experience of world's most successful debate club formats. The first debate was held during the Yearly Conference (see in the Agenda above).



The topic of the Debate was: “Obesity is More of a Risk Factor Than a Disease”. The proponent and opponent views were presented by the students and evaluated by the jury (consisting of UTMA professors and lecturers)



- UTMA SSS has developed and presented its first Startup Idea. The Startup is authored and led by Hamzeh Ghorbani (UTMA student, SSS member). It aims to develop aiding equipment for visually impaired and blind individuals. The startup is named “A-EYES”. By the support of the UTMA Head of the Department of Science, the SSS members have applied to the Sevan Startup Summit 2023, and had a chance to present the Startup and the UTMA during this large-scale international startup event.



Preparatory works for the presentation of H.Ghorbani's "A-EYES" project in Sevan Startup Summit

During this event, the University Startup was presented by SSS secretary Samuel Adomah. The participation allowed not only to network and present the university to the startup community, but also to gain valuable knowledge, skills and experience in the field of science commercialization.



https://www.youtube.com/watch?v=S068luFV_W0



- During the reporting academic year, UTMA student H.Ghorbani had multiple scientific article publications in prestigious international scientific journals.
UTMA student R.Zadbuke has co-authored a scientific Poster during an International scientific conference.

Articles

Hamzeh Ghorbani

1. Hazbeh, O., **Ghorbani, H.**, Molaei, O., Shayanmanesh, M., Lajmorak, S., Rituraj, R., & Bahrami, S. (2022, November). Proposing a New Model for Estimation of Oil Rate Passing Through Wellhead Chokes in an Iranian Heavy Oil Field. In 2022 IEEE 22nd International Symposium on Computational Intelligence and Informatics and 8th IEEE International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics (CINTI-MACRo) (pp. 000037-000044). IEEE.
2. **Ghorbani, H.**, Ghorbani, P., Ghorbani, S., Khlghatyan, N., Babayan, B.G. and Koczy, A.V. (2022), September. A Robust Approach for Estimation of the Bone Age. In 2020 20th Jubilee International Symposium on Intelligent Systems and Informatics (SISY) (pp. 000385-000390). IEEE.
3. Tabasi, S., Tehrani, P.S., Rajabi, M., Wood, D.A., Davoodi, S., **Ghorbani, H.**, Mohamadian, N. and Alvar, M.A., (2022). Optimized machine learning models for natural fractures prediction using conventional well logs. *Fuel*, 326, p.124952.
4. Beheshtian, S., Rajabi, M., Davoodi, S., Wood, D.A., **Ghorbani, H.**, Mohamadian, N., Alvar, M.A. and Band, S.S. (2022). Robust computational approach to determine the safe mud weight window using well-log data from a large gas reservoir. *Marine and Petroleum Geology*, 105772.
5. Jafarizadeh, F., Rajabi, M., Tabasi, S., Seyedkamali, R., Davoodi, S., **Ghorbani, H.**, Alvar, M.A., Radwan, A.E. and Csaba, M. (2022). Data driven models to predict pore pressure using drilling and petrophysical data. *Energy Reports*, 8, 6551-6562.
6. Zhang, G., Davoodi, S., Band, S.S., **Ghorbani, H.**, Mosavi, A., & Moslehpour, M. (2022). A robust approach to pore pressure prediction applying petrophysical log data aided by machine learning techniques. *Energy Reports*, 8, 2233-2247.
7. **Ghorbani, H.**, Abad, A. R. B. (2022). Analysis of geomechanical processes of sand production for productive wells (study of Asmari reservoir in the Ahvaz oil field). *Bulletin of High Technology*, 1 (19), 10-18.
8. Kamali, M. Z., Davoodi, S., **Ghorbani, H.**, Wood, D. A., Mohamadian, N., Lajmorak, S., Rukavishnikov, V.S., Taherizade, F. and Band, S.S. (2022). Permeability prediction of heterogeneous carbonate gas condensate reservoirs applying group method of data handling. *Marine and Petroleum Geology*, 139, 105597.

9. **Ghorbani, H., Asadi, S., Ghorbani, S., Ghorbani, P., Stepanyan, H., Khlghatyan, N., Aghabalyan, D., Bahrami, S. and Rituraj, R. (2023, January).** Investigating the predictive contribution of attitude towards life and belief system on self-resilience and psychological toughness of cancer patients about the mediating role of emotion regulation. In 2023 IEEE 21st World Symposium on Applied Machine Intelligence and Informatics (SAMI) (pp. 000139-000146). IEEE.
10. **Ghorbani, H., Lajmorak, S., Ghorbani, S., Ghorbani, P., Khlghatyan, N., Stepanyan, H., ... & Rituraj, R. (2023, January).** Application of a New Hybrid Machine Learning (Fuzzy-PSO) for Detection of Breast's Tumor. In 2023 IEEE 21st World Symposium on Applied Machine Intelligence and Informatics (SAMI) (pp. 000147-000154). IEEE.
11. Gao, G., Hazbeh, O., Rajabi, M., Tabasi, S., **Ghorbani, H., Seyedkamali, R., Shayanmanesh, M., Radwan, A.E. and Mosavi, A.H., (2023).** Application of GMDH model to predict pore pressure. *Frontiers in Earth Science*, 10, p.1043719.
12. Gao, G., Hazbeh, O., Davoodi, S., Tabasi, S., Rajabi, M., **Ghorbani, H., Radwan, A.E., Csaba, M. and Amir, M., (2023).** Prediction of fracture density in a gas reservoir using robust computational approaches. *Frontiers in Earth Science*, p.1831.

Conference Materials

Rohini Zadbuke

1. Participation in conference, with Poster presentation

E. Ghandilyan, S. Gasparyan, H. Khachatryan, **R.Zadbuke**, V. Grigoryan, "3-Dimensional Bioprinting of Aortic Heart Valves. Assessment of Printability and Cell Viability in Biinks. "Modern Methods of Biovisualization in Physiology and Medicine" Conference, 7-10.Oct.2022

The poster was awarded 2nd place in the international competition

Shogher Harutyunyan

1. Participation in Conference, with presentation

Sh. Harutyunyan, H.Stepanyan. "Small Cell Lung Cancer." 9th republican scientific and practical conference on "Modern Achievements of Young Scientists in Medicine - 2022" organized by the Grodno State Medical University of the Republic of Belarus. 2022



UTMA Student Scientific Society President/

Ziyad Tariq Jamal

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