

## 2023 Call Research Grants for Young Scientists

### Ranking Lists by the scientific fields

#### 1. Natural sciences

N	Project ID	Project Title	Host institution	Final Score
1	YS-23-187	Adjustment of enantiomer migration order in capillary electrophoresis and its effect on analytical method performance	Ivane Javakhishvili Tbilisi State University	26
2	YS-23-131	Electromagnetic pollution background investigation/analysis at the locations of the educational institutions of Tbilisi (Georgia) and assessment related possible risks	Ivane Javakhishvili Tbilisi State University	25
3	YS-23-1927	Oxidation of prochiral sulfides into chiral sulfoxides, including asymmetric synthesis, and enantioseparation of synthesized products in chiral chromatography.	Ivane Javakhishvili Tbilisi State University	25
4	YS-23-996	Risk assessment of invasiveness of non-native aquatic plants and horizon species in Georgian wetlands	Ilia State University	25
5	YS-23-1078	Structural interpretation of central part of the Kura foreland fold-and-thrust belt using seismic profiles, Georgia	Ivane Javakhishvili Tbilisi State University	24
6	YS-23-160	Instability of Solar Spicules	Ilia State University	23
7	YS-23-167	Synthesis and Electromagnetic Properties of Hybrid Polymer Nanocomposites	Ilia Vekua Sukhumi Institute of Physics and Technology	23
8	YS-23-670	Study of the dynamics of some meteorological parameters on the background of the course of dangerous weather events on the territory of Georgia.	Ivane Javakhishvili Tbilisi State University	23
9	YS-23-119	Bronze Age human activity in the territory of Georgia and determination of the role of wheat (Triticum) in the ration based on the phytoliths' study	The Georgian National Museum	22
10	YS-23-297	Complex research/analysis of Kutaisi urban area and creation of digital atlas using GIS technology	Akaki Tsereteli State University	22

11	YS-23-3328	Mixed Boundary Value Problems in an Angular Domain	The University of Georgia	21
12	YS-23-403	Bacteriophages as a Potential Tools for Biocontrol of <i>Listeria monocytogenes</i> in Food Products	G. Eliava Institute of Bacteriophages, Microbiology and Virology	21
13	YS-23-1164	Pseudo and true random number generators for post-quantum digital signature schemes	Caucasus University	21
14	YS-23-133	Basic study of U and Th ore occurrences in the pre-Alpine formations of Khrami crystalline massif (Caucasus)	Ivane Javakhishvili Tbilisi State University	20
15	YS-23-418	Activity Pattern Recognition in Artificial Intelligence	Ivane Javakhishvili Tbilisi State University	20
16	YS-23-3376	Biological activity of bacteria and their viruses under different environmental conditions and stress-induced changes	Ivane Javakhishvili Tbilisi State University	19
17	YS-23-751	Investigation of Some Important Properties for Unranked Theories	Ivane Javakhishvili Tbilisi State University	18
18	YS-23-259	Inhibition of Cancer Cell Proliferation in the CACO-2 Cell Line Using Fluorescent Dye-Sensitized Titanium Dioxide Nanoparticles	Georgian Technical University	18
19	YS-23-147	Convergence and strong summability of Fejer means and T means in Martingale Hardy spaces	The University of Georgia	17
20	YS-23-626	Development of innovative technologies for the valorization of grape wine processing waste to reduce the negative impact on the environment using the principles of a circular economy	Batumi Shota Rustaveli State University	16
21	YS-23-243	New diazole/triazole/coumarin-containing tricyclic systems: synthesis and identification	Georgian Technical University	16
22	YS-23-281	Assessment of colonization with methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) among medical students and determination of antibiotic and phage sensitivity of collected bacterial isolates.	G. Eliava Institute of Bacteriophages, Microbiology and Virology	16
23	YS-23-263	Elaboration of high energetic plastic explosives on the base of utilized gunpowder and investigation of their characteristics	LEPL G.Tsulukidze Mining Institute	15
24	YS-23-581	Development of innovative technologies for the valorization of citrus fruit processing waste to	Batumi Shota Rustaveli State University	15

		reduce the negative impact on the environment using the principles of a circular economy		
25	YS-23-2669	Applications of Optimal Transport in WRF model	Ivane Javakhishvili Tbilisi State University	15
26	YS-23-1611	Threats and countermeasures caused by mudflow risks on engineering solutions	ECOCENTER FOR ENVIRONMENTAL PROTECTION	14
27	YS-23-1071	A study of the energy potential and reporting characteristics of mudslide formation	ECOCENTER FOR ENVIRONMENTAL PROTECTION	12
28	YS-23-166	Study of the activity of complex liposomes containing Calcium ions on model systems of animal cells	Ivane Javakhishvili Tbilisi State University	11

## 2. Engineering and Technologies

N	Project ID	Project Title	Host institution	Final Score
1	YS-23-267	Study of the possibility of using Georgian kaolinized clays in the production of cement and refractory ceramic materials	Ivane Javakhishvili Tbilisi State University	25
2	YS-23-511	Preparation of nanomagnetite stabilized with biocompatible modifiers for use in the biomedical field	Georgian Technical University	24
3	YS-23-2182	Obtaining and Investigation of Ceramic Composite Materials Reinforced with Basalt Fibers	Ilia Vekua Sukhumi Institute of Physics and Technology	24
4	YS-23-796	A New Method for Calculating Composite Spatial Constructions, Algorithm and Software	Georgian Aviation University	23
5	YS-23-098	Development of the innovative technology of a new combined system to solve the problems of water supply in the settlements of the arid zone of Georgia.	Georgian Technical University	22
6	YS-23-543	Synthesis, characterization, and in vitro study of antitumor drug-loaded/superparamagnetic iron oxide nanocarriers on human triple-negative breast cancer cells	Georgian Technical University	20

7	YS-23-476	Development of rational technology of gold-bearing ores based on statistical modeling	LEPL G.Tsulukidze Mining Institute	19
8	YS-23-452	Obtaining new armor composite materials and researching their properties	Georgian Technical University	19
9	YS-23-514	Modern methods of numerical solution of problems of dynamic loading of solid bodies with shock waves	LEPL G.Tsulukidze Mining Institute	19
10	YS-23-3538	Tl-based high-temperature superconductor materials obtained by a vapor diffusion process	Ilia Vekua Sukhumi Institute of Physics and Technology	17
11	YS-23-371	Biotechnological Approach for Soil Remediation in Georgia	Ivane Javakhishvili Tbilisi State University	17
12	YS-23-633	Recommendations for the introduction of seismic isolation systems for the protection of buildings against earthquakes in Georgia and deterministic prediction of damage levels	Georgian Technical University	16
13	YS-23-1582	The risks of landscape infrastructure sustainability and protection against natural anomalies	ECOCENTER FOR ENVIRONMENTAL PROTECTION	16

### 3. Medical and health sciences

N	Project ID	Project Title	Host institution	Final Score
1	YS-23-1171	Rare and complex epilepsies – correlation between etiology and outcome	David Tvildiani Medical University	26
2	YS-23-2459	Evaluation of plasma circulating p28 / gankirin and micro-RNA markers in the diagnosis of renal cell carcinoma and its recurrence	Ivane Javakhishvili Tbilisi State University	24
3	YS-23-4243	Formulation and development of bioadhesive nanocomposite gel and film for treatment of stomatitis	Tbilisi State Medical University	23
4	YS-23-1748	Creating new pulp of the tooth using bioengineering methods and determining its effectiveness in an animal experiment	Ivane Javakhishvili Tbilisi State University	22
5	YS-23-2589	Correlation of epigenetic changes and hormone dependence in neoplastic processes of endometrium	Tbilisi State Medical University	20

6	YS-23-1860	An improved QPA method for molecular diagnostics	Ilia State University	20
7	YS-23-771	Evaluation of the impact of interdisciplinary team work on the oral health of patients with autism spectrum disorder	The University of Georgia	20
8	YS-23-559	Detection and quantitative analysis of TP53 gene methylation using Au nanoparticles	P.Shotadze Tbilisi Medical Academy	18

#### 4. Agricultural sciences

N	Project ID	Project Title	Host institution	Final Score
1	YS-23-453	Isolation and NGS based characterization of biologically active antagonistic microorganisms from different ecological environments against phytopathogenic bacteria	Batumi Shota Rustaveli State University	23
2	YS-23-779	Creating a predictable model of natural restoration for subalpine birch forest	Scientific-Research Centre of Agriculture	22
3	YS-23-2825	Molecular-Genetic analysis of the Alternaria genus, common in the family Solanaceae crop	Batumi Shota Rustaveli State University	21
4	YS-23-1749	Using of Innovation Methods for Protection Reclamation Objects from Floods (on the example of Dusheti Municipality)	ECOCENTER FOR ENVIRONMENTAL PROTECTION	18
5	YS-23-3152	Research on the effectiveness of the innovative drainage system and the study of the quality of drained water in the wetlands of Western Georgia	ECOCENTER FOR ENVIRONMENTAL PROTECTION	15
6	YS-23-102	Identification of rare, autochthonous and economically promising apple and pear varieties common in Adjara, study of the chemical characteristics of the fruit and its conservation	Batumi Shota Rustaveli State University	15

## 5. Social sciences

N	Project ID	Project Title	Host institution	Final Score
1	YS-23-691	Dynamics of Interconnected Crises in the South Caucasus: Magnetism to tourism amid political (in)stability	Ivane Javakhishvili Tbilisi State University	26
2	YS-23-900	Palliative care practices in Georgia: at the crossroads of sociocultural, theological and scientific perspectives	Ilia State University	24
3	YS-23-869	Participation of Ordinary Courts in the Protection of Constitutional Legality: Constitutional Submission as a Mechanism for the Protection of the Human Rights and the Perspective of its Development	Ivane Javakhishvili Tbilisi State University	24
4	YS-23-3460	Balancing Privacy and Progress: Personal Data Protection in the Age of Artificial Intelligence	Ivane Javakhishvili Tbilisi State University	23
5	YS-23-664	Conformity of Legal Regulation and the Georgian Court Practice for the Prohibition of Labor Discrimination due to Political or other Opinions in the Context of Harmonization with EU Law	Sulkhan-Saba Orbeliani University	22
6	YS-23-1191	Ways to Improve Municipal Financial Management in Georgia	Georgian Technical University	21
7	YS-23-1443	Relationship between environmental information disclosure in management reports and company performance in developing economy – case of Georgia	Caucasus University	20
8	YS-23-657	Assessment of the quality of research and its challenges at master's level (Example of Georgia)	International Black Sea University, LLC	20
9	YS-23-1503	Institutional Arrangement of Professional Trainings of Judicial Candidates and Judges as a Prerequisite for an Independent and Effective Justice	Alte University	20
10	YS-23-1266	Unraveling Sensory Disturbances in Comorbid Eating Disorders and Autism: A Path to Innovative Digital Interventions	Free University of Tbilisi	19
11	YS-23-380	The Process of Digital Transformation and Its Impact on Education Quality Assurance in Higher Educational Institutions of Georgia	TSU Center for Analysis and Forecasting	18

12	YS-23-1999	A Systematic Review of Psychological Determinants Impacting Student Attrition in Higher Education	Ivane Javakhishvili Tbilisi State University	17
13	YS-23-2496	Impact of tax cooperation with the European Union on investments and fair competition.	Batumi Shota Rustaveli State University	16
14	YS-23-094	Language Phenotypes in Children with Autism Spectrum Disorder and Developmental Language Disorder: A Systematic Review of Empirical Evidence.	Ivane Javakhishvili Tbilisi State University	13
15	YS-23-4178	From Research to Teaching Development – in the Context of the Europeanization of Georgian Law	Caucasus University	10

## 6. Humanities

N	Project ID	Project Title	Host institution	Final Score
1	YS-23-447	Theological Doctrine of the Iberian Church from the Fourth to the Seventh Centuries	Caucasus University	27
2	YS-23-1190	The Therapy of Mind and the Power of the Therapeutic Word in Ancient Greece	Ivane Javakhishvili Tbilisi State University	26
3	YS-23-320	Arbitrary Beliefs and the Demands of Rationality	Ilia State University	24
4	YS-23-697	Persian manuscripts copied in Tbilisi: historical, source-studies and codicological studies	Korneli Kekelidze Georgian National Centre of Manuscripts	24
5	YS-23-1201	From the history of bilingual lexicography of the 18th century (the first Italian-Georgian dictionary of medicinal plants)	Ilia State University	24
6	YS-23-327	Phenomenologically Grounded Qualitative Research of Pre-Reflective Bodily Experience in Disability Team Sports	Ivane Javakhishvili Tbilisi State University	23
7	YS-23-4170	Georgian Diaspora - A study of Metaphorical Models among Georgian transnational communities	Ivane Javakhishvili Tbilisi State University	22
8	YS-23-209	Issues of Cultural Diversity and Policy of Ethnoculture (on the example of the collections of Niko Berdzenishvili Kutaisi State Historical Museum)	Kutaisi State N. Berdzenishvili Historical Museum	22

9	YS-23-222	Transference of Aphorisms from “The Knight in the Panther’s Skin” in Russian Translations: A Comparative Analysis	Batumi Shota Rustaveli State University	22
10	YS-23-437	Corpus Linguistic and Linguoculturological Analysis of Turkish and Azerbaijani Translations of "The Knight in the Panther’s Skin"	Batumi Shota Rustaveli State University	21
11	YS-23-1134	Iranian non-ferrous metal objects in the National Museum of Georgia	The Georgian National Museum	19
12	YS-23-111	The creative relationship between prominent representatives of calligraphers of the Middle Ages - Alexi Meskhishvili, Archpriest of Anchiskhati church, and Nikoloz Mikadze, Archpriest of Sion church in Tbilisi.	Korneli Kekelidze Georgian National Centre of Manuscripts	17
13	YS-23-1680	Political Discourse in Irish Modernist and Post-Modernist Literature (James Joyce, Flann O’Brien, Frank McGuinness)	Ivane Javakhishvili Tbilisi State University	17
14	YS-23-358	Patristic exegesis of Biblical Old Testament Theophanies	N(N)LE Tbilisi Theological Academy and Seminary of the Apostolic Autocephalous Orthodox Church of Georgia	16
15	YS-23-110	New AMS dates and absolute chronology of South-Western Georgia	Batumi Shota Rustaveli State University	16
16	YS-23-3986	Heidegger and the question of philosophy (According to the private notebooks of 1936-1944)	Ivane Javakhishvili Tbilisi State University	15
17	YS-23-101	Unique Prophetic Actions in the Contemporary International Context	Korneli Kekelidze Georgian National Centre of Manuscripts	15
18	YS-23-927	The Soviet and post-Soviet era in the eyes of the Georgina literature of the 21st century	Ivane Javakhishvili Tbilisi State University	14
19	YS-23-2888	The relationship between cinema and literature in the Georgian Soviet press (comparative analysis)	Ivane Javakhishvili Tbilisi State University	13



20	YS-23-1102	Intercultural Communication Between Georgian and Foreign Students: Intercultural Incidents, Problems and Challenges (the Case of Georgian Universities)	Ivane Javakhishvili Tbilisi State University	12
21	YS-23-1705	Religious-denominational problems in Georgia (Catholicism XX century)	N(N)LE Tbilisi Theological Academy and Seminary of the Apostolic Autocephalous Orthodox Church of Georgia	12
22	YS-23-527	Georgian ethny after the Collapse Kingdom of Georgia (15th-17th centuries): common memory, myths, symbols and sense of common destiny	Ivane Javakhishvili Tbilisi State University	9

## 7. Georgian studies

N	Project ID	Project Title	Host institution	Final Score
1	YS-23-157	Nunneries and nuns in medieval Georgia (works of historical and source studies)	Korneli Kekelidze Georgian National Centre of Manuscripts	24
2	YS-23-639	Mountainous Colchis (Lechkhumi): Its importance in the development of metallurgy in the ancient world	Tsageri Historical Museum	24
3	YS-23-1753	Wine Tourism Development Through Sensory Wine Marketing and Guest Experience Creation	Ilia State University	24
4	YS-23-1647	Commercialization, dedication to the profession and environmental uncertainty: Georgian auditors' perspective	Caucasus University	24
5	YS-23-840	Agricultural Activity in the Territory of Kvemo Kartli 8000 years ago according to Millstones from the Arukhlo I Neolithic Settlement	The Georgian National Museum	24
6	YS-23-878	The Use of Solar Energy In Georgia's Real Estate Market	Georgian Technical University	20

7	YS-23-106	References of Arab geographers of the IX-X centuries about the Caucasus and Georgia	Ivane Javakhishvili Tbilisi State University	19
8	YS-23-928	Investigation of radon radioactive emission in Tbilisi subway stations	Ivane Javakhishvili Tbilisi State University	17