

Temporary Survey Results as of Jan10, 2021

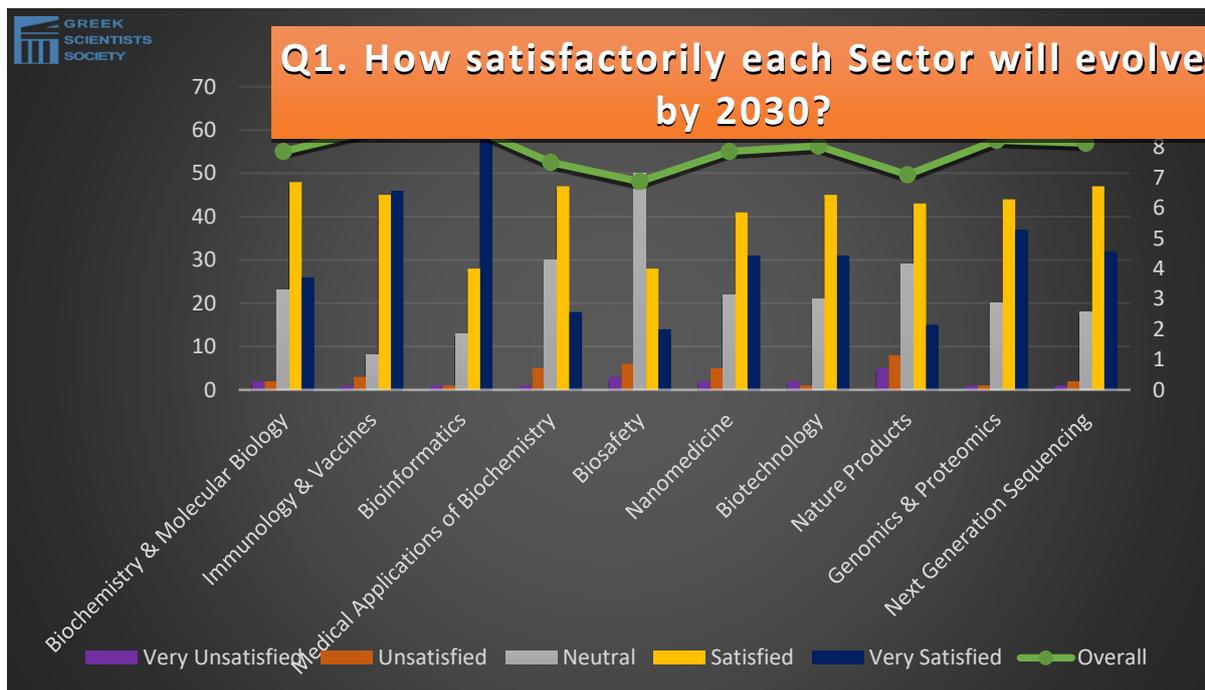
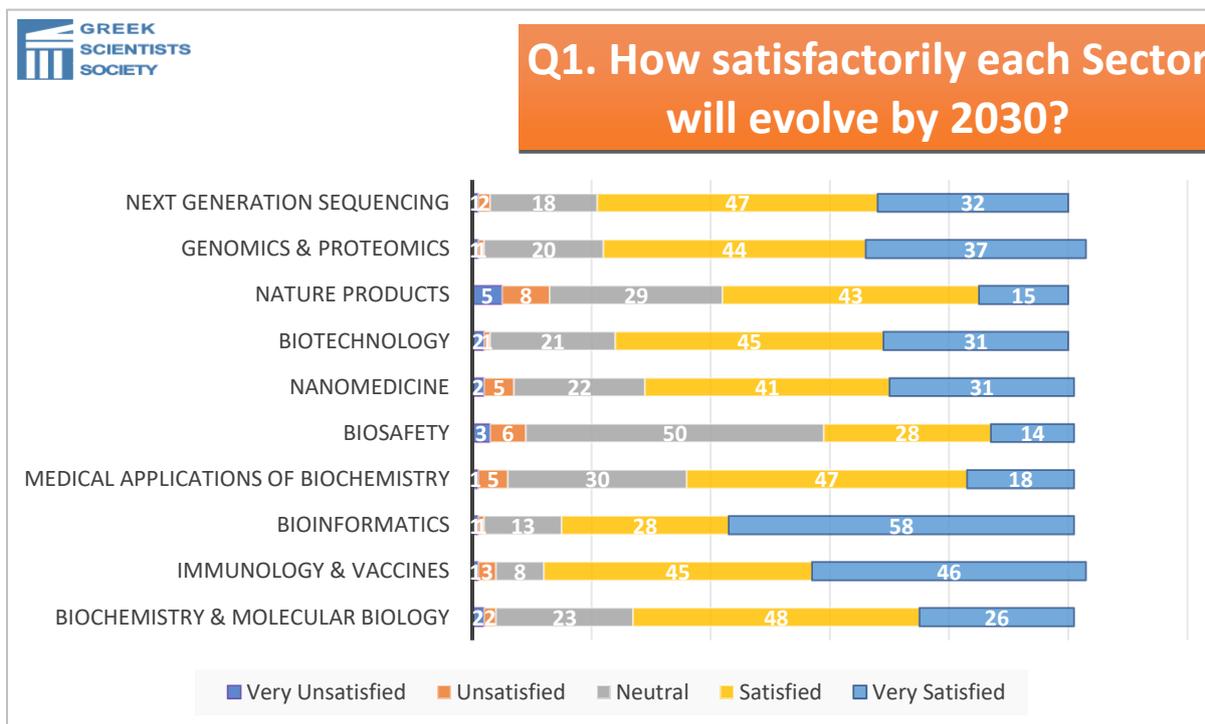
(no of Q.: 106)

Top Trends in the Biomedical Sector & which ones Greece & Cyprus should focus on

Help us strengthen the Hellenic Biomed Network

Q1. How satisfactorily each Sector will evolve by 2030?

	Very Un-satisfied	Unsatis-fied	Neutral	Satisfied	Very Sat-ified	Overall
Bioinformatics	1	1	13	28	58	8.79
Immunology & Vaccines	1	3	8	45	46	8.56
Precision Medicine <i>*from 12/12/20</i>	2	3	8	26	38	8.47
Genomics & Proteomics	1	1	20	44	37	8.23
Next Generation Sequencing	1	2	18	47	32	8.14
Biotechnology	2	1	21	45	31	8.04
Biochemistry & Molecular Biology	2	2	23	48	26	7.86
Nanomedicine	2	5	22	41	31	7.86
Medical Applications of Biochemistry	1	5	30	47	18	7.50
Nature Products	5	8	29	43	15	7.10
Biosafety	3	6	50	28	14	6.87
	21	37	242	442	346	
	1.93%	3.40%	22.24%	40.63%	31.80%	



You may add your own Sectors: [accepted](#)

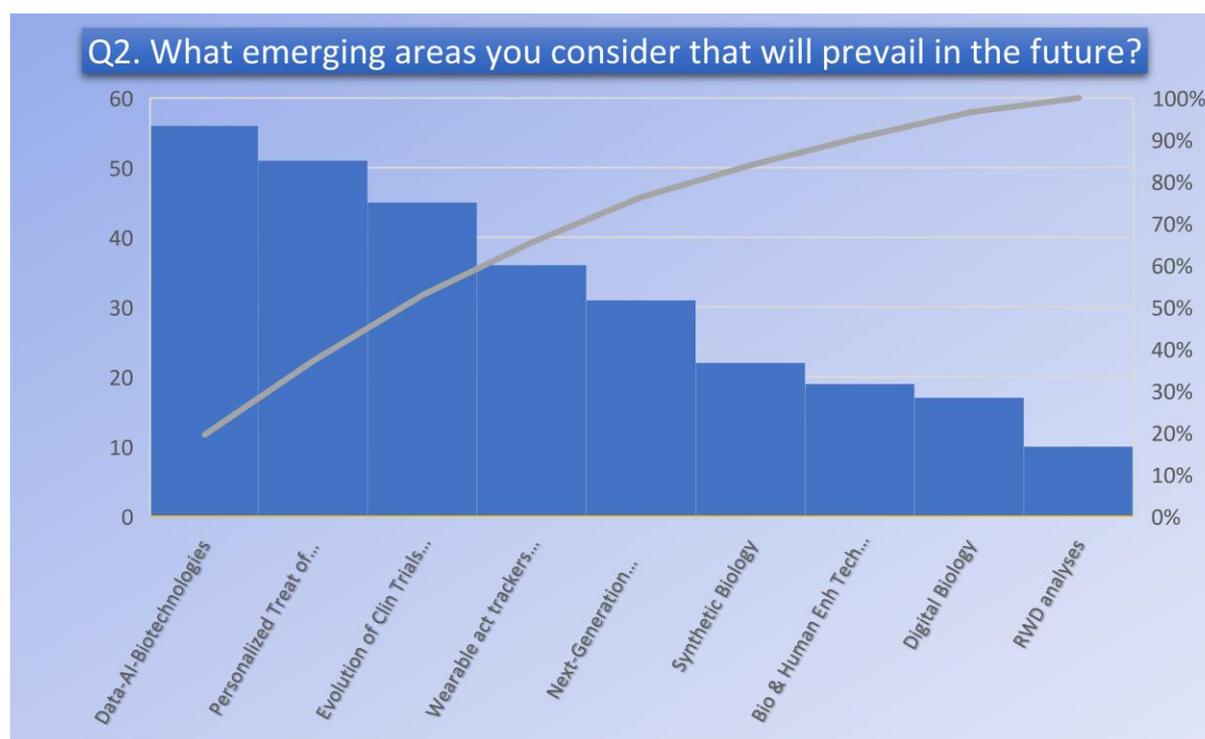
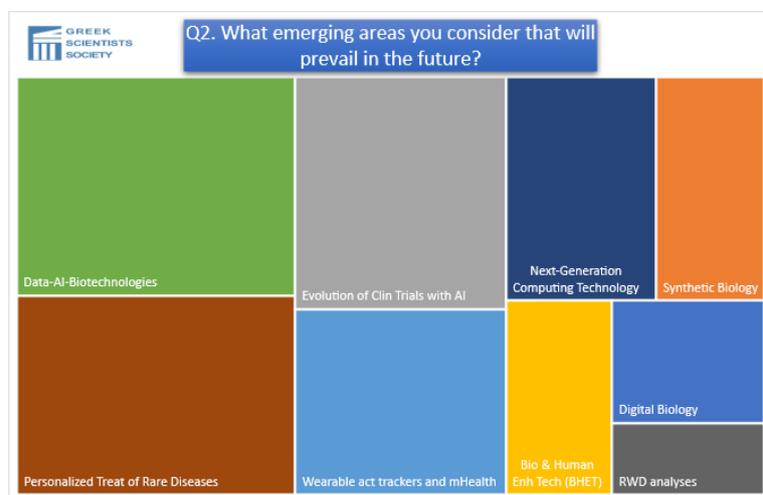
Advanced stem cell technologies, [Precision medicine](#), Medicinal Chemistry, Nature Products, Pathology, Virology, microbiology, [Gene Therapy](#), Structural Biology, Robotics, Cell Therapy, Food biorefineries, "Environmental Sustainability within the Biomedical Sciences Sector, along the lines AstraZeneca operates, Artificial Intelligence in conjunction with Biomedical

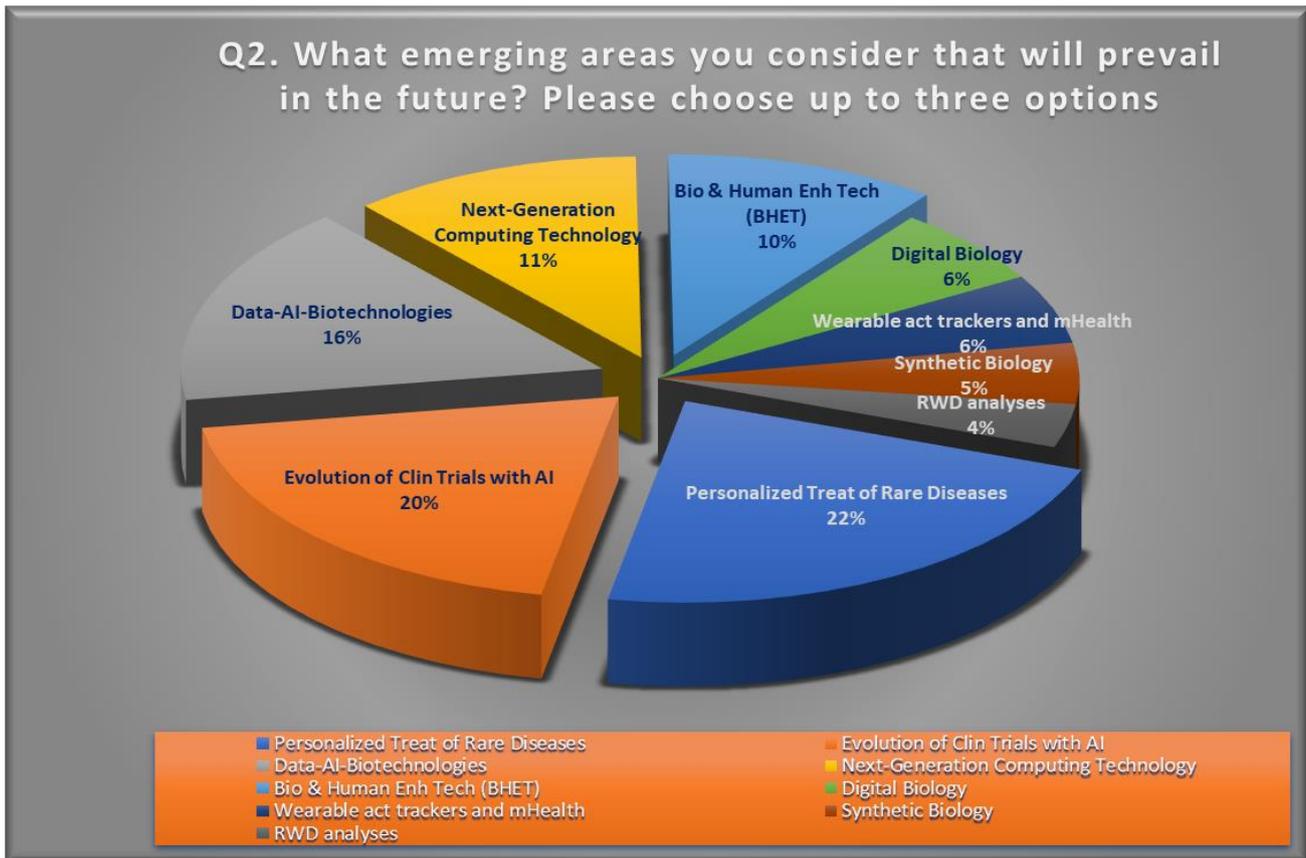
Sciences, Healthcare Solutions, Diagnostics & Therapeutics Approaches", "Telemedicine, Homehealthcare", Neuroscience, "metabolomics, foodomics", "Medical Devices, Digital Healthcare", "Metabolomics, Network/Systems Biology", **Biochemistry and molecular biology**, Resuscitation of the the acutely unwell patient, "Nutrigenetics, Precision Nutrition", Neuroscience, "Point of care medicine, Digital Transformation in Healthcare", "Biomedical Imaging, Health Information, Systems/Interoperability", "Molecular Diagnostics, Epigenetics, RNA biology", Bioethics

Q2. What emerging areas you consider that will prevail in the future? Please choose up to three options

Data-AI-Biotechnologies	56	19.51%
Personalized Treat of Rare Diseases	51	17.77%
Evolution of Clin Trials with AI	45	15.68%
Wearable act trackers and mHealth	36	12.54%
Next-Generation Computing Technology	31	10.80%
Synthetic Biology	22	7.67%
Bio & Human Enh Tech (BHET)	19	6.62%
Digital Biology	17	5.92%
RWD analyses	10	3.48%

287



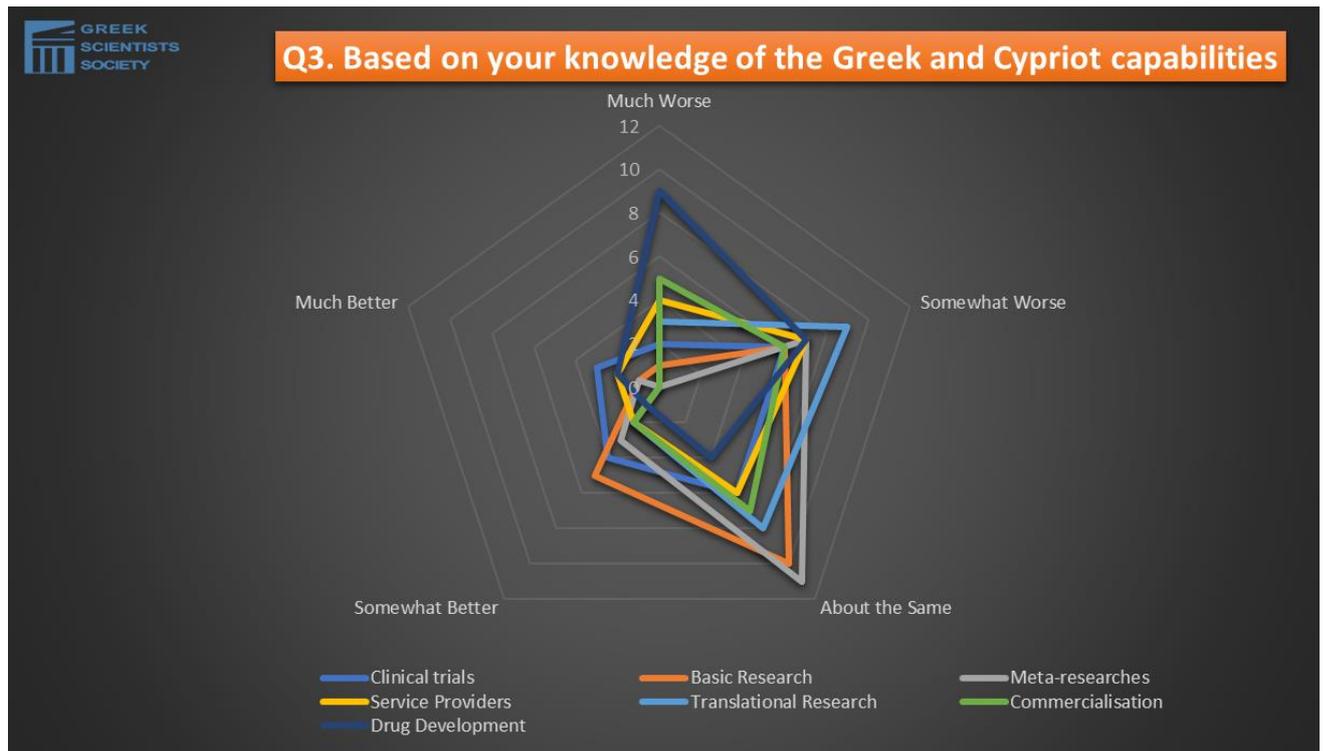


You may add your own Sectors *20/12/2020

Structural based drug design, Food waste biorefining, "personalised nutrition, agrifood", Blockchain technology

Q3. Based on your knowledge of the Greek and Cypriot capabilities vis-à-vis the International environment, how would rate

for	Much Worse	Somewhat Worse	About the Same	Somewhat Better	Much Better	Don't Know	Overall
Basic Research	7	14	40	29	8	3	5.65
Meta-researches	3	13	38	23	6	14	5.61
Clinical trials	7	14	28	23	13	14	5.51
Service Providers	6	15	22	30	15	13	5.25
Translational Research	5	7	32	30	16	9	5.00
Commercialisation	3	12	26	26	20	14	4.90
Drug Development	4	15	22	25	28	7	4.77
	35	90	208	186	106	74	



You may add your own Sectors *20/12/2020

Personalized Biomedicine, Biomedical Imaging

If you had the chance to design the policies and take the decisions for the Greek Research Community (applied in Greece, Cyprus, and the Diaspora), which actions - in bullet points - will you pursue?

Cooperation and interconnection of all research centers and university institutions
Cooperation of research centers and universities with private sector bodies
Elimination of bureaucracy

Meritocracy
Funding new ideas
Funding young researchers
Create a non-political science environment
Equal advancement environment to women scientists

Change the status of the Universities and Research Centers in Greece
Enhance the synergies of SMEs with public and private universities to design and develop final products with high added value

-Simplifying startup process for clinical trials to make more competitive
-more R&D in drug development

-centralize and organise existing research to align efforts on different projects
-further enhance funding to make research more appealing

Drug development, bioinformatics, machine learning

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1. Cultivate and prioritize native talent.
 2. Repatriate lost talent.
-

-Focus on Synthetic Biology

- * Focus on good minds, not the people we know
 - * Search for good practices abroad in order to guide the research in our countries
 - * Take advice from Greek research community living abroad
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- * Focus on interdisciplinary research
 - * The creation of centers of excellence in conducting research
 - * Opportunities for international recruitment of scientists and international collaboration
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Collaboration between Greek researches and utilization of Greek scientists with International positions and influence.

Find the best and bring them back

Make new infrastructures (research centers)

Provide enough sources for the development of smart research

Smart research means to work in collaboration with big industries or Universities that they provide the basic research and we provide specialty.

- Intellectual property rights management
 - incentives for research with universities
 - legislation framework
 - benchmarking against other countries
-

Improve Biosafety

Increase resources

Motility, seed grants, consortia

Priorities, as follows:

Creation and Implementation of a National Biomedical Science Policy

Definition of what is needed to support the emergence of scientific breakthroughs in Greece (from within Greek research centers) - rather than incremental advances in specific areas

Designate research (basic/translational/clinical) Center of Excellence (CoEs)

Create independent (non-Governmental) bodies for scientific/clinical research advice and project evaluation (at the macro level) to support policymaking and relevant decision-making

Create and promulgate criteria for meritocracy in the various tactics (committees, etc.) to support the policies

Deep knowledge of the challenges and opportunities in the specific environment in Greece/Cyprus as relevant to policy-making

Ensure adequate and secure/stable funding for the endeavor and associated projects

Recommend a mixture of sources of stakeholders: academics, applied scientists, clinicians, industry, commercial/corporate leaders, etc.

--> attract private, life science investors

--> adopt projects bringing immediate positive impact to the local society

--> cultivate spirit of teaming, organization, planning and follow-up

Gene therapy

Cell therapy

Hospital exemption

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1. Support from private funding
 2. Increase the wage of post-doctoral fellows to facilitate their decision for repatriation if desired.
 3. Facilitate the spinning off of start-ups from Greek and Cypriot academic institutes.
 4. Enhance the collaboration on the interface of academia and industry.
 5. Boost the funding of universities to allow for strong technical training of the students.
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There is far too much basic research being done but going nowhere. Set up national centers for HTS e.g. for antivirals, cancer lines or other indications to assess compounds made in academia and suggest to follow on the generated hits

Allocate research funds accordingly rather than horizontally on "academic" criteria and disregard for idea maturity, "game changing" perspectives and probability of success.

-Connection of University Research with Industry

- Creation of clinical research networks in major university hospitals
 - Simplification, acceleration and facilitation of IRB approvals in clinical trials that would allow easy and fast recruitment of subjects
-

I think that the society could act as mentor or inbetween to find collaborators

offer realistic and strong motives such as

- a. very good income
 - b. very good career perspectives
 - c. very good opportunities for funding and project development
-

- promoting research programs related to the country's wealth
 - connection to the market
 - higher funds
 - strengthening the initiative of young researchers
 - exchanges of students and professors between Greece, Cyprus, and other international centers and transfer of knowledge
 - ensuring the continuity of projects
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1. Where is the public health budget for these countries mostly spent
 2. What are the genetic diseases prevailing in these countries
 3. How could the above two elements be combined within the existing pharmaceutical industry in Greece and Cyprus.
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Ban political youth parties in state university properties.

Ban hereditary academic promotions.

Implement global independent assessment of our academics.

Require all academics to be physically present on campus 75% of their time (unless on sabbatical).

Eliminate secretarial positions in favor of research positions (who needs dictation?).

Make pay related to performance.

Make lab space related to performance.

Provide support to the Greek Research Community that will facilitate performing competitive research including:

- mapping of research infrastructures and avoid overlapping by making the most of the available resources
 - ensure that service contracts are in place for all operational infrastructures including routine laboratory equipment
 - employing staff scientists and research technicians that would support the Researchers and provide services to internal/external users
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- providing administrative support
 - installing liaison offices/technology transfer offices for disseminating the researchers' results to key stakeholders securing IPRs
 - giving fellowships (salary and consumables) to young scientists and enough incentives to follow a career in research

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- increase funding to basic research. This will include the expansion of graduate and post-graduate programs to secure stipends, and well funded laboratories.
 - develop infrastructures for translational-medicine research, by supporting bio-start-up companies. This can be achieved by the highly developed computer sciences to transition outputs from AI development.
 - Expansion of both public and private granting agencies within Greece, that can be coupled or paired with EU- or International-based grants.
 - Greece should take it cues from what Israel has done with their biomedical polices and replicate it. Greece really needs something like a Weitzman Institute, with Public/Private research hubs created in Athens, Thessaloniki, Patras, and Herakleion.

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- RWD analysis
 - R&D using machine learning

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- * Severe increase in funding of Academic programs & research
 - * Develop a Concentrated Biotech Support Cluster Area near largest academic research centers
 - * Strengthen IP protections and improve IP registration processes
 - * Create business support structure for startups from Academic Spin-offs

Investing hard on developing and establishing a true Silicon Valley for our scientists living home and abroad, interlinked with our Universities and Greek companies and investors.

In parallel, funding new manufacturing capabilities/infrastructure and evolve the industrial sector.

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- * Focus on results based research
 - * Incentives for International Patent filling and exploitation

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- ∅ funding should be purely based on scholarly record
 - ∅ politically-driven funding should be better distributed
 - ∅ scientifically-driven funding should be strictly based on merit
 - ∅ grant application reviews should be done by international panels

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1. redesign European framework Money distribution
 2. Avoid current ministerial ankylosis

Feedback to GSS

1. Create startup & innovation & patent zones in the likes of Singapore or Tel Aviv
2. Create incentive to diaspora Greeks to invest and Actively participate in synergies with homeland counterparts with minimum bureaucracy

Support the entrepreneurial scientists with the tools and the incentives to help create innovative start-ups in the research sector. The Greek community comprises of a large number of very intelligent scientists around the globe which excel outside Greece and Cyprus only because they can utilise the supportive environment in their research which doesn't exist yet in Greece and Cyprus. However, Greece and Cyprus can benefit hugely from future income for the countries derived from Intellectual Property much like the US, the U.K. and other countries have shown. This is a sector where value is based on intellectual capital and does not require capital intensive facilities such as manufacturing so can easily be taken advantage of.

Environmental consciousness
Food waste valorisation
Bioproducts, high value added products
Biorefineries
Research on evolution of nanotechnological applications
Technological optimization
Green chemistry methods

- Increase of %GDP devoted to Biomedical Research
- Increase of salaries for Scientific Researchers
- Realistic matching of purpose-built expectations within Higher Education Incentives & societal needs

- Creation of Registry / Platform for interdisciplinary networking (research groups noting their capacity and asking for specific expertise to connect with).
 - potential small grants/bursaries for young scientists.
 - Interdisciplinary conferences - overlapping interests, bringing together different fields.
-

Focus limited resources to specialize in one or two emerging areas

Cost effectiveness control in all programs

- 1) secure research funding based on 10-20 years plan. It should be accepted by all parties. A constant percentage of country's annual budget would be a good idea.
 - 2) General secretary of research and development should not be a political position.
 - 3) it is important to organize the research into fields and based on the needs of each of them (eg infrastructure, consumables, traveling) secure funding.
 - 4) facilitate better interconnection between industry and universities.
 - 5) government should try to bring biotechnology and pharmaceutical companies to university cities of Greece periphery. 10-year taxation plan and help for the bureaucracy for their startup. It's a good idea.
-

significantly increase funding for basic research

Agrifood area: capitalise on biodiversity and the length of the sea front. try to reverse the problem of small size of farms and fields and small size of annual production by moving toward high value certified products highlighting the value and uniqueness.

- Provide good infrastructure
 - Support spin-off companies
 - Organize trainings about patent regulations, regulatory affairs, GMP, international and EU funding, scientific communication
 - Support interdisciplinary collaboration
 - Support collaboration between university, research institutes, clinics and pharmaceutical industry
 - Recruit international scientists
 - Intensify STEM in school
-

Reduce bureaucracy, taxation. Add incentives, simplify business initiation.

Leverage universities for starting biotech companies

Simplify tech transfer

Invest

Attract investors with incentives

Leverage low cost of Greece to start CROs.

Systematic funding

Meritocratic funding

Development of national big infrastructures and facilities in which participation is based on merit and knowledge of the subject

Connection with European and international infrastructures

Administration processes aligned to the needs of the research projects

Supporting the value of the Greek research community to the general public

- Exposure of Greek and Cypriot research to scientific communities abroad

E.g Visits to top International Universities to make the research conducted within our countries known

- Close communication with the Government and other authorities such as banks as well as industries to provide more funding to scientists as a lot of us have to be away from our families to be able to pursue our dream. Research funding in Greece and Cyprus is ridiculously low.

- it would be better if international boards could decide which scientists could gain each grant as Greece and Cyprus suffer from subjective decisions

- Design so that there is always ways for Research to be commercialized through entrepreneurship or other options, for example better pipelines for spin-outs and incentives to spin-out of university

1. Better funding

2. Networking with industry

- Increase total budget in a regular basis for infrastructure investments, researcher employment and consumables. Impose evaluation of research programmes from randomly selected peer researchers abroad and ensure secrecy and validity of the procedures.

- Impose external quality checks from abroad and link to funding, for every research group. Reduce number of labs where needed.

- Forbid unpaid PhD and Post Doc positions, and make open calls linked to specific projects obligatory. Greece has fakenly demonstrated the highest numbers of PhD students without any real value.

- Reduce taxes to research-related equipment and consumables as low as possible (eg 6%).

- Permit research organisations to directly buy and prepay for research equipment and consumables from the supplier, avoiding local representatives.

Focus on AI driven drug development

Focus on digitally/AI enable precision/translational medicine

Contract manufacturing capacity for gene therapies

Create stronger links between research and industry

- Involve as many experienced members of the Diaspora as possible

- Partner with Pharmaceutical companies

Focus on :

1) new digital technologies

2) precision medicine

-funding

-definition of common ground

-application for the general public

-
1. Enhance basic research
 2. Remove taxes withholdings on grants gained by researchers
 3. Encourage entrepreneurship
 4. Shuffle research administrations often
-

- Create clusters of excellence for Biomed fields inviting well known greek-cypriot researchers
 - Establishing industry (globally)-academia partnerships with commercialization focus
 - Focusing on areas where economy of scale is not a must, and in accordance with the current strategic goals of EU (e.g. green deal, digitalization of healthcare etc.)
 - Create a framework where greek scientists will get an experience in industry, preferable abroad, for a reasonable time.
 - Create scientific boards in which members have international experience either in industry or in academia with proven excellence
 - Establishing an independent agent to supervise research activities
 - Create a national research fund where young researchers (<40y), international experience should be a must, could establish research groups in Greece for a duration of 5 years, and a budget of 3-5M euros, focusing on cutting-edge technologies.
 - Academic staff in greek universities need to have at least 4 years experience from international environment.
 - Including BA and Innovation Management courses in all the STEM related programs in all the greek universities.
-

- eliminate corruption
 - eliminate nepotism
-

(my points are related to medical imaging/cardiac imaging and clinical research):

- standardize imaging protocols so that all patients being imaged undergo the same/similar examinations (of course understanding variation based on each specific disease state)
 - standardize measurements and reporting
 - develop database for entering imaging-derived measurements and data
 - develop database for entering additional demographic, clinical, outcomes data for the patients
 - encourage cross-collaboration and sharing of data among different practices/hospitals
 - engage medical students, residents, fellows in creation and maintenance/update of these databases.
 - have it as a prerequisite for graduation for students/trainees to publish at least one manuscript of original research (could use data from above databases)
 - create a platform for connecting Greek/Cypriot researchers across the world, where we could share our project and exchange ideas
-
- Research Funding
 - Jobs in academic and research institutes
 - Interconnection of academic and research institutes
 - Interconnection of academic and research institutes with private sector
 - PhD and Post-Doc fellowships
 - Patent application office
 - Grant writing advisor
 - Technology transfer/Commercialization advisor
-

Is there anything you would avoid?

Reshuffling finds and divide them to the same scientists for the last 25 years without quality assessment

-involving Greek bureaucracy

Commercialization

1. Importation of foreign talent.

-Avoid Beaucrocity

Politics

Unfair inclination for or against one candidate during hiring to fill a leading position.

Letting the leadership of Research institutes to people who neither have the proper skillset nor the knowledge to be there.

- beaucrocity process

- Greek only decisions without foreign partner involvement

Bureaucracy

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Create and promulgate criteria for meritocracy in the various tactics (committees, etc.) to support the policies

Deep knowledge of the challenges and opportunities in the specific environment in Greece/Cyprus as relevant to policy-making

Ensure adequate and secure/stable funding for the endeavor and associated projects

Recommend a mixture of sources of stakeholders: academics, applied scientists, clinicians, industry, commercial/corporate leaders, etc.

Upgrade both academic and research organizations (NHRF)

--> politics

Market access

Reimbursement

Lack of transparency in the reviewing process. Should be done as in peer reviewed articles with scientific justification and rigor including the opportunity for rebuttal.

Improve quality of PhD programs in Greece

Stricter criteria for entrance to academia

Public funding of research programs

Governmental and public sector bureaucracy in science, trials, etc.

Lack of transparency and to leave any room for doubts on meritocracy

Short term thinking.

Accepting freshmen in with an "F" mark in their entrance exams.
Creating and sustaining multiple old-school subpar sciences.
Creating and sustaining rural universities without merit.
Promising to accept 90% of yearly student applicants, when the economy can not absorb.
Reduce grant plundering (as published in local press)

- converting the Greek Research Community to Managers of Research
- spending quality time of Researchers to routine administrative work instead of brainstorming for addressing specific challenges
- discouraging young scientists working in the field due to the feeling of insecure working environment that the present conditions offer.

RCT in established areas

Anything far removed from translational research

Avoid offering "privileges" to very big private/public funds and not involved in stock market listing. It should be a hybrid organisation more like a co-operative.

* Subsidise mediocrity

∅ funding should not be driven by newspapers and publicity stunts

-
1. Abolish great amount of bureaucracy
 2. Run the system via private sector experts and by pass current ministerial medieval attitude
 3. Give financial and taxation incentives to private funds to participate to basic and applied research

Yes - bureaucracy

Extended Multilevel Bureaucracy

Pharmaceuticals requiring huge initial investments in a very competitive market

1) Irregular funding for research. Annual research programs should be advertised.

2) Give money to some research fields, only.

There are recent examples of biomedical research grants to be given only in neuroscience projects because the GGET referees worked in that field.

-Stop discriminating citizens that has been leaving some years abroad regarding greek retirement pay or other aspects

-Just monetary support

Bureaucracy

Bureaucratic processes

Diminishing the value of basic research carried out in Greece

- Give away of money without clear end goals of commercialization

I would avoid dispersion of funds to large number of labs.

- Avoid government involvement as much as possible due to bureaucracy

Keep political agendas outside research

-ego

-inequalities

-gender differences

- Avoid heavy fees for creating and maintaining research databases (at least in the beginning)

Do you wish to contact you in the near future?

Yes: 79

No: 7

Undefined: 20

- Please mind that if you wish to contact you and to participate in panel discussions have your name at the beginning of the survey or contact us at contact@greek-scientists-society.com/

Please participate in our survey by clicking in the image



Thank you all!!