February 2019

WHITE PAPER

"WAY FORWARD FOR SCIENCE IN UKRAINE: Perspective of the Ukrainian Research Diaspora"

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The inaugural Forum of the Ukrainian Research Diaspora "ADVANCING SCIENCE THROUGH INTERNATIONAL COOPERATION" has been held in Kyiv on 20-22 October 2018 as a part of the celebration of the centennial anniversary of the foundation of the National Academy of Sciences of Ukraine (See more at the Forum's web-site, including the program). More than 160 participants, - researchers, representatives of the government and public activists from all over Ukraine and more than 30 participants from abroad (Austria, Belgium, Brazil, Canada, France, Germany, Ireland, Israel, Switzerland, the Netherlands, the UK and the USA), - have registered their interest, participated and actively contributed to the Forum's intensive three-day program.

The Forum offered an excellent platform to present and discuss research results, in particular those carried out by collaborative teams of Ukrainian and international scientists. It also allowed the participants to address the most urgent issues pertaining to the current state of the Ukrainian science. The Forum's participants adopted a **Resolution** (Appendix 1, download in Ukrainian/ in English). This **White Paper,** prepared by an initiative group of diaspora researchers, summarizes key points brought up in various discussions in preparation and during the Forum, as well as in the follow-up feedback provided by numerous participants (28 written replies to the survey). We are strongly committed to both galvanizing the required changes and contributing our hands-on knowledge and profound experience, gained at leading research organizations in different countries to the benefit of Ukraine.

This document is structured along the topics discussed at the round-table/ panel discussions held at the Forum, with a particular focus on:

I. **Converting "brain drain" into "brain gain"**
II. **Creation of expert commissions to support science reform in Ukraine**

I. Converting "brain drain" into "brain gain"

Since the collapse of the Soviet Union and ensuing economic turmoil an important question for many researchers in Ukraine was, and unfortunately still is: "*If I stay in science – then not in Ukraine. If I stay in Ukraine – then not in science*". One consequence is the loss of practically an entire generation of scientists from the research performing organizations in Ukraine: disproportionately large number of middle-aged researchers, who could be expected to be at the height of their careers now, have changed occupation or moved abroad. Many of the latter have succeeded in establishing themselves within the international research system in scientifically leading countries, such as Germany, USA, UK, Israel, etc.

Academic mobility is considered to be one of the essential elements of striving research ecosystem and brings with it many advantages. While often (and incorrectly) associated exclusively with a "brain-drain" problem, typical for economically underdeveloped countries, academic mobility constitutes an important element of research training in scientifically and economically leading countries. For example, 56% of Italian PhD students and 53% of Danish postdoctoral researchers spend more than three months abroad during their doctoral and postdoctoral training respectively[1]. Many German researchers move and develop their careers in the USA, the UK and Switzerland and not all of them subsequently return to Germany. To address this issue, German federal and state governments have developed different measures aimed at improving interactions between German diaspora researchers[2] and supporting their return to Germany[3,4]. What is even more important, however, is that the German research organizations have systematically and consistently invested in increasing their appeal to international researchers. As a result, significant numbers of researchers come from other European countries, e.g. Italy, Spain and Greece, but also from further afar: in 2017 15% of all scientists in Germany[5], almost 30% of all employees and over 50% of scientists working at the institutes of the Max Planck Society[6] were from abroad. This diverse and proactive workforce significantly contributes to the persistently top-level science in Germany.

Hence, **what can Ukraine do to address both internal and external "brain-drain", foster "brain-circulation" and even turn it into "brain-gain"?**

We see the establishment of **The National Research Foundation of Ukraine** (NRFU)[7] and **The Foundation of the President of Ukraine for the Support of Educational and Scientific Programs for Youth**[8] as a welcome development. At the same time, the question arises on how the activities of both these organizations will be coordinated, since both aim to support young researchers, offer scholarships for training abroad, among other priorities. We hope Ukraine will

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[1] *National Report on Junior Scholars (2017), overview of key results, page 18, fig. 7-8: https://www.buwin.de/dateien/buwin-2017-keyresults.pdf*

[2] *German Academic International Network (GAIN) is the network for German scientists working in North America. Since 2003 the GAIN supports them in maintaining contact with German academic institutions, preparing them for the return to research in Germany and helping to articulate their interests to political decision-makers. https://www.gain-network.org/de/*

[3] *The German Scholars Organization e.V. (GSO): https://www.gsonet.org/foerderprogramme.html*

[4] *https://www.mkw.nrw/forschung/foerderung/wissenschaftlichen-nachwuchs-foerdern/rueckkehrprogramm/*

[5] *National Report on Junior Scholars (2017), overview of key results, page 18, fig. 9: https://www.buwin.de/dateien/buwin-2017-keyresults.pdf*

[6] *https://www.mpg.de/facts-and-figures (retrieved on 17 February 2019).*

[7] *https://mon.gov.ua/ua/news/uryad-stvoriv-nacionalnij-fond-doslidzhen-yakij-davatime-granti-na-nauku-z-2019-roku*

[8] *https://www.president.gov.ua/news/prezident-ukrayini-zasnuvav-fond-z-pidtrimki-osvitnih-ta-nau-50850; https://www.president.gov.ua/documents/3572018-25414*

manage to avoid unnecessary duplication, inefficient management of funds and unhealthy competition between these two new – very necessary – organizations.

The establishment of the **Fund for the Development of Innovations**[9], aimed at supporting **commercialization of innovations** and facilitation of launch of new technologies, goods or services on Ukrainian and foreign markets, is undoubtedly another positive step in the right direction. This new Fund is expected to provide financial, technical and advisory assistance to **start-ups** at an early stage of their development, make an active effort at attracting private partners and investors in order to enable as many Ukrainian companies as possible to grow their business. In this context, a recent EU initiative, **EU4Innovation**[10], which aims to combine various EU activities that support the development of Eastern Partnership countries (EaP) innovation capacities, notably those funded under the Horizon 2020 programme and the European Neighbourhood Instrument, could be of particular value. At the same time, for the innovation-driven development of Ukraine to succeed it is essential to **improve the national legislation on Intellectual Property Rights (IPR)** and ensure its efficient implementation as well as provide necessary training to the researchers and innovators. We strongly believe that targeted and systematic efforts in this direction have potential to significantly change situation "on the ground", providing a "pool" factor for highly-qualified researchers to stay in Ukraine as entrepreneurs and innovators.

Here we have summarized the key points, which in our view are both urgent and necessary to improve the situation in science and support "brain circulation" in Ukraine:

(1) **Basic funding, and thus, prestige, of research in Ukraine should be significantly increased**. The Ukrainian government has to respect current laws of Ukraine and assure the mandated 1,7%[11] of its GDP are spent on science. Moreover, Ukraine should undertake specific steps aimed at increasing this percentage to the EU-target of 3% (as specified in the Chapter 47 of the same Law of Ukraine)[12].

(2) Given a catastrophic state of buildings and infrastructure of research organizations a **Ukrainian "Marshall Plan" of capital investments aimed at modernization of buildings and laboratories of research organizations**, as well as **a dedicated "Modern research equipment fund"** and a **"Program to access international research infrastructure"** should be established. As a starting point, the positive experience of the "**Key State laboratories**"[13] should be deployed and the very idea of such laboratories should be revived. In addition, a systematic approach to co-found **joint research laboratories**, **co-funded by the interested international partners** (e.g. Canada, France, Germany, USA) should be developed and opportunities of establishing outposts of famous international institutes/ laboratories

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[9] https://www.kmu.gov.ua/ua/npas/pro-utvorennya-fondu-rozvitku-innovacij

[10] http://europa.eu/rapid/press-release_IP-16-3716_en.htm

[11] *Law of Ukraine "On scientific and scientifically-technical activities"/ Закон України "Про наукову і науково-технічну діяльність". Chapter 48: "Держава забезпечує бюджетне фінансування наукової і науково-технічної діяльності у розмірі не менше 1,7 відсотка валового внутрішнього продукту України. […] Видатки на наукову і науково-технічну діяльність за рахунок державного бюджету є захищеними статтями видатків бюджету."* https://zakon.rada.gov.ua/laws/show/848-19

[12] *Law of Ukraine "On scientific and scientifically-technical activities"/ Закон України "Про наукову і науково-технічну діяльність". Chapter 47: "Держава застосовує фінансово-кредитні та податкові інструменти для створення економічно сприятливих умов для ефективного провадження наукової і науково-технічної діяльності відповідно до законодавства України, забезпечення до 2025 року збільшення обсягу фінансування науки за рахунок усіх джерел до 3 відсотків валового внутрішнього продукту - показника, визначеного Лісабонською стратегією Європейського Союзу". https://zakon.rada.gov.ua/laws/show/848-19*

[13] https://dt.ua/SCIENCE/nauka_pid_klyuch.html

should be explored and pro-actively pursued. There are some promising examples how this works between Georgia and Germany[14] and Germany and Poland ("Dioscuri Centres of Scientific Excellence")[15]. Such joint laboratories could be acting as test-beds for the elaboration of new functioning structures and regulations, which, when successful, could be scaled-up to the national level.

(3) Legislation related to remuneration should be reformed in such a way, that the state assures a **respectful and adequate basic salary** for researchers, whereas the employing research organization (irrespective of the type of its ownership) is free to develop its own incentive schemes. It should be possible to use a part of the acquired grant funding to supplement this (basic) salary. Since the researchers are part of the most mobile workforce globally, **special (favorable) tax regulations** should be developed to stimulate the researchers to acquire additional funding from national and international funding organizations, private foundations, etc. The Ministry of Education and Science of Ukraine (MESU) should pro-actively lobby such legislative changes with other relevant ministries. The Scientific Committee of the National Council on S&T of Ukraine, which is headed by the prime-minister, should position this crucial issue of appropriate and dignified remuneration of scientists at the top of the government's agenda.

(4) Administrative structures within research institutes should be reformed to enable **early independence of researchers**, especially in terms of budget and talent (human resources) management. **Honorary or Emeritus status for retired researchers** (in accordance with the state legislation) have to be developed. The key goal should be to support further productive work of still active researchers (preferably on an honorary basis, with continued access to the library, attendance of seminars, participation in PhD supervision, etc.). At the same time, one should develop an effective mechanism to avoid the (common) practice of heads of the laboratories keeping their posts long after their most productive years, thus often stifling the very possibility of development so important in modern fast-changing science environment.

(5) Dedicated positions for staff at offices for research grants, technology transfer, international collaboration, researchers' training, science communication should be established. Respective (re-)training/ professional development programs for PhD-level researchers should be developed and implemented. This will both professionalize the Ukrainian HE and research system, at the same time it will offer highly-qualified professionals attractive career options outside of the direct hands-on research.

(6) The Ukrainian education and research system should intensify its efforts towards **internationalization** and adopt the best practice in this regard[16]. In particular, we believe the following specific measures are important:

   a. **All degree documents should be issued both in Ukrainian and English language**, thus facilitating academic mobility and removing the need for translation. This measure will

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[14] *The first SMART|Lab, SMART|EDM_Lab (SMART stands for 'Science, Medicine, Applied Research and Technology'; whereas EDM stands for electric dipole moment) was launched in Tbilisi in 2016. "The concept of these laboratories is to offer young and in well-trained Georgian scientists at the FZ Jülich an attractive return option to Georgia. The Georgian Ministry of Education and Science funds the SMART|Labs; with equipment and know-how delivered by Jülich. Further SMART|Labs are planned in the areas of climate and brain research".https://www.increast.eu/en/2969.php; "On September 29, 2017, the new SMART|AtmoSim_Lab was opened in TSU, based on a collaboration between the Jülich Institute of Energy and Climate Research (IEK-8, Troposphere) and the TSU faculty of Exact and Natural Sciences": http://collaborations.fz-juelich.de/ikp/cgswhp/cgswhp18/*

[15] *https://ncn.gov.pl/dioscuri/?language=en*

[16] *Eurydice Report "**Modernisation of Higher Education in Europe: Academic Staff – 2017"** focuses on the qualification requirements for academic staff, the recruitment process, employment and working conditions in academia, the impact of external quality assurance, and **top level strategies for internationalisation**. https://eacea.ec.europa.eu/national-policies/eurydice/content/modernisation-higher-education-europe-academic-staff-%E2%80%93-2017_en*

both foster academic mobility of Ukrainian researchers and make Ukrainian research system more attractive for foreign researchers. It will also facilitate the development of joint student exchange/ degree programs between the Ukrainian and foreign universities.

b. **English language training should be reformed**, e.g. via the development of affordable specialized language classes, foremost in English, aimed at researchers, also via e-learning. The emphasis should be on enabling learning and rewarding activities, impossible without such (e.g. publications in international journals in English, participation in renown international summer schools, presentations at conferences, etc.), rather than on mandatory formal certificates.
c. **Dedicated training programs** (including improving English skills) **for research support and administration officers** (HR, finance departments, PR, etc.) should be developed and implemented.
d. National legislation should be reformed/ simplified to enable Ukrainian research organizations to **employ foreign researchers**: **talent knows no borders and no nationalities**. The regulations should be simple and working visas for researchers should be issued fast.
e. There should be **travel grants** available to enable researchers to participate in internationally recognized and highly-reputable meetings/ conferences/ summer schools, etc., both abroad and within Ukraine. Moreover, there should be **short-term fellowship programs** aimed at early-career researchers, who wish to learn new methods, develop collaborative projects, etc., at another research organization or university, in Ukraine or abroad.
f. At the same time, in our view, given the scarcity of domestic funds and a large number of foreign support programs aimed at attracting international scholars, **Ukraine should not dedicate resources to funding outgoing academic mobility for longer**-term (> 1 year) PhD or post-doctoral research purposes.
g. **Dedicated support/ grant scheme(s) for the initiation/ intensifying of international collaboration**, including a targeted scheme to support sabbatical research stays of international researchers in Ukraine (also for those with an emeritus status as well as diaspora researchers) should be established (some international examples are summarized in Appendix 2). Such dedicated support schemes will both foster knowledge transfer to Ukraine and foster integration of its researchers within international scientific community, facilitate acquisition of joint research funding, promote access to international research infrastructures, and offer a perspective for researchers in Ukraine.
h. Ukraine (at a national, but also regional) level should also consider establishing **funding/ incentive schemes for "Returning researchers and innovators"**. Ideally, these should be aimed at Ukrainian researchers, who were supported for their research stay abroad through a competitive international PhD or postdoc fellowship program, or long-term employment at recognized international research organizations (thus assuring the quality and avoiding corruption). Such programs could also be developed in cooperation with/ alignment to existing programs (see Appendix 3 for some examples).
i. It would be beneficial if Ukraine develops an "**Alumni engagement strategy**" to pro-actively engage foreign nationals, who have studied or carried research in Ukraine – both at the level of individual universities, research institutes and nationally (see an example of such strategy developed by Australia[17]).

[17] *Australia Global Alumni Engagement Strategy 2016–2020: https://dfat.gov.au/about-us/publications/Documents/australia-global-alumni-engagement-strategy-2016-2020.pdf*

(7) Municipal governments of the key research hubs in Ukraine (Kyiv, Lviv, Kharkiv, Dnipro, Odesa, etc.) could also contribute more to supporting both basic and applied research efforts at the regional research hubs. Encouraging example is the program "**Lviv Scientific/** *Львів науковий*"[18], further being developed now into the **Lviv System of Investigators/** *Львівська Система Дослідників*[19], as well as **Lviv Biotech&Pharma Meetup**[20]. Already striving regional activities, especially related to IT and start-up scenes (e.g. regional **IT clusters**[21,22,23,24], **Kyiv Unit.City Innovation Park**[25], **Eastern European Conference on Computer Vision** in Odesa[26] to name just a few), are already contributing to increasing demand for highly-qualified researchers for the development of the knowledge-based economy of Ukraine. Furthermore, the effort should be made by the municipal governments to modernize old dormitories/ build new affordable housing/ guest-houses both for Ukrainian (non-local) and foreign researchers employed on temporary positions and for (short-term) academic visitors (PhD students, postdocs, fellowship-holders).

(8) **As the economic situation in Ukraine improves**, one could expect both **higher demand for highly-qualified (also PhD-level) professionals** and **increased investment in R&D by the private sector**. Funding of research is not the exclusive responsibility of the government, but is also a reflection of demand from the broader country's economy. There is already a promising trend in IT: "*A recent study by the Better Regulation Delivery Office (BRDO) IT Association found that while 10% of Ukrainian IT sector workers left the country for employment abroad in 2015, the figure for 2017 was just under 4% and was continuing to fall.*"[27] Thus, as the country's economy is reformed and reoriented to be a "knowledge-based" and innovation-focused, the need to leave the country will diminish. At the same time the incentives to stay or return will increase.

II. Creation of expert commissions to support science reform in Ukraine

(1) Major part of research funding should be distributed to individual researchers, research teams and institutions on a transparent competitive basis. It should be based on **peer-review, with a mandatory participation of foreign experts** (e.g. via the newly-established National Research Foundation of Ukraine (NRFU)[28]).

(2) An **expert database**, open to both national and international researchers, interested in reviewing grants and/ or evaluating research organizations should be established and widely publicized, attracting qualified experts to register. Such a database should be developed

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[18] https://www.lvivrada.gov.ua/novyny/item/7448-u-ramkah-programy-%E2%80%9Clyviv-naukovyy%C2%BB-vidbudetysya-konkurs-socialyno-naukovyh-proektiv-dlya-naukovciv/7448-u-ramkah-programy-%E2%80%9Clyviv-naukovyy%C2%BB-vidbudetysya-konkurs-socialyno-naukovyh-proektiv-dlya-naukovciv

[19] https://scientist.lvivcity.gov.ua/

[20] https://center.ucu.edu.ua/lviv-biotech-pharma-meetup/

[21] https://itcluster.kiev.ua/en/

[22] https://it-kharkiv.com/

[23] https://itcluster.lviv.ua/en/

[24] http://itcluster.dp.ua/en/

[25] *"UNIT.City is Ukraine's first innovation park. […] Here the concentration of companies, startups, students, professionals and research laboratories creates conditions for businesses within the park to grow faster than outside."* https://unit.city/en

[26] http://eecvc.com

[27] *BUSINESS NEWS, 4 January 2019: "Brain drain becoming brain gain as more and more IT specialists return to Ukraine",* http://bunews.com.ua/component/zoo/item/brain-drain-becoming-brain-gain-as-more-and-more-it-specialists-return-to-ukraine?fbclid=IwAR2U2dHEkgPpC8duwrTIbHuUAt32v7NvMnm6WsXZGnC5yOaqV3BWTz3bx54#.XC8yiKhUOQ8.facebook

[28] https://mon.gov.ua/ua/news/uryad-stvoriv-nacionalnij-fond-doslidzhen-yakij-davatime-granti-na-nauku-z-2019-roku

based on similar principles as the **EU expert database**[29]. Synergy with other countries, as exemplified by the first steps made within an EU-funded incrEAST project with countries of Eastern Partnership[30], should be further exploited. Recently-launched calls for expert reviewers/ evaluators, namely the **call for experts of the NAS of Ukraine** aimed at attracting potential reviewers for evaluation of its institutes[31], and the **call for referees of the NRF of Ukraine**[32] are very positive steps in the right direction.

(3) Research funding should be awarded on **merit-based criteria**, which include a combination of high international standards and considerations of strategic priorities of Ukrainian society.

(4) The legislation framework, in which Ukrainian research organizations function, has to be reformed/ improved to ensure that:
   a. Ukrainian research organizations are enabled to coordinate EU-funded projects, in particular in respect of their ability to independently manage research funds in foreign currency;
   b. Regulations related to the import of scientific equipment (including that on a charitable basis), are simplified and streamlined, with a possibility of such imports being freed of taxation.

(5) **Web-based user-friendly platform/ database of research-performing organizations** in Ukraine should be established (in Ukrainian and English) to serve as a gateway to the Ukrainian research system (see as an example of the "Research in Germany"[33] platform). **It should also include information on research projects** (e.g. those funded by the MESU, different state-run foundations such as NFFR, NRFU etc., as well as (co-)funded by international funders whenever the information can be obtained) **and resulting publications** (see as an example P3 database of the Swiss National Science Foundation (SNSF)[34]). Such a database will act as an open source of information on past and current research activities in Ukraine. This will facilitate national and international collaboration through reliable information on potential research partners, as well as improve analytic possibilities for strategic purposes.

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[29] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/work-as-an-expert

[30] *A Memorandum of Understanding (MoU) was signed by the representatives of Eastern Partnership (EaP) countries in 2016. The Roadmap was incorporated as an Annex to the MoU, outlining a number of intended future joint activities, including i) Exchange of thematic reviewers on a case to case basis; ii)* ***Establishment of a joint reviewer database****; iii) Further use of existing reviewer data currently collected in 'Eval-Inco', etc.:* https://www.inco-eap.net/en/530.php

[31] *Web-portal for "Evaluating effectiveness of research institutions in NAS of Ukraine":* http://eval.nas.gov.ua/ireg_en.html

[32] https://www.ua-portal.science/call-for-international-referees

[33] https://www.research-in-germany.org/en

[34] *In the P3 database the Swiss National Science Foundation (SNSF) makes available data on the projects, people and publications that it has supported, as part of its mandate to inform the public about its research funding activities.* http://p3.snf.ch/Pages/DataAndDocumentation.aspx

Appendix 1

RESOLUTION, adopted at the Forum of the Ukrainian Research Diaspora „Advancing Science through International Cooperation", Kyiv, 20-22 October 2018

We, the participants of the first Forum of the Ukrainian Research Diaspora, organized to mark the 100th anniversary of the National Academy of Sciences of Ukraine, after extensive discussions on a wide range of issues related to the current state and prospects of the development of science and higher education in Ukraine, presentation of research carried out by Ukrainian scientists working abroad and best-practice examples of successful joint research projects with scientists in Ukraine, state the following:

1. **Integration of Ukrainian science into the European and global research area** through fostering of international cooperation in general and by expanding collaboration with the research diaspora in particular **is of paramount importance** for increasing the research quality as well as modernization and reforming the science management system in Ukraine. This, in turn, is an **essential prerequisite for the development of a competitive innovation-driven economy**.
2. Over the past decades, the Ukrainian research diaspora has become an integral part of the global academic community and many of its members have a strong interest to engage with the scientific and higher educational sector in Ukraine. This is evidenced by the **participation in the Forum of 33 scientists from more than 10 countries, including professors from leading universities in Austria, Germany, the Netherlands and the United States**. Many active members of the Ukrainian research diaspora already collaborate with colleagues in Ukraine, and are **ready to share knowledge and expertise, to provide support and advice** in defining the priority directions for the development of science and innovation in Ukraine, as well as to participate in expert evaluations of research organizations, grant proposals, contribute to the development of effective formats to support science and innovation, etc.
3. **Ukraine has made the first steps towards reforming its science system**, namely: The National Council for Science and Technology Development has been established, the Scientific Committee of the Council has commenced its work, regulatory framework for the establishment of the National Research Foundation has been developed, new laws on science and on education have been adopted. However, the implementation of already adopted laws is far too slow. **We assess the current state of science in Ukraine as borderline critical, which poses a genuine threat to the national security of the country. It requires immediate and far reaching action by the legislative and executive powers in order to prevent further degradation of the country's science and technology. It is absolutely crucial to develop a long-term vision for the development of science and innovation in Ukraine, radically increase the basic level of support for research organizations**, as well as **undertake long overdue legislative changes**, in particular regarding the level of salaries, import of scientific equipment, etc. It has to be done not some time in the future, but right now.

We appeal personally to the Prime Minister and the Chairman of the National Council for Science and Technology Development of Ukraine, **Mr. Volodymyr Groysman**, and to the Speaker of the Verkhovna Rada of Ukraine, **Mr. Andriy Parubiy**, to recognize **the priority of science in Ukraine** and **to respectively increase the funding** of this key sphere at least to the level already prescribed by national law. The National Council for Science and Technology Development must begin its work immediately. We are deeply convinced that **significant additional funds** aimed at scientific and innovative research should be provided to scientists on a competitive basis by the **National Research Fund of Ukraine, which should become the main independent distributor of such funds**. Grant competitions should adhere to standard practices of similar international organizations: expert peer review with the mandatory participation of international experts and be based on principles of scientific integrity.

The 21st century is the century of globalization. It not only poses challenges, but also opens up new opportunities. The progress of the Ukrainian society and the very future of our country depends on how fast and efficient we integrate into the world community and what priorities are chosen. 100 years ago, during tough times of war and external aggression, the founding fathers of our state were able to recognize the paramount importance of science for the newly proclaimed independent Ukraine. We are convinced that also now, with appropriate support, science will become the engine of the development of the Ukrainian economy, and will allow Ukraine to take a respected place among the innovative countries of the world.

РЕЗОЛЮЦІЯ

Форуму української наукової діаспори «Розвиток науки шляхом міжнародної співпраці», Київ, 20-22 жовтня 2018 р.

Ми, учасники першого Форуму української наукової діаспори «Розвиток науки шляхом міжнародної співпраці», присвяченого 100-річчю Національної академії наук України, обговоривши широке коло питань, пов'язаних із сучасним станом і перспективами розвитку науки та вищої школи в Україні, ознайомившись з напрямами наукових досліджень українських учених, що працюють за кордоном, та з прикладами успішної реалізації спільних з вітчизняними вченими наукових проектів, констатуємо:

1. ***Інтеграція української науки до європейського та світового наукового простору*** шляхом стимулювання міжнародної співпраці загалом та через розширення співробітництва вітчизняних учених з українською науковою діаспорою зокрема, мають першорядне значення для підвищення рівня наукових досліджень та модернізації і реформування системи управління науковою сферою в Україні, що ***є невід'ємною передумовою для розвитку конкурентоспроможної інноваційної економіки***.
2. Упродовж останніх десятиліть в закордонних дослідницьких центрах зміцніла, утвердилася і активно переймається проблемами науково-освітньої галузі в Україні українська наукова діаспора, про що свідчить участь у роботі Форуму ***33 вчених з понад 10 країн***, серед яких ***професори провідних університетів Австрії, Німеччини, Голландії та США***. Ми засвідчуємо, що представники української наукової діаспори активно співпрацюють з колегами в Україні, ***готові ділитися досвідом та надавати консультаційну підтримку і експертні поради*** як для визначення пріоритетних напрямків наукового та інноваційного розвитку науки України, так і для незалежного експертного оцінювання наукових установ, проектів, розробки ефективних форматів підтримки науки та інновацій тощо.
3. Наразі в Україні ***зроблено перші кроки структурних реформ в науці***, а саме – засновано Національну раду з питань розвитку науки і технологій, розпочав роботу Науковий комітет Ради, створено юридичні засади для заснування Національного фонду досліджень, прийнято закони про науку та освіту. Однак імплементація вже прийнятих законів відбувається надто повільно. ***Ми оцінюємо сучасний стан науки як близький до критичного, що становить загрозу національній безпеці країни і потребує негайних дій законодавчої та виконавчої влади з метою недопущення подальшої деградації науково-технологічної сфери.*** Абсолютно необхідними є ***розробка довготермінового бачення розвитку науки та інновацій в Україні, кардинальне зростання базового рівня підтримки дослідницьких організацій***, так само як і ***внесення давно назрілих змін до законодавства***, зокрема щодо оплати праці, імпорту наукового обладнання тощо.

Ми звертаємося особисто до Прем'єр-Міністра і одночасно голови Національної ради України з питань розвитку науки і технологій пана ***Володимира Гройсмана*** та до голови Верховної Ради України пана ***Андрія Парубія*** із закликом ***визнати пріоритетність науки в Україні*** та ***збільшити фінансування цієї ключової сфери*** до рівня, передбаченого законом. Національна рада з питань розвитку науки і технологій повинна негайно приступити до виконання покладених на неї обов'язків. Ми глибоко переконані, що ***суттєві додаткові кошти*** на наукові та інноваційні дослідження повинні надаватися вченим на конкурентній основі ***Національним фондом досліджень України, який має стати головним незалежним розпорядником цих коштів***. Такі грантові конкурси мають базуватись на стандартних практиках подібних організацій інших країн: експертної оцінки за обов'язкової участі міжнародних експертів та на принципах наукової доброчесності.

XXI-е століття є віком глобалізації, що не лише ставить нові виклики, але і відкриває нові можливості. Прогрес українського суспільства і саме майбутнє нашої країни залежать від того, як швидко ми зможемо інтегруватися у світові процеси і які пріоритети будуть обрані. 100 років тому, також у непростий воєнний час, батьки нашої держави змогли усвідомити вирішальне значення науки для тільки-но проголошеної України. Ми переконані, що і сьогодні за відповідної підтримки наука стане локомотивом розвитку української економіки, а Україна посяде достойне місце серед інноваційних країн світу.

Appendix 2.

Some examples of the programs and policy analyses aimed at intensifying cooperation with international and, in particular, diaspora researchers (listed by country, in alphabetical order).

Please note: examples provided here are not our recommendations, but are intended to increase awareness of the approaches developed by different countries and to promote learning from experiences made by others.

- **China**
  "China initiated "the Recruitment Program of Global Experts" (known as "**the Thousand Talents Plan**") since the end of 2008, under which it would bring in overseas top talents to China over the next five to ten years." http://www.1000plan.org/en/plan.html

  "China's plan to recruit talented researchers", by Hepeng Jia, Nature, 17 January 2018
  "*Now in its tenth year, the Thousand Talents Plan is helping China to attract foreign researchers and provides an incentive for Chinese scientists living abroad to return home*."
  https://www.nature.com/articles/d41586-018-00538-z

  „… anecdotal evidence suggests that they have contributed to a new challenge within the research environment in which domestically trained scientists are discriminated against over returnees."

  Cong Cao, Ning Li, Xia Li, Li Liu (2013) Reforming China's S&T System, Science, Vol. 341, Issue 6145, pp. 460-462, DOI: 10.1126/science.1234206

- **Croatia**
  The Unity through Knowledge Fund (UKF, since 2007).
  http://www.ukf.hr/default.aspx?id=4

- **Georgia**
  SRNSF Collaborative Research Grants with Participation of Georgian Compatriots Residing Abroad
  See more: p 14 of this report "THE ROLE OF THE DIASPORA IN THE INTERNATIONALISATION OF GEORGIAN SCIENTIFIC RESEARCH", Tbilisi, 2017
  http://www.cipdd.org/upload/files/the-role-of-the-diaspora.pdf

- **Moldova**

  Report "Skilled migration and development practices: Republic of Moldova and the Countries of South East Europe", 2013, Swiss National Science Foundation

  https://cooperation.epfl.ch/wp-content/uploads/2018/12/SkilledMigrationDevelopementPractices-2014.pdf

- **Russia**
  "Mega-grants": http://www.p220.ru/en/
  See also this report, where the effectiveness of this funding scheme and other matters of developing cooperation with diaspora researchers are discussed:
  http://russiancouncil.ru/activity/publications/razvitie-sotrudnichestva-s-russkoyazychnoy-nauchnoy-diasporo/

Appendix 3

Some examples of existing international funding schemes, where funding/ support to return to home country is foreseen/ possible:

- **Germany**:
  - **DAAD "Rückkehrstipendien für Deutsche aus dem Ausland"**
    https://www.daad.de/ausland/reintegration/stipendien/de/22184-rueckkehrstipendien-fuer-deutsche-aus-dem-ausland/
  - **NRW Rückkehrprogramm**
    https://www.mkw.nrw/forschung/foerderung/wissenschaftlichen-nachwuchs-foerdern/rueckkehrprogramm/
  - **Wissenschaftler-Rückkehrprogramm GSO/CZS**
    https://www.gsonet.org/foerderprogramme/rueckkehrprogramm-czs.html
  - Alexander von Humboldt Foundation supports its fellowship-holders from certain countries offering them Return scholarship:
    https://www.humboldt-foundation.de/web/return-fellowship.html

- **EU**
  - **Marie S. Curie Fellowships**
    "Direct return to and long-term reintegration of researchers in Europe, including in their country of origin, is supported via a separate multi-disciplinary **reintegration panel** of the European Fellowships. For the reintegration panel, there must be direct mobility to the country of the beneficiary in Europe from a third country (compulsory national service and/or short stays such as holidays are not taken into account)."
    https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/msca-if-2018
  - **ERA Chairs**
    https://ec.europa.eu/info/research-and-innovation/strategy/european-research-area-era_en

- **Switzerland:**
  Return CH Advanced Postdoc.Mobility
  http://www.snf.ch/en/funding/careers/postdoc-mobility/Pages/default.aspx

  "Postdoc.Mobility fellowships are aimed at researchers who have done a doctorate and who wish to pursue an academic career in Switzerland. A research stay abroad enables such researchers to acquire more in-depth knowledge, increases their scientific independence and enhances their research profile.

  The fellowships include a grant for subsistence costs, a flat-rate for travel expenses and a possible contribution to research, conference costs and matriculation fees. **In addition, fellowship holders can apply for a return grant to finance their initial period of research after returning to Switzerland. The return grant includes a salary and social security contributions.**

  The funding period is in principle 24 months (fellowship) and **3 to 12 months (return phase)**."

- **HFSP postdoctoral fellowships**
  "Fellows can either use the third fellowship year to continue work in the host laboratory, to return to their home country, or to move to another HFSPO member country."
  http://www.hfsp.org/sites/www.hfsp.org/files/webfm/Fellows/2019%20Fellowship%20application%20guidelines.pdf