

# Research Newsletter

OFFICE OF THE PROVOST-RESEARCH ADMINISTRATION  
QUARTERLY NEWSLETTER

## Congratulations to NU faculty members!

BY AIMAN UTEYEVA

Dr Ahti-Veikko Pietarinen, Associate Professor of Philosophy at SHSS, has been elected as the Vice-President of the Charles S. Peirce Society, leading to presidency in 2019. Google Scholar shows Dr Pietarinen among the ten most cited academics in the world in the fields of philosophy of logic and history of philosophy, with 1,500 citations. His article in International Studies in the Philosophy of Science on Peirce's logic of science has been among the top three most read papers of the journal since its publication in 2015. He is currently preparing an edition of unpublished manuscripts of this American polymath.

Professor Joep Konings of the Department of Economics, SHSS, obtained a research grant from KU Leuven in the amount of 90,000 EUR for his project on the importance of supply networks of firms for understanding the transmission of economic shocks. The grant will be used to fund PhD students that have started their PhD at KU Leuven and who came under the framework of the research collaboration agreement between the Economics Department (Masters program) at Nazarbayev University and the PhD program of KU Leuven. This research collaboration agreement was signed between the two universities in 2017. Currently there are 3 PhD students who finished their Master of Economics at NU and who have joined the PhD program at KU Leuven.



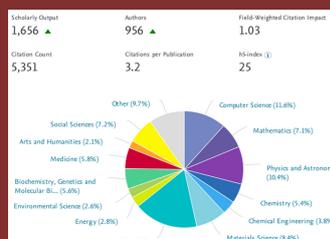
### VISITS

Prof. Rashid Bashir, UIUC,  
visits NU



### NEWS

Research news of NU Schools  
and NLA



### SCIVAL.COM

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performance evaluation using  
SciVal.com system



### GRANTS

70 international funding  
opportunities that NU faculty  
may apply for

# Prof. Bashir visits Nazarbayev University

BY AIMAN KHAMITOVA

On March 6, 2018 Professor Rashid Bashir, Vice Dean of College of Medicine from University of Illinois at Urbana Champaign, visited the Nazarbayev University to give a seminar for all Faculty and students on “BioMEMS and Biomedical Nanotechnology: From Lab on Chip to Printing Cellular Machines”. He held various meetings with the NU senior leadership (President Mr. Katsu), as well as visited the Schools of Medicine, Engineering, Science and Technology; held talks with postdoctoral students; consulted Core facility team.

During the seminar Professor Bashir spoke about the opportunities hidden in the integration of biology, medicine, and fabrication methods at the micro and nano scale to enable a wide range of applications in diagnostics, therapeutics, and tissue engineering. Microfluidics and Lab-on-Chip can be very beneficial to realize practical applications in detection of disease markers, counting of specific cells from whole blood, and for identification of pathogens, at point-of-care.

According to the Professor, the use of small sample size and electrical methods for sensitive analysis of target entities can result in easy to use, one-time-use assays that can be used at point-of-care. In his talk he presented his work on detection of T-cells for diagnostics of HIV AIDs for global health, development of a CBC (Complete Blood Cell) analysis on a chip, electrical detection of multiplexed nucleic acid amplification reactions, and detection of epigenetic markers on DNA at the single molecule level. While the above mentioned devices are built with PDMS or silicon using microfabrication approaches, bio-printing with stereolithography can be a very powerful technology to produce bio-hybrid devices made of polymers and cells such as biological machines and soft robotics. Such complex cellular systems will be a major challenge for the next decade and beyond, requiring knowledge from tissue engineering, synthetic biology, micro-fabrication



and nanotechnology, systems biology, and developmental biology. As these “biological machines” increase in capabilities, exhibit emergent behavior, and potentially reveal the ability for self-assembly and self-repair, questions can arise about the ethical implications of this work. These devices could have potential applications in drug delivery, power generation, and other biomimetic systems”.

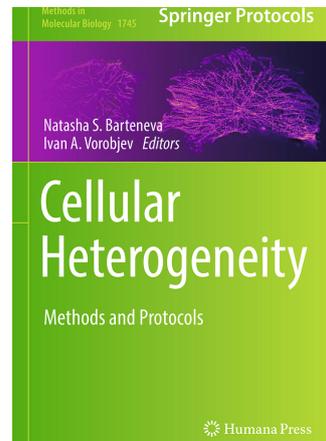
# School of Science & Technology News

1) Prof. Ivan Vorobyev, Dept. of Chemistry, and Dr. Natalya Barteneva, Dept. of Biology, published a book in Methods in Molecular Biology series. The book could be found as:

Cellular heterogeneity. Methods and Protocols. Editors Natasha S. Barteneva and Ivan A. Vorobjev  
ISSN 1064-3745 ISSN 1940-6029 (electronic)  
Methods in Molecular Biology  
ISBN 978-1-4939-7679-9 ISBN 978-1-4939-7680-5 (eBook)  
<https://doi.org/10.1007/978-1-4939-7680-5>  
Library of Congress Control Number: 2018930254  
© Springer Science+Business Media, LLC 2018

2) Research group of Dr. Zhandos Utegulov, Associate Professor of Physics, has published three peer-reviewed papers since the beginning of 2018 on advanced laser-based characterization of materials:

- Vladimir Poborchii, Noriyuki Uchida, Yoshinobu Miyazaki, Tetsuya Tada, Pavel I. Geshev, Zhandos N. Utegulov, Alexey Volkov "A Simple Efficient Method of Nanofilm-on-Bulk-Substrate Thermal Conductivity Measurement Using Raman Thermometry", International Journal of Heat and Mass Transfer, 123, 137-142 (2018)



## Cellular Heterogeneity

### Methods and Protocols

Edited by

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 Humana Press

- Dana Akilbekova, Talgat Yakupov, Vyacheslav Ogay, Bauyrzhan Umbayev, Vladislav V. Yakovlev, Zhandos N. Utegulov "Brillouin light scattering spectroscopy for tissue engineering application" Proc. SPIE 10496, Optical Elastography and Tissue Biomechanics V, 104961I; doi: 10.1117/12.2289923 (2018)

- Zachary Coker, Maria Troyanova-Wood, Andrew J. Traverso, Talgat Yakupov, Zhandos N. Utegulov, and Vladislav V. Yakovlev "Assessing performance of modern Brillouin spectrometers", Optics Express, 26 (3), 2400-2409 (2018)

# Graduate School of Business News

SOURCE: GSB WEBSITE

Assistant Professor of Strategy at Nazarbayev University Graduate School of Business Dr. Onajomo Akemu published a paper on entrepreneurial decision making "Effectual and Causal Decision Making: Shifts in the Product Development Cycle". This paper has been accepted to the 5th Effectuation Conference to be held at the Darden School University of Virginia in June 2018.

Earlier this year Dr. Onajomo's Fairphone case study won the European Case Center award in the Entrepreneurship category.

Associate Professor at Nazarbayev University Graduate School of Business Zhijian Cui gave an interview to CCTV (China Central Television) channel, where he talked about the unique strategic strength of Kazakhstan and how could Kazakhstan contribute to the Belt and Road Initiative. He also shared his opinion of how Kazakh students and people interested with learning Chinese and getting to know China.

# School of Engineering News

## SCHOOL OF ENGINEERING'S NEW INTERNATIONAL GRANT

Prof. Jong Kim, Department of Civil Engineering, School of Engineering, in collaboration with the Technical University Berlin have received a grant from the Volkswagen Foundation for the project proposal SUMRICA: Sustainable Mobility Research in Central Asia.

The project offers altogether 18 scholars from Central Asian (CA) countries paid three months lasting scholarships with the status of a guest researcher at TU Berlin. The intention is to support research related to transport

management at CA faculties. The NU PhD students, Master students and Assistant professors will have the chance to extend their networks and start new research collaboration. As this is aimed to have a positive impact on education and research in CA, the Volkswagen foundation funds all trips during the project, scholarships, three summer schools (Kazakhstan, Uzbekistan, Kyrgyzstan), a final conference and publications in the respective language of the partner country.

## Environmental Science & Technology Group News

BY DR. VASSILIS INGLEZAKIS

### 1. Guest lecture of Professor Inglezakis at the University of Brighton

Professor Inglezakis provided a lecture on Refineries Wastewater Treatment to the undergraduate students of University of Brighton. This event was organized as a part of module "Case studies in Environmental pollution". Professor Inglezakis gave a very informative talk and present his expert accounts of working in the field of environmental pollution.

### 2. MSc students' achievement

We are happy to announce that ESTg members Gaukhar Balbayeva and Azat Yerkinova, who worked under the supervision of Dr. Stavros Pouloupoulos, participated in the 5th annual International Conference on Material Science and Environmental Engineering [MSEE 2017] that was held in December 15th-17th, 2017, in Xiamen, Fujian, China. They presented respectively the papers:

"Photochemical degradation of organic pollutants in wastewaters" by Gaukhar Balbayeva, Azat Yerkinova, Vassilis J. Inglezakis and Stavros G. Pouloupoulos, and "Photocatalytic treatment of a synthetic wastewater" by Azat Yerkinova,



Gaukhar Balbayeva, Vassilis J. Inglezakis and Stavros G. Pouloupoulos.

The papers will be published by IOP Conference Series: Materials Science and Engineering (MSE) and submitted to EI, Scopus and CPCI for indexing.

### 3. New project – new challenges

ESTg members, Professors Mert Guney and Vassilis Inglezakis started a new project, which was approved for funding 2018-2020. The project title is "Mercury contamination in Pavlodar and Borovoe, Kazakhstan: Evaluation of atmospheric emissions and cycle systems, site assessment, and human health risk characterization"



# 1st NanoMed Workshop “Novel Nanoporous Materials for Biomedical Applications”

21 & 22 March 2018  
University of Alicante (Spain)

*This project has received funding from the European Union's Horizon 2020 research and innovation programme under a grant agreement No 734641*



4. News on the European Union HORIZON 2020 project “Nanoporous and nanostructured materials for medical applications” (NanoMed).

The European Medicines Agency (EMA) is pleased to announce its 1st Nanomed workshop on “Novel Nanoporous materials for biomedical applications” that will be held in University of Alicante, Spain on the 21st and 22nd of March, 2018

The workshop is intended to be a platform involving scientists from all over the world in application of nanotechnologies to medicine. The objective is to have a discussion on identified issues and emerging science aspects, which may provide directions for future developments.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under a grant agreement No 734641. For more information, please visit: <http://estg.nu.edu.kz/news/page/2/>

5. New Publications:

Journal papers

1) V.J. Inglezakis, A. Amzebek, B. Kuspangaliyeva, Y. Sarbasov, G. Balbayeva, A. Yerkinova, and S.G. Pouloupoulos, “Treatment of municipal solid waste landfill leachate by use of combined biological, physical and photochemical processes”, *Desalination and Water treatment Journal*.

2) M. K. Doula, A. A. Zorpas, V.J. Inglezakis, J.P. Navvaro, D. J. Bilalis, “Optimization of heavy polluted soil from olive mill waste”, *Environmental Engineering and Management Journal* (IF=1.096)

3) Leal, L. T. C., Guney, M., and Zagury, G. J. “In vitro dermal bioaccessibility of selected metals in contaminated soil and mine tailings and human health risk characterization”, *Chemosphere* (IF=4.208), 197, 42-49, 2018.  
Link: <https://www.sciencedirect.com/science/article/pii/S0045653518300080>

4) Giorgos Markou, Dimitris Mitrogiannis, Vassilis Inglezakis, Koenraad Muylaert, Nikolaos Koukouzas, Nikolaos Tsoukalas, Efstratios

Kamitsos, Dimitrios Palles, Ioannis Baziotis, "Ca(OH)<sub>2</sub> Pre-Treated Bentonite for Phosphorus Removal and Recovery From Synthetic and Real Wastewater" - CLEAN – Soil, Air, Water Journal, 10.1002/clen.201700378, link: <http://onlinelibrary.wiley.com/doi/10.1002/clen.201700378/full>

5) V. J. Inglezakis, K. Moustakas, G. Khamitova, D. Tokmurzin, Y. Sarbassov, R. Rakhmatulina, B. Serik, Y. Abikak, S. G. Pouloupoulos, Current Municipal Solid Waste Management in the cities of Astana and Almaty of Kazakhstan and Evaluation of Alternative Management Scenarios, Journal: Clean Technologies and Environmental Policy (IF = 3.331), link: <https://link.springer.com/journal/10098>

6) Marinos Stylianou, Vassilis Inglezakis, Agapios Agapiou, Grigorios Itskos, Albina Jetybayeva, Maria Loizidou, A comparative study on phyllosilicate and tectosilicate mineral structural properties, Journal: Desalination and Water Treatment, link: <http://www.deswater.com/home.php>

7) Zhandos Tauanov, Dhawal Shah, Vassilis Inglezakis, and Prashant K. Jamwal, "Hydrothermal synthesis of zeolite production from coal fly ash: A heuristic approach and its optimization for system identification of conversion", Journal of Cleaner Production (IF = 5.715), link: <https://www.sciencedirect.com/science/article/pii/S0959652618303536>

8) Aliya R. Satayeva, Carol A. Howell, Alina V. Korobeinyk, Jakpar Jandosov, Vassilis J. Inglezakis, Zulkhair A. Mansurov and Sergey V. Mikhalovsky, "Investigation of rice husk derived activated carbon for removal of nitrate contamination from water", Science of the Total Environment Journal (IF= 4.9), link: <https://www.sciencedirect.com/science/article/pii/S0048969718307290>

9) V.J. Inglezakis, M.M. Fyrillas and M.A. Stylianou, "Two-phase homogeneous diffusion model for the fixed bed sorption of heavy metals on natural zeolites", Microporous & Mesoporous Materials Journal (IF=3.615), link: <https://www.sciencedirect.com/science/article/pii/S1387181118301112>

## Conference papers

1) Yerbol Sarbassov, Berik Aiymbetov, Diyar Tokmurzin, Almira Yagofarova, Bexultan Abylkhani, Rustam Otarov, Christos Venetis, Vassilis Inglezakis, Edward J Anthony, Combustion characterization of refuse derived fuel from municipal solid waste of Astana city. Thermogravimetric and tube furnace analysis. 23rd International Conference on Fluidized Bed Conversion, 13-17 May 2018, Seoul, Republic of Korea (Oral), link: <http://www.23fbc.org/>

2) Tauanov Z., Dhawal S, Itskos G., V. Inglezakis, Silver Nanoparticles Impregnated Zeolitic Composites Derived from Coal Fly Ash: Effect of the Silver Loading on Adsorption of Mercury (II), 3rd Efficient Water Systems (EWaS) International Conference, June, 27-30, 2018 Lefkada island, Greece (Oral), link: <http://ewas3.civ.uth.gr/>

3) Alzhan Baimenov, Dmitriy Berillo, Leila Abylgazina, Stavros G. Pouloupoulos and Vassilis J. Inglezakis, "Novel amphoteric cryogels for Cd<sup>2+</sup> ions removal from aqueous solutions", 8th International Conference on Key Engineering Materials, March 16-18, 2018, Osaka, Japan (Oral), link: <http://www.ickem.org/>

4) Bexultan Abylkhani, Rustam Otarov, Berik Aiymbetov, Almira Yagofarova, Diyar Tokmurzin, Christos Venetis, Stavros Pouloupoulos, Yerbol Sarbassov, Vassilis Inglezakis, Astana city Municipal Solid Waste Characterization, NAXOS 2018 6th International Conference on Sustainable Solid Waste Management, 13-16 June 2018, Greece (Oral) Link: <https://naxos2018.uest.gr/>

5) Alina V Korobeinyk, Vadim R Yapiev, Seitkhan Azat, Vassilis J Inglezakis, "Assessment of total mercury content in water of the Balkyldak Lake-reservoir, Pavlodar, Kazakhstan", 8th International Conference on Environment Science and Engineering (ICESE 2018), link: <http://www.icese.org/index.htm>

# School of Medicine News

BY DR. DIETER RIETHMACHER

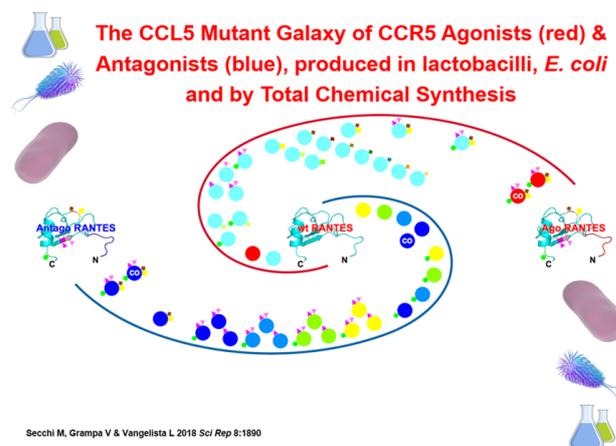
DR. LUCA VANGELISTA

Luca Vangelista, PhD, NUSOM Associate Professor at the Department of Biomedical Sciences and Director of the Master in Molecular Medicine, authored the following international peer-reviewed publications:

A Position Paper from the AllergoOncology Task Force of the European Academy of Allergy and Clinical Immunology (EAACI), accepted in 2017, was published in 2018 (Jensen-Jarolim E et al. AllergoOncology: Opposite outcomes of immune tolerance in allergy and cancer. Allergy 2018 73:328-340; free download at: <https://onlinelibrary.wiley.com/doi/epdf/10.1111/all.13311>).

Recently, Dr. Vangelista contributed to a Workshop in Vienna where the EAACI AllergoOncology Task Force refined the next Position Paper "Microbiome in Allergy and Cancer" and delineated future activities. Dr. Vangelista was invited to contribute to the Frontiers in Immunology Research Topic "Regulation of Inflammation in Chronic Disease" and a mini-review was published in 2018 (Vangelista L & Vento S. The expanding therapeutic perspective of CCR5 blockade. Front Immunol 2018 8:1981; free download at: <https://www.frontiersin.org/articles/10.3389/fimmu.2017.01981/full>).

A long-lasting research project, coordinated by Dr. Vangelista, led to the development of the most potent HIV-1 entry inhibitors reported to date, also as live microbicides based on recombinant lactobacilli, and was published in 2018 (Secchi M, Grampa V & Vangelista L. Rational CCL5 mutagenesis integration in a lactobacilli platform generates extremely potent HIV-1 blockers. Sci Rep 2018 8:1890; free download at: <https://www.nature.com/articles/s41598-018-20300-9.pdf>)



Dr. Vangelista was recently awarded a grant from the Ministry of Education and Science of the Republic of Kazakhstan for the project "Development of a CCL5-based lead compound for *Staphylococcus aureus* infection inhibition", in which he plans to block the lethal *S. aureus* LukED toxin by inhibiting its CCR5 recognition with one of the CCL5 variants he developed in the Scientific Report paper.

DR. CHEE KAI CHAN

Dr. Chee Kai Chan participated in two conferences:

- 1) In Dushanbe, Tajikistan: IRODA Autism Center. 24th February. Title of presentation: Autism, Genetics and Vitamin D.
- 2) Eurasia University: 2nd April in conjunction with Autism World Awareness Day, Eurasia University Research Week: Autism, Genetics and Nutrition.

DR. DIETER RIETHMACHER

Prof. Dieter Riethmacher has contributed to a publication in the Journal of Immunology: Ultraviolet B-Induced Maturation of CD11b-Type Langerin- Dendritic Cells Controls the Expansion of Foxp3+ Regulatory T Cells in the Skin. Yamazaki S, Odanaka M, Nishioka A, Kasuya S, Shime H, Hemmi H, Imai M, Riethmacher D, Kaisho T, Ohkura N, Sakaguchi S, Morita A. J Immunol. 2018 Jan 1;200(1): p119-129. Dieter was also awarded a NU-small grant after positive ORAU evaluation on the role of CCL5 and Periostin in inflammatory bowel disease.



#### DR. DENIS BULANIN

Denis Bulanin has received an award in November 2017 for the most cited publication from Kazakhstan scientists without international involvement.

#### DR. DMITRIY VIDERMAN

Dmitriy Viderman has published an article in the European Journal of Pain titled:

Quadratus lumborum block in management of severe pain after uterine artery embolization. Ben-David B, Kaligozhin Z, Viderman D. Eur J Pain. 2018 Jan 16. doi: 10.1002/ejp.1171. [Epub ahead of print]

**NUSOM STUDENTS SUPERVISED BY NUSOM FACULTY:** Several of our students were invited to give a presentation on their research at the

International Students Congress of Health Sciences in Almaty on the 28th of March second year MD students:

Kristina Pavlova: Genetic variants of genes critical to recovery and injury and their association with elite cross-country skiers in Kazakhstan.

Saniya Beisekenova: Genetic variants of genes associated with oxidative stress and endurance and their prevalence in elite cross-country skiers in Kazakhstan.

This presentation was given the Best Oral Presentation award.

Kaisar Dauyey: Barriers to Palliative Care Provision in Kazakhstan Kaisar was invited to give an oral presentation at the Annual Supportive & Palliative Care Conference 2018 in Bournemouth, UK.

Ibragim Issebekov: Barriers for appropriate palliative symptom management: a qualitative research in Kazakhstan, a medium-income transitional-economy country. Ibragim has been invited as a poster presenter to the 20th International Conference on Advanced Palliative Care Medicine, Pain and Patient Symptom Management in Tokyo, Japan.

# School of Humanities & Social Sciences

## News

BY ANDREY FILCHENKO

DEPARTMENT OF KAZAKH LANGUAGE AND TURKIC STUDIES LAUNCHED A PROJECT ON SOCIAL, ECONOMIC, CULTURAL, AND ENVIRONMENTAL HISTORY OF CENTRAL EURASIA IN THE LATE MEDIEVAL PERIOD.

This project led by Professor Uli Schamiloglu supported by the NU Small Research Grants scheme is an interdisciplinary exploration of the social, economic, cultural, and environmental history of Central Eurasia in the late medieval period.

The current stage of this research—the focus of the current “Small Research Grant”—explores the

world of the late 14th-15th centuries to understand not only the complicated circumstances of the late 14th century, but to explain how successive waves of disease, the climatic downturn which had already begun at the end of the 13th century and leading steadily to the “Little Ice Age” of the 16th-17th centuries on affected the states and local populations of Central Eurasia in this period.

This research will result in a new, interdisciplinary narrative of this period. The research affiliated with it could also lead to new interdisciplinary projects funding research on the genetic history of bubonic plague in Central Eurasia, the history of urban centres and their collapse, as well as the ethno-linguistic history of the peoples of Central Eurasia in this period.



NU and international students involved in archaeological excavations SE KZ, 2017



Iron Age petroglyphs at study site, SE KZ

management at CA faculties. The NU PhD students, Master students and Assistant professors will have the chance to extend their networks and start new research collaboration. As this is aimed to have a positive impact on education and research in CA, the Volkswagen foundation funds all trips during the project, scholarships, three summer schools (Kazakhstan, Uzbekistan, Kyrgyzstan), a final conference and publications in the respective language of the partner country.

This work will draw upon original research in primary sources written in a variety of languages. In this regard, the research will also be able to make use of newly-published sources, such as the famous work by Ötemish Haji published in 2018 in Kazan as the *Qara tevarix* by Utemish Haji. (The P.I. will also work on the translation into English of one of these texts in collaboration with a colleague in Hungary.)

#### DEPARTMENT OF KAZAKH LANGUAGE AND TURKIC STUDIES HOSTS A VISITING RESEARCHER DR. EVA-MARIE DUBUISSON

In the period between April and June 2018, the Department of Kazakh Language and Turkic Studies will be hosting Assistant Professor Eva-Marie Dubuisson. She is a Visiting Scholar in the Department of Anthropology at New York University and has been an Assistant Professor since 2011 at Boğaziçi University in Istanbul, Turkey. Her Ph.D. dissertation in Linguistic Anthropology at the University of Michigan was entitled: "The Value of a Voice: Culture and Critique in Kazakh Aitys Poetry" (2009). For the past two years (2015-2016), with the support of a Marie Curie Career Integration Grant (CIG) from the European Commission, she has explored the role of ancestors and sacred geography in

broader discourses of land and sovereignty in Kazakhstan. With the help of a short-term NCEEER grant, she will travel to Kazakhstan in May-June 2018, to follow-up aspects of the larger project, including to conduct short-term ethnographic fieldwork working together with specific Kazakh colleagues and friends in Astana and Atyrau.

#### ON-GOING RESEARCH PROJECT ON TRANS-EURASIAN EXCHANGES ALONG EARLY SILK ROAD AT THE DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

The project titled "Trans-Eurasian Exchanges: Contemporary dialogues and archaeological inquiry" led by Dr. Paula Dupuy and co-directed by Dr. Neil Collins focuses on archaeology and preservation of the prehistoric and early Silk Road periods with the goal to examine Trans-Eurasian contacts through time. The ultimate goals and purpose of the project are both academic and public are 1) to combat the rise in antiquities theft and loss of cultural heritage in Kazakhstan; 2) to establish Nazarbayev University as an international and academic hub for Silk Road studies; and 3) to train local students and professionals in scientific archaeological methods and archaeological site management.

#### MASCULINITY, SPORT, AND NATION-BUILDING IN THE PROJECT BY THE POSTDOCTORAL RESEARCHER ULAN BIGOZHIN OF THE DEPARTMENT OF HISTORY, PHILOSOPHY AND RELIGIOUS STUDIES

Ulan Bigozhin, a postdoctoral researcher at the department of History, Philosophy and Religious Studies explores religion, shrine and pilgrimage. His new project sponsored by SHSS Social Policy Research grant, looks at masculinity, sport, and nation-building process with a focus on

reconstitution of kokpar national game in contemporary Kazakhstan. Kokpar is becoming increasingly popular in Central Asia: the World Nomad Games are now held every two years in Kyrgyzstan, while Kazakhstan has a national championship series, and kokpar is even making its way into the physical education programs of some rural schools. This ethnographic project examines kokpar as a reinstitution of culture, i.e. creation of new formal institutions of kokpar, which are changing the game from an informal pastime to a modern sport.

#### DEPT. OF SOCIOLOGY AND ANTHROPOLOGY HELD ITS 1ST ANNUAL CAPSTONE CONFERENCE

BY DR. SOFIYA AN & DR. ZOHRA BEBEN

On Saturday, April 7th, 2018, the Department of Sociology and Anthropology held its first annual undergraduate capstone conference. The capstone conference was a culmination of a year-long capstone course that has allowed our ten graduating fourth-year students majoring in either Anthropology or Sociology to conduct original research and present their findings to members of the department, the SHSS community and the larger community of Astana, Kazakhstan. The conference was considered to be a great success by the faculty and students of the Department who saw this as an empowering and important experience that will help our majors in developing their future plans. The conference was attended by faculty and students, both undergraduate and graduate, from the School of Humanities and Social Sciences, as well as the Dean of SHSS, Daniel Pugh, and Vice Provost for Academic Affairs, Loretta O'Donnell.

In the future we hope to attract greater participation from community organizations in Kazakhstan and students and faculty from other universities in Astana.

The goal of the capstone course on which the conference is based is three-fold. It allows undergraduate students to consolidate what they have learned in their Anthropology and Sociology courses throughout their undergraduate careers and apply that learning through designing, conceptualizing and carrying out their own research projects as well as communicating their findings in a professional manner. It further helps them to learn to think deeply about how to apply their learning to contexts outside of the university. This is particularly evident in the work



of the students pursuing the capstone track called "Community Engagement Project" which requires exploring questions that are relevant to community organizations in Kazakhstan. By conducting research and data analysis that provide solutions to those organizations so they can serve their constituents in an evidence-based manner, the students can increase their future employment opportunities and utilize their training in the Sociology and Anthropology Department in a creative and practical manner. The third goal is to allow students to learn to engage in the research enterprise in a consistent and sustainable manner and see what it is really like to be part of a research community. By going through the process of formulating research questions, collecting and analyzing the data, and presenting their findings to colleagues and community members, they learn that research is a collaborative practice which requires the ability to learn from others, recognize the limitations of one's work, and show deep and abiding curiosity about the social world around them. This is especially valuable for the students who are pursuing the thesis track in the capstone program and will serve as a launching point for those pursuing graduate studies. Our undergraduate students are already presenting their capstone research at other undergraduate conferences in places such as South Korea and the United States. Some of them have plans to pursue publications in journals and other research presentation venues.

FACULTY OF THE DEPT. OF POLITICAL SCIENCE  
PUBLISH NEW BOOKS

BY DR. JEAN-FRANCOIS CARON

Three books have been published/will be published this Spring by the faculty members of the Department of Political Science and International Relations:

A book by Dr. Jean-François Caron:

Throughout history, states have tried to create the perfect combatant with superhuman physical and cognitive features that are akin to those of comic book superheroes. However, the current innovations have nothing to do with the ones from the past and their development goes beyond a simple technological perspective. On the contrary, they are raising the prospect of a human enhancement revolution that will change the ways with which future wars will be fought and may even profoundly alter the foundations upon which our modern societies are built on. This book, which discusses the full ethical implications of these new technologies, is a unique contribution for students and scholars who care about the morality of warfare.

Refusing to adopt a binary vision, Political Theorist Jean-François Caron argues in this book that, when analyzed from an ethical viewpoint, the development and use of capacity-increasing technologies in the military is far more complex than it first appears since it presents us with a significant moral dilemma. On the one hand, enhancing soldiers' capacities can be interpreted as a moral obligation on the part of the military while, on the other hand, such technologies might also end up harming fundamental moral principles of warfare. Without condemning them as evil and inadmissible, Professor Caron proposed a nuanced and balanced appraisal of capacity-increasing technologies in the military as a tool that ought to be used contingent on the respect of certain moral criteria.

A book by Caress Schenk:

Migration management in Russia is a window into how public policy, the federal system, and patronage are used to manage conflict demands. This multi-level balancing act demonstrates the importance of high-level

politics, institutional interests and constraints, and the conditions under which government actors at all levels can pursue their own interests as the state seeks political equilibrium. *Why Control Immigration?* argues that a scarcity of legal labour and the ensuing growth of illegal immigration can act as a patronage resource for bureaucratic and regional elites. Assessing the legal and political context of migration, Caress Schenk blends a political science approach with insights from the comparative immigration literature. Using this framework, she also engages with attitudes on populism and anti-immigration, particularly in terms of how political leaders utilize and employ public opinion in Russia.

A book by H el ene Thibault:

This book demonstrates how the Soviet atheist legacy continues to influence current state structures, the regulation of religion, and the formation of national identities. H el ene Thibault focuses on the differences between secular nationhood in Tajikistan, and an increasingly popular and influential Muslim identity. Featuring extensive and original primary-source material, including 12 months of ethnographic fieldwork, Thibault demonstrates the profound and lasting influence of Soviet power structures and attitudes, and how secular and religious identities clash in a context of tightening authoritarianism.

# National Laboratory Astana News



UNDP SUPPORTS KAZAKHSTAN IN PROVIDING OFFICIAL DEVELOPMENT ASSISTANCE TO HELP DEVELOP CAPACITIES OF WOMEN PUBLIC HEALTH PROFESSIONALS FROM AFGHANISTAN

BY NLA PRESS OFFICE  
April 2, 2018

A two-week workshop in maternal and child healthcare for public health professionals from Afghanistan has commenced at Nazarbayev University. The workshop marks an important milestone in the cooperation between the Ministry of Foreign Affairs of the Republic of Kazakhstan and the United Nations Development Programme (UNDP) on capacitating Kazakhstan's Official Development Assistance (ODA) system within the framework of joint project "Promoting Kazakhstan's Official Development Assistance Cooperation with Afghanistan".

The project serves the purpose of piloting Kazakhstan's ODA initiative by developing capacity of Kazakhstan Government in designing and implementing development projects, whilst

also expanding economic independence and building capacity of Afghan women. Kazakhstan shares experience and best practices with Afghan counterparts in the area of maternal and child healthcare. Over the course of the workshop the participants will learn from leading experts at Nazarbayev University's School of Medicine, National Laboratory Astana, and the National Research Center for Maternal and Child Health. The workshop will focus on the affordable and easy ways of maintaining equipment and practices to increase the relevance of knowledge acquired in the course of the workshop, whilst also taking Afghan context into consideration.

"Over the past two decades Kazakhstan has accomplished tremendous developmental progress in numerous areas, including maternal and child healthcare. The maternal and child mortality figures saw dramatic improvement due to the dedicated effort of the government and the international community. For example, the country has achieved a two-thirds reduction in the deaths among children under age 5, whilst maternal mortality rate fell from 55 per 100,000



live births in 1990 to 12.6 in 2013. These achievements are evidence of hard work and strategic vision, and we commend Kazakhstan's willingness to share its knowledge and experience through the official development assistance initiatives," said UN Resident Coordinator and UNDP Resident Representative Norimasa Shimomura.

Kazakhstan is working towards establishing national ODA operator agency (KazAID), which

will further professionalize Kazakhstan's ODA system by ensuring accountability, efficiency and sustainability of Kazakhstan's development assistance effort.

"Kazakhstan is an active and important member of the international community. Earlier this year under Kazakhstan's Presidency of the UN Security Council, a cornerstone of the agenda was bringing peace and prosperity to Afghanistan. An effective way to do this is by offering development cooperation now that Kazakhstan has joined the ranks of donor countries. Over the past two decades, Kazakhstan has provided significant amount of foreign assistance," said Norimasa Shimomura.

The Deputy Minister of Foreign Affairs of Kazakhstan Roman Vassilenko, the Ambassador of Japan to Kazakhstan H.E. Ichiro Kawabata, the Minister Counselor of the Embassy of the Islamic Republic of Afghanistan to the Republic of Kazakhstan Khayri Mohammad Humayun, General Director of NLA Zhaxybay Zhumadilov and others attended the opening ceremony.

## USEFUL INFORMATION

### H2020 SwafS 2018—Net4Society collaboration

SYNYO GmbH, a global-acting enterprise focusing on research, innovation and technology located in Vienna, Austria, is currently looking to partner with organizations on ambitious proposals under the Science with and for Society 2018 calls of Horizon 2020 and beyond.

SYNYO explores, develops and implements novel methods, approaches, technologies and solutions in various domains tackling societal, political, ecological and economical challenges. SYNYO analyses the impact of emerging technologies from different angles and from an interdisciplinary perspective. The team at SYNYO consists of high-skilled employees specialized in various scientific and technical fields ready to intensely support a consortium towards a successful delivery.

So far, SYNYO has been involved in 17 European research projects and has created strong management capabilities as coordinator of 2 FP7 and 5 H2020 projects resulting in a project collaboration hub (Collabto) and a smart research project management methodology (SPIRITS). For research and project highlights see the Science with and for Society Brochure where you can find out more on the current SwafS projects SciShops and SciChallenge.

Science with and for Society H2020 Calls Project Partner

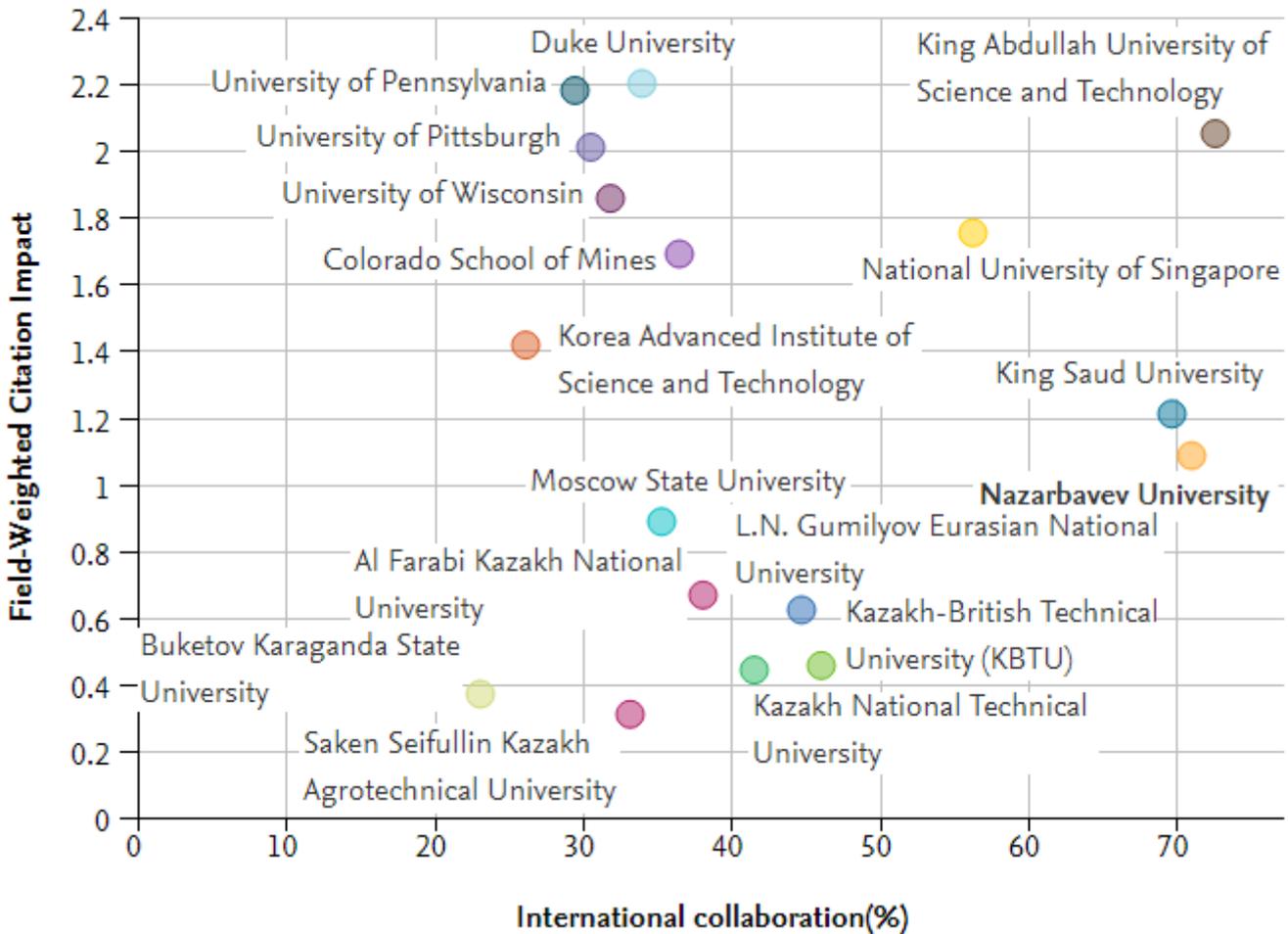
The interdisciplinary team at SYNYO takes over roles along the whole project lifecycle including basic investigations, requirements analyses, concept designs, implementations, validations as well as research

dissemination, communication and exploitation of results.

If you are searching for a partner for the upcoming Science with and for Society calls(April 2018), SYNYO is interested to join your consortium by bringing in specific insights and a base of

ecosystem data gathered on their past activities for the research community and industry. If you are building a consortium for a new research proposal and have any ideas or questions on how SYNYO can contribute, you may contact them directly.

## Research Performance Evaluation by SciVal



Benchmarking the research performance of Nazarbayev University, national and international institutions using Field-Weighted Citation Index and International Collaboration share of peer-reviewed publications from 2012 to March 2018.

BY AIMAN UTEYEVA

In this month's issue, we are delighted to share an updated presentation on the research performance of Nazarbayev University using the SciVal research solution. Since its inception in 2011, Nazarbayev University faculty and researchers have released 1,708 peer-reviewed publications indexed by Scopus, and have been cited 5,686 times (source: Scopus, April 11, 2018). The approximate number of citations per the peer-reviewed publication is 3.3.

In order to provide you with more comprehensive information on the NU's research performance, we prepared a presentation using SciVal research evaluation platform that is based on Scopus ([https://drive.google.com/open?id=153MboIQpXpYZB8k1CxU03qK9\\_nt75pT0](https://drive.google.com/open?id=153MboIQpXpYZB8k1CxU03qK9_nt75pT0)).

If you have any questions regarding the provided information, please contact Aiman Uteyeva (email address: [aiman.temirova@nu.edu.kz](mailto:aiman.temirova@nu.edu.kz)).

# FUNDING OPPORTUNITIES

To see the funding opportunities shared in previous issues of the Research Newsletter, please [click here](#).

#	Program	Source	Award ceiling	Deadline	Direct Link
1.	PD-18-1998 Accelerating Discovery: Educating the Future STEM Workforce	NSF	N/A	Jul 02, 2018	<a href="#">Link</a>
2.	DE-FOA-0001829 Developing Technologies for Advancement of Associated Geologic Storage in Basinal Geo-Laboratories	Department of Energy National Energy Technology Laboratory	\$3,500,000	Jun 01, 2018	<a href="#">Link</a>
3.	Direct Doctorate Fellowship in Aging Biology	Fundação de Amparo à Pesquisa do Estado de São Paulo	N/A	30-05-18	<a href="#">Link</a>
4.	Healthcare technologies discipline hopping call	Engineering and Physical Sciences Research Council UK	N/A	no closing date	<a href="#">Link</a>
5.	The Medieval Iron Industry in the Weald, Archaeology -PhD Studentship	University of Exeter	14777 GBP	30-04-18	<a href="#">Link</a>
6.	Strategic Initiatives – Canada Cultural Investment Fund	Canadian Heritage	N/A	15-09-18	<a href="#">Link</a>
7.	International prize	Library of Congress	50000 USD	30-04-18	<a href="#">Link</a>

#	Program	Source	Award ceiling	Deadline	Direct Link
8.	Developing a new isotope analysis instrument to understand origin and distribution of water in the solar system	National Aeronautics and Space Administration	N/A	N/A	<a href="#">Link</a>
9.	Outer planet astrodynamics and navigation research	National Aeronautics and Space Administration	N/A	N/A	<a href="#">Link</a>
10.	Feed the future global food security BAA	United States Agency for International Development	N/A	28-03-19	<a href="#">Link</a>
11.	Adapting and applying non-transportation sector organizational leadership practices to transportation agencies	Transportation Research Board	N/A	01-08-18	<a href="#">Link</a>
12.	Postdoctoral researcher in SAR remote sensing for monitoring subsidence and seepage along levees and aqueducts	National Aeronautics and Space Administration	N/A	N/A	<a href="#">Link</a>
13.	The Creation Grant program: "A" GRANTS	New Brunswick Arts Board	01-10-18	15,000 CAD	<a href="#">Link</a>
14.	JPL Postdoc in GNSS-R data analysis	National Aeronautics and Space Administration	N/A	N/A	<a href="#">Link</a>

#	Program	Source	Award ceiling	Deadline	Direct Link
15.	High-resolution Multiple-species Atmospheric Profiler (HiMAP)	National Aeronautics and Space Administration	N/A	N/A	<a href="#">Link</a>
16.	Disruptive Technologies for Acoustic Noise Reduction	University of Exeter	29-06-18	90,000 GBP	<a href="#">Link</a>
17.	Biom mineralisation at Soft-Hard Tissue Interface for Craniofacial Reconstruction Surgery Design and Optimisation, Engineering - PhD (Funded)	University of Exeter	28-08-18	14,777 GBP	<a href="#">Link</a>
18.	HEALTHCARE INFECTION SOCIETY GRAHAM AYLIFFE TRAINING FELLOWSHIP	Healthcare Infection Society	15-03-19	60,000 GBP	<a href="#">Link</a>
19.	SPRING AND FALL GRANTS: Spring	Mountain Equipment Co-op	19-03-19	N/A	<a href="#">Link</a>
20.	Projects	Auckland Medical Research Foundation	29-08-19	160,000 NZD	<a href="#">Link</a>
21.	Distinguished Lecture Series	Fields Institute for Research in Mathematical Sciences	15-09-18	N/A	<a href="#">Link</a>

#	Program	Source	Award ceiling	Deadline	Direct Link
22.	Dear Colleague Letter: Advancing long-term reuse of scientific data	National Science Foundation	23-05-18	300,000 USD	<a href="#">Link</a>
23.	Fiscal Year (FY) 2018 Title II: International Food Relief Partnership (IFRP), shelf-stable food commodity transportation, delivery, and distribution	United States Agency for International Development	09-05-18	150,000 USD	<a href="#">Link</a>
24.	Independent Grants for Learning & Change (IGLC): Track 2 - Call for Grant Applications (CGA): Improving HCP counseling of patients on the appropriate selection and use of OTC analgesics	Pfizer	21-06-18	80,000 USD	<a href="#">Link</a>
25.	GIS Applications to risk management of water resources	Oak Ridge Associated Universities	N/A	N/A	<a href="#">Link</a>
26.	Research and evaluation on promising reentry initiatives	U.S. Department of Justice	06-08-18	Up to 500,000 USD with total funding of 5,000,000 USD	<a href="#">Link</a>
27.	NIDA Mentored clinical scientist development program award in substance use and substance use disorder research	National Institutes of Health	Letter of intent on May 11th 2018	Up to 500,000 USD	<a href="#">Link</a>
28.	STEM + Computing K-12 education (STEM+C)	National Science Foundation	02-07-18	N/A	<a href="#">Link</a>

#	Program	Source	Award ceiling	Deadline	Direct Link
29.	Announcement for proposals to provide NRCS easement programs restoration assistance	U.S. Department of Agriculture	18-05-18	Total funding 250,000,000 USD	<a href="#">Link</a>
30.	ASTRO-PCF Career development award	American Society for Radiation Oncology	08-08-18	Up to 75,000 USD	<a href="#">Link</a>
31.	ASH Award for leadership in promoting diversity	American Society of Hematology	16-07-18	N/A	<a href="#">Link</a>
32.	Arnold O. Beckman postdoctoral fellowship	Arnold and Mabel Beckman Foundation	06-09-18	Up to 160,000 USD	<a href="#">Link</a>
33.	Strengthening civil society and civil servant capacity through partnership	U.S. Department of State	04-06-18	Up to 400,000 USD with total funding of 1,261,666 USD	<a href="#">Link</a>
34.	Engineering Education Grant Scheme (EEGS)	Institution of Mechanical Engineers	06-04-19	Up to 15,000 GBP	<a href="#">Link</a>
35.	ASTRO-BCRF Career development award	American Society for Radiation Oncology	08-04-19	Up to 100,000 USD	<a href="#">Link</a>

#	Program	Source	Award ceiling	Deadline	Direct Link
36.	Collaborative Awards in Humanities and Social Science	Wellcome Trust	04-Jul-18	Up to £1.5 million	<a href="#">Link</a>
37.	Collaborative Awards in Science	Wellcome Trust	20-Aug-18	Up to £4 million	<a href="#">Link</a>
38.	Four-year PhD Studentships in Science	Wellcome Trust	Autumn each year	Studentship stipend, fees and other costs	<a href="#">Link</a>
39.	Innovator Awards	Wellcome Trust	There are no deadlines for this scheme – you can apply online at any time	Up to £500,000	<a href="#">Link</a>
40.	Intermediate Fellowships in Public Health and Tropical Medicine	Wellcome Trust	09-May-18	Salary and research expenses covered	<a href="#">Link</a>
41.	Investigator Awards in Humanities and Social Science	Wellcome Trust	04-Jul-18	From £250,000 to £1 million	<a href="#">Link</a>
42.	Investigator Awards in Science	Wellcome Trust	24-Jul-18	Flexible funding, up to around £3 million. Salary isn't provided.	<a href="#">Link</a>

#	Program	Source	Award ceiling	Deadline	Direct Link
43.	Principal Research Fellowships	Wellcome Trust	You can express an interest at any time	Salary and research expenses covered	<a href="#">Link</a>
44.	Public Engagement Fund	Wellcome Trust	03-May-18	£25,000 to £3 million	<a href="#">Link</a>
45.	Research Enrichment – Open Research	Wellcome Trust	09-Jul-18	Up to £50,000	<a href="#">Link</a>
46.	Research Enrichment – Public Engagement	Wellcome Trust	09-Jul-18	Up to £250,000, or 5% of the funding awarded under your main Wellcome grant	<a href="#">Link</a>
47.	Seed Awards in Humanities and Social Science	Wellcome Trust	26-Jun-18	Usually between £25,000 and £100,000	<a href="#">Link</a>
48.	Seed Awards in Science	Wellcome Trust	05-Jul-18	Up to £100,000	<a href="#">Link</a>
49.	Industrial Strategy Challenge Fund - Transforming Construction: Active Building Centre	Engineering and Physical Sciences Research Council UK	23-May-18	N/A	<a href="#">Link</a>
50.	Call for Feasibility Studies - EPSRC Future Manufacturing Hub in Manufacture using Advanced Powder Processes (MAPP)	Engineering and Physical Sciences Research Council UK	18-May-18	N/A	<a href="#">Link</a>

#	Program	Source	Award ceiling	Deadline	Direct Link
51.	Research Networking	Arts & Humanities Research Council	N/A	up to £30,000	<a href="#">Link</a>
52.	Knowledge Transfer Partnerships	BBSRC Bioscience for the Future	N/A	N/A	<a href="#">Link</a>
53.	Trust and Global Governance Large Grants	ESRC Economic and Social Research Council	Jun-18	between £1 million and £2.5 million (at 100% fEC)	<a href="#">Link</a>
54.	Health Systems Research Initiative call 5	MRC Medical Research Council	05-Jun-18	N/A	<a href="#">Link</a>
55.	National capability services & facilities commissioning - isotope and radiocarbon facility	NERC UK Research & Innovation	26 July 2018	1-3 M GBP	<a href="#">Link</a>
56.	"Original – isn't it?" New Options for the Humanities and Cultural Studies	VolkswagenStiftung	Nov-18	up to 80.000 or 150.000 Euro (depending on funding line)	<a href="#">Link</a>
57.	'Freigeist' Fellowships	VolkswagenStiftung	11-10-18	up to 1 million Euro	<a href="#">Link</a>
58.	Artificial Intelligence and the Society of the Future	VolkswagenStiftung	05-07-18	up to 1,5 million Euro	<a href="#">Link</a>

#	Program	Source	Award ceiling	Deadline	Direct Link
59.	Experiment! – In search of bold research ideas	VolkswagenStiftung	01-08-18	up to 120,000 Euro (flexible use)	<a href="#">Link</a>
60.	Life? – A Fresh Scientific Approach to the Basic Principles of Life	VolkswagenStiftung	09-10-18	up to 1.5 million Euro	<a href="#">Link</a>
61.	World Knowledge – Structural Support for "Rare Subjects"	VolkswagenStiftung	25-08-18	up to 1 million euros (funding line 1); up to 100,000 euros (funding line 2)	<a href="#">Link</a>
62.	Impact of initial influenza exposure on immunity in infants	National Institutes of Health	Letter of intent on June 2nd 2018	Up to 3,100,000 USD with total funding of 5,000,000 USD	<a href="#">Link</a>
63.	Investigation of antibody sequences	Oak Ridge Associated Universities	N/A	N/A	<a href="#">Link</a>
64.	Novel tools and devices for animal research facilities and to support the care of animal models	National Institutes of Health	05-09-18	Up to 1,500,000 USD	<a href="#">Link</a>
65.	UV Emission processes in astrophysics and planetary atmospheres	National Aeronautics and Space Administration	01-07-18	Up to 60,000 USD	<a href="#">Link</a>
66.	Strategy & policy fellows program	Smith Richardson Foundation	June 15th 2018	Up to 60,000 USD	<a href="#">Link</a>

#	Program	Source	Award ceiling	Deadline	Direct Link
67.	Pilot and feasibility clinical research grants in urologic disorders	National Institutes of Health	June 16th 2018	Up to 275,000 USD	<a href="#">Link</a>
68.	Non-pharmacological interventions for gait and balance disturbances	Michael J. Fox Foundation for Parkinson's Research	Letter of intent on May 31st 2018	Up to 500,000 USD	<a href="#">Link</a>
69.	Research on the health of transgender and gender nonconforming populations	National Institutes of Health	May 7th 2019	Up to 275,000 USD	<a href="#">Link</a>
70.	CLAUDE LEON FOUNDATION POSTDOCTORAL FELLOWSHIPS	Claude Leon Foundation	31-05-18	Up to 275,000 ZAR	<a href="#">Link</a>