

## U100: An Innovative USERN Platform for Education and Research Without Borders

Sara Momtazmanesh<sup>1,2</sup>, Farzaneh Rahmani<sup>1,2</sup>, Farnaz Delavari<sup>1,2</sup>, Zahra Vahedi<sup>1</sup>, Saleheh Ebadirad<sup>1</sup>, Mahsa Keshavarz-Fathi<sup>1,2</sup>, Marjan Moallemian<sup>1</sup>, Saboura Ashkevarian<sup>1</sup>, Mohammad Reza Kolahi<sup>1</sup>, Alireza Samimiat<sup>1</sup>, Nahid Raei<sup>1,2</sup>, Pouria Rouzrokh<sup>1,2</sup>, Samira Alesaeidi<sup>1,2</sup>, Ali Jaberipour<sup>1</sup>, Sara Bakhshi<sup>1</sup>, Sasan Paryad-Zanjani<sup>1</sup>, Matjaz Perc<sup>1,3,4,5</sup>, Lucina Q. Uddin<sup>1,6</sup>, Abdelkader Allali<sup>1,7</sup>, Kathleen Sullivan<sup>1,8</sup>, Abbas Taher<sup>1,9</sup>, Safa Baris<sup>1,10</sup>, Ahmet Ozen<sup>1,10</sup>, Elif Karakoc-Aydiner<sup>1,10</sup>, Juan Carlos Aldave<sup>1,11</sup>, Amir Hamzah Abdul Latiff<sup>1,12</sup>, Waleed Al-Herz<sup>1,13</sup>, Prathip Phantumvanit<sup>1,14</sup>, Anzhela Stashchak<sup>1,15</sup>, Oleksandr Kryvenko<sup>1,15</sup>, Mykola Stashchak<sup>1,15</sup>, Didik Utomo<sup>1,16</sup>, Deepak Salunke<sup>1,17,18</sup>, Roya Kelishadi<sup>1,19</sup>, Mojtaba Hedayati<sup>1,20</sup>, Shahrokh MirzaHosseini<sup>1,21</sup>, Anastasiia Bondarenko<sup>1,22</sup>, Ekaterini Goudouris<sup>1,23</sup>, Antonio Condino-Neto<sup>1,24</sup>, Duarte Nuno Vieira<sup>1,25</sup>, Timo Ulrichs<sup>1,26</sup>, Dainius Pavalkis<sup>1,27</sup>, László Rosivall<sup>1,21,28</sup>, Hans Ochs<sup>1,29</sup>, Nima Rezaei<sup>1,2,30</sup>

<sup>1</sup> Universal Scientific Education and Research Network (USERN), The World

<sup>2</sup> School of Medicine, Tehran University of Medical Sciences, Tehran, Iran

<sup>3</sup> Faculty of Natural Sciences and Mathematics, University of Maribor, Maribor, Slovenia

<sup>4</sup> Complexity Science Hub Vienna, Vienna, Austria

<sup>5</sup> Department of Medical Research, China Medical University Hospital, China Medical University, Taichung, Taiwan

<sup>6</sup> Brain Connectivity and Cognition Lab, Coral Gables, Florida, USA

<sup>7</sup> Moroccan Association Hassanian for Health and Environment (AMHES), Rabat, Morocco

<sup>8</sup> Children's Hospital Philadelphia, Philadelphia, Pennsylvania, USA

<sup>9</sup> Naba-Alhayat Foundation for Medical Sciences and Healthcare, Najaf, Iraq

<sup>10</sup> Division of Pediatric Allergy/Immunology, Marmara University Hospital, Marmara University, Istanbul, Turkey

<sup>11</sup> Hospital Nacional Edgardo Rebagliati Martins, Lima, Peru

<sup>12</sup> Allergy and Immunology Centre, Pantai Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

<sup>13</sup> Department of Pediatrics, Al-Sabah Hospital, Kuwait, Kuwait

<sup>14</sup> Faculty of Dentistry, Thammasat University, Bangkok, Thailand

<sup>15</sup> Kharkiv National Medical University, Kharkiv, Ukraine

<sup>16</sup> Nusantara Institute of Science and Technology (NUSCIENTECH), Indonesia

<sup>17</sup> Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India

<sup>18</sup> Punjab University (PU), Chandigarh, India

<sup>19</sup> Research Institute for Primordial Prevention of Non-communicable Disease, Isfahan University of Medical Sciences, Isfahan, Iran

<sup>20</sup> Guilan University of Medical Sciences, Rasht, Iran

<sup>21</sup> Avicenna International College, Budapest, Hungary

<sup>22</sup> Pediatric Infectious Disease and Pediatric Immunology Department, Shupyk National Medical Academy for Postgraduate Education, Kiev, Ukraine

<sup>23</sup> Pediatrics Department, Medical School, Federal University of Rio de Janeiro, São Paulo, Brazil

<sup>24</sup> Department of Immunology, Institute of Biomedical Sciences, University of São Paulo, São Paulo, Brazil

<sup>25</sup> Department of Forensic Medicine, Ethics and Medical Law, Faculty of Medicine, University of Coimbra, Coimbra, Portugal

<sup>26</sup> Institute for Research in International Assistance, Akkon University for Human Sciences, Berlin, Germany

<sup>27</sup> Medical University Astana, Nur-Sultan, Kazakhstan

<sup>28</sup> Institute of Translational Medicine, International Nephrology Research and Training Center, Faculty of Medicine, Semmelweis University, Budapest, Hungary

<sup>29</sup> University of Washington and Seattle Children's Research Institute, Seattle, WA, USA

<sup>30</sup> Research Center for Immunodeficiencies, Children's Medical Center Hospital, Tehran University of Medical Sciences, Tehran, Iran

"Two heads are better than one," or "too many cooks spoil the broth"! This is the old dispute of two doctrines in scientific production. Two schools that have each addressed a countless number of questions in

the history of science: the collaborators and the solos. Here in the Universal Scientific Education and Research Network (USERN), we relate to the former school, introducing the "U100", a collaborative

**Corresponding Author:** N. Rezaei

Research Center for Immunodeficiencies, Children's Medical Center Hospital, Tehran University of Medical Sciences, Tehran, Iran  
Tel: +98 21 66576573, Fax: +98 21 66929235, E-mail address: rezaei\_nima@tums.ac.ir

platform for research among at least 100 scientific centers around the globe (Figure 1).

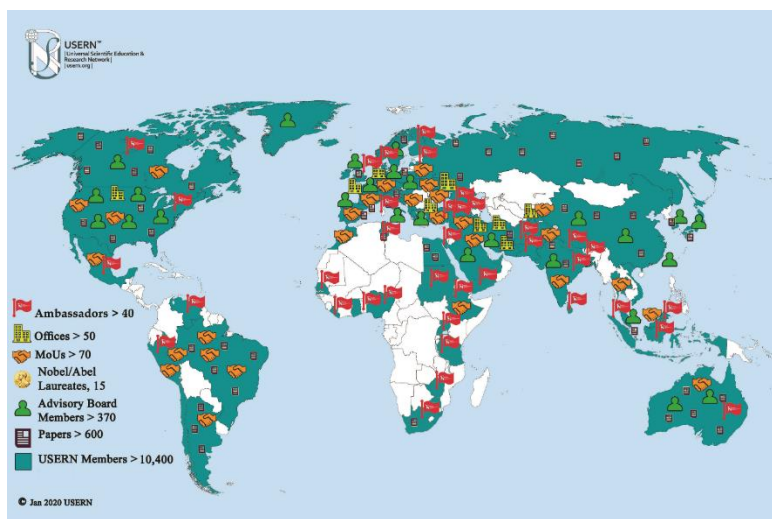
Scientists can contribute to building the future by educating talented youngsters, which is made possible by networking the major role players. Modern education defends the figure of the teacher as a facilitator of the learning process. Learning should, therefore, be the result of a collaborative process between teachers and students. So must behave research too: turn into a collaborative process to build knowledge, covering all fields of cooperation, erasing borders. Collaborative research is a growing trend with outstanding merits and can entail any research-related activity, from sharing skills, techniques, and knowledge, to exchange programs and cooperative projects. Collaborative research provides us with access to unique study populations and facilities and means to publish multi-center and multi-national papers that are proved to reach higher cite scores and impact (1,2). Last but not least, learning about different nationalities, and the way they solve common problems can be a source for the formation of novel ideas, an opportunity offered only through international interactions (3).

Despite the considerable advantages of multi-national collaborative endeavors in science, there remain several challenges to tackle. To begin with, many institutions do not have the required framework to foster these collaborations (4). There might be significant challenges in establishing clear and effective communication between collaborators, and the outpouring amount of data and ideas might confuse the responsible side to integrate the results and write the final paper/report. These confusions usually result in a collaborative project taking longer than a non-collaborative one (5). These shortages, along with the compelling need for cooperative scientific projects, highlight the need for an organization to identify, assess, and allocate research resources and facilitate communications that result in multi-national and multi-center research initiatives.

USERN was established on January 1<sup>st</sup>, 2016, to promote professional, scientific research, and education worldwide (6-9). USERN is honored to have over 10,000 members from all five continents with thirteen Nobel and two Abel laureates and more than 350 world top 1% scientists as Advisory Board members (10). USERN members are involved in more than 80 active research interest groups, and the numbers are still counting.

After four years of active scientific diplomacy and establishment of more than 50 USERN Offices and 60 USERN Memorandums of Agreement (MOU), USERN announces the inauguration of "U100", an innovative platform for scientific exchange, education and Research activities without border across the globe. U100 is USERN's next step towards the goal of making sciences borderless, this time tackling the border between countries and between academia. U100 marks the collaborative network of at least one-hundred universities and institutes from thirty-five countries under the brand name of USERN. Members of U100 have agreed on expanding collaborations in scientific programs, exchanges, and training of young researchers, sharing the best-practice, and co-organizing meetings, workshops, and expert committees, based upon mutual interests and benefits. U100 members are universities and institutes working in all fields of science, including formal, physical, chemical, biological, medical, and social sciences.

U100 envisions an outstanding environment for reciprocal scientific exchange all around the world by removing the borders between countries and disciplines and focusing on junior scientists in collaborative activities. It is U100's mission to (1) ease the communication between different institutions, (2) support voluntary collaborative projects between members, (3) promote international collaborative projects, (4) advocate benefits for all collaborative members, and (5) raise awareness of the importance of international collaborations.



**Figure 1.** The map of Universal Scientific Education and Research Network (USERN).

## References

1. Chinchilla-Rodriguez Z, Sugimoto CR, Lariviere V. Follow the leader: On the relationship between leadership and scholarly impact in international collaborations. *PLoS One* 2019;14:e0218309.
2. Breugelmans JG, Roberge G, Tippet C, Durning M, Struck DB, Makanga MM. Scientific impact increases when researchers publish in open access and international collaboration: A bibliometric analysis on poverty-related disease papers. *PLoS One* 2018;13:e0203156.
3. Francisco JS. International Scientific Collaborations: A Key to Scientific Success. *Angew Chem Int Ed Engl* 2015;54:14984-5.
4. Parker M, Kingori P. Good and Bad Research Collaborations: Researchers' Views on Science and Ethics in Global Health Research. *PLoS One* 2016;11:e0163579.
5. Sushama Sivakumar JF. Collaborations: Pros and Cons Bethesda, MD: The American Society for Cell Biology (ASCB); 2016 (Available from: <https://www.ascb.org/careers/41032-2/>.)
6. Rezaei N. Universal Scientific Education and Research Network (USERN):a New Horizon for Science. *Acta Med Iran* 2016;54:1-3.
7. Rezaei N. Universal Scientific Education and Research Network (USERN): To Make the Knowledge Without Borders. *Acta Med Iran* 2017;55:1-5.
8. Rezaei N. Universal Scientific Education and Research Network (USERN): Twinkling Stars Unite to Make the World Glow. *Acta Med Iran* 2018;56:1-3.
9. Rahmani F K-FM, Hanaei S, Aminorroaya A, Delavari F, Paryad-Zanjani S, Sadat Ahmadi N, Akbari P, Ashkevarian S, Barghi F, Ebadirad S, Jaberipour A, Kolahi MR, Moallemian M, Pourebrahimi A, Samimiati A, Vahedi Z, Ladi Seyedian S-S, Rezaei N. Universal Scientific Education and Research Network (USERN): Step Strong in Scientific Networking. *Acta Med Iran* 2019;57:1-4.
10. Universal Scientific Education and Research Network (USERN) (Available from: <https://usern.tums.ac.ir/>)