Correspondence

Trump cannot crush Iran's scientists

US President Donald Trump's unilateral withdrawal from the Iran Nuclear Agreement (Joint Comprehensive Plan of Action; JCPOA) in May attracted international condemnation. As vice-dean for research in the Faculty of Medicine at Tehran University of Medical Sciences, I stand behind Iran's scientists, who have resolved to work even harder to maintain the country's scientific progress (see also *Nature* **557**, 287–288; 2018).

After the imposed war in 1980–88 and decades of Western sanctions, Iran has made remarkable advances in research, ranking 17th in the world in 2012. The JCPOA did not have much impact on scientific productivity, in part because many US sanctions remained in place. These continued to affect the purchase of books, journals, lab equipment and materials; the payment of publication charges; membership of scientific bodies; and travel to conferences and meetings. Furthermore, the US treasury department clamped down on publication in US journals of papers from Iranian government scientists (see S. Akhondzadeh *Avicenna J. Med. Biotechnol.* **5**, 203; 2013).

In the face of Trump's withdrawal from the JCPOA, I hope that the international scientific community will support Iran's efforts to contribute further to international science.

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Exit interviews and lab-member awards

As leader of a large research group, I would like to share an effective strategy for collecting negative feedback and constructive suggestions from lab members on leadership issues (see *Nature* **557**, 294–296; 2018).

Following the practice of many commercial companies, I organize an exit interview with every postdoc, graduate and undergraduate student when they leave the lab. I find that people are generally more open about problems when they are leaving, because they no longer have to worry about reactions from their seniors or colleagues. Identifying likes and dislikes from a variety of viewpoints helps me to reinforce good practices and modify unwelcome ones.

Another industrial ploy I use is to run semi-annual votes for the best lab member, along the lines of company awards for 'employee of the month'. Lab members vote on three performance criteria: helpfulness, work ethic and productivity. The person who obtains the highest collective score from their peers is treated to a free lunch.

Although the winners value their peers' respect over a free lunch, the award helps the lab establish a culture of helping one another, working hard and with integrity, and honing scientific findings for publication.

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Evaluation woes: we saw it coming

The cry of anguish from John Tregoning asking how his research should be judged, if not by the journal impact factor (*Nature* **558**, 345; 2018), reflects a profound malaise in the university system. So what did we do before journal impact factors were invented, when career advancement flourished anyway?

The transition from traditional rigorous intellectual assessment of research to bibliometric indices and box-ticking coincided with the transition to the corporate university model and the rise of the university bureaucrat. These administrators showed less interest in assessing the intellectual merit of research than in deploying competitive metrics for the marketplace.

Governments are much to blame because of their decreasing budgets for tertiary education. However, the professoriate (to which I belong) should have seen the danger these shifts posed sooner and, when it did, it should have fought harder for the intellectual heart of the system.

Some evidence-based metrics are useful. In my view, however, a return to the methods of peer-driven intellectual assessment that worked well for centuries should remain part of the answer to evaluation woes — even though that could mean retrieving the system from the grasp of university bureaucrats and the burgeoning bibliometric industry.

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Evaluation woes: start right

In our view, we need to move from a single system for assessing research performance (see J. Tregoning *Nature* **558**, 345; 2018) to a prospective model implemented at the start of a research initiative. This would engage stakeholders in defining metrics for the project's mission and agenda.

An example is the European Commission's MULTI-ACT project, which is a collective research-impact framework of multivariate models for health research and innovation (see go.nature.com/2mdkqgt). This integrates conventional metrics related to excellence with new measures relating to economic and financial efficiency and to social efficacy.

Although not the "quick fix" Tregoning mentions, such multidimensional measures should help early-career researchers to tie their work more effectively to a meaningful research agenda.

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Evaluation woes: metrics beat bias

We disagree with the contention that publication metrics should be condemned as the bane of research-evaluation practices (see J. Tregoning *Nature* **558**, 345; 2018). In countries with a long-rooted tradition of nepotism and patronage, such metrics provide objective and consistent evaluation — particularly advantageous for early-career researchers. They can also help overstretched funding agencies and review panels to arrive at fast, fair and transparent decisions.

The conventional combination of qualitative review and quantitative metrics can be expensive and time-consuming, not least because it is hard to find genuinely impartial reviewers and to achieve consensus.

We acknowledge that misuse of metrics such as journal impact factors and citation counts can discredit creative research, encourage citation gaming and provoke research misconduct. But the striking increase in the popularity of metrics as an evaluation tool worldwide indicates that they offer benefits, too.

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CONTRIBUTIONS

Correspondence may be submitted to **correspondence@nature.com** after consulting the author guidelines and section policies at **http://go.nature.com/cmchno**.

Subject **Your Nature letter**

From Horton, Richard (ELS-CAM) <Richard.Horton@lancet.com>
To s.akhond@tums.ac.ir <s.akhond@tums.ac.ir>

Date 2018-07-23 18:56

Dear Dr Akhondzadeh – I read your letter in the July 19 issue of Nature expressing hope that the international community will support Iran's efforts to contribute further to international science. I am the Editor-in-Chief of The Lancet and we are committed to working with all countries to further the interests of health and medical science. I wondered how I could best respond to your invitation. We would very much like to support Iran's engagement in the global scientific community.

My best, Richard Horton

Panel: Top ten research priorities for hyperacusis

1. What is the most effective treatment approach for hyperacusis in children?
2. What is the prevalence of hyperacusis in a general population and other specific populations (eg, people with autism, mental health issues, learning disabilities, or hearing loss)?
3. Are there different meaningful types of hyperacusis?
4. What is the essential knowledge and training required for health professionals to appropriately refer or effectively manage hyperacusis?
5. Which treatment approaches are most effective for different types or severities of hyperacusis?
6. Is hyperacusis due to physical or psychological issues or is it a combination of both?
7. Which psychological therapy (eg, counselling, cognitive behavioural therapy, or mindfulness) is most effective for hyperacusis?
8. What management approach for hyperacusis is most effective for adults and children with autism?
9. What is the best way of using sound in therapy for hyperacusis?
10. Which self-help interventions are effective for hyperacusis?

hyperacusis includes sound-based tolerance tests and questionnaires to measure the effect it has on an individual's life.[4] Treatment approaches include sound and cognitive behaviour therapies, although no formal clinical practice guidance currently exists.[5]

The Hyperacusis Priority Setting Partnership (PSP) was established to identify the questions about hyperacusis that are the most important to health-care professionals and people with lived experience of hyperacusis (patients and their parents). The PSP included people with lived experience of hyperacusis; health-care professionals who specialise in clinical and cognitive psychology, audiology, and otolaryngology; researchers; and representatives from organisations involved in supporting people with hyperacusis, funding research, and communicating science.

Using James Lind Alliance methods, the PSP started with two surveys. In the first, 312 respondents worldwide submitted 2370 research questions, termed uncertainties. Of these respondents, 179 were people with lived experience and 86 were health-care professionals, of whom one also had hyperacusis. 38 respondents were either parents, carers, family members, friends, or teachers. Submitted questions were verified as unanswered in the research literature. Questions were processed and narrowed down to 85, which were listed in a second survey. In the second survey, 327 participants voted for their individual priorities. From the 28 questions that received the most representative votes, ten research priorities were agreed upon during the final workshop that involved 21 participants, held July, 2018, in Nottingham, UK (panel). The top ten research priorities for hyperacusis focus on treatment, cause, mechanism, prevalence, and health-care provider knowledge and training. These priorities provide an important platform for researchers, funding bodies, and the health-care sector to ensure that future research focuses on questions that are important to health-care practitioners and people with lived experience of hyperacusis.

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Possibility for science without borders in the Trump era

In July 2004, I participated in the International Association of Universities conference (Sao Paulo, Brazil). In one of the lectures, the acting head of the Ohio State University delivered a speech entitled Globalization in Science. The lecture coincided with the movement generated by President Bush in 2002 when he proposed the problem of the axis of evil in response to the Iranian President Mohammad Khatami's invitation for a so-called dialogue of civilisations. As a consequence, the US Government at the time ordered American publishers not to publish Iranian articles.

After the beautiful speech of this Ohio State University official who insisted that the US Government wants to bring into play the meaning of science without borders in the so-called global village, I asked how this could be

†See Appendix for the Hyperacusis Priority Setting Partnership Steering Group members

possible when the US President gave an order to prevent publication of articles from another country. The speaker, with all due respect, apologised for the behaviour of the US Government with much regret. Considering this, in 2013 the American treasury transferred this order to be enforced on publishers and surprisingly, in the period of science without borders in the global village, we saw a percentage of articles from Iran immediately rejected because of sanctions.

Trump unilaterally withdrew from the Iran Nuclear Agreement (Joint Comprehensive Plan of Action) in May, 2018, which resulted in international condemnation. Regardless of the illegality of this action, one might ask how this would affect scientific progression in Iran.

In fact, it should be said that Iran's scientific growth, which has been noticeable in the past 20 years, has been achieved under the shadow of the all-inclusive sanctions imposed against Iran for the past 40 years since the Islamic Revolution of Iran, especially by the US Government, and 8 years of imposed war.[1] While Saddam Hussein was responsible for the deaths of Iraqis and Iranians alike with use of chemical weapons, Iran's output of science publications was less than a fifth of Turkey's output. Thurkey also had a similar geopolitical and demographic profile to Iran during the period just after the end of the Iran–Iraq war (Web of Science: Iran, 165 documents; Turkey, 894 documents). However, in 2017, Iran's scientific output according to ISI ranked first in the region (Web of Science: Iran, 51 035 documents; Turkey, 46 020 documents). The Joint Comprehensive Plan of Action did not have much effect on science production perhaps partly because many American sanctions were never really lifted. This continuing impetus for growth is in addition to the fact that it is often difficult for Iranians to acquire visas. On many occasions, the only reason that Iranian scientists are not able to attend a conference and present scientific data is a lack of a visa. Moreover, the American treasury has ordered American publishers not to accept and publish manuscripts submitted from Iranian scientists.[2] After the Joint Comprehensive Plan of Action and the responsible behaviour of President Obama, the problems related to purchase of scientific materials and financial transactions for payment of various fees decreased. This problem has worsened since Trump became president. These problems are not just in the publication of articles. In 2013 and 2014, Thomson Reuters cut off Iran's access to Web of Science. Currently, after the solitary move by the USA to step aside from the Joint Comprehensive Plan of Action, it is not possible for Iranian scientists to rely on bank transfers, purchase materials and laboratory equipment, pay membership fees to international organisations, pay participation fees to conferences, and pay publication fees. These problems are taking place in the global village and a time of science without borders in Trump's era.

Despite these problems, and despite unjust and unkind behaviours, Iranian researchers have continued with perseverance in the past 40 years, and, of course, unity with international colleagues in the USA, Europe, and globally.[3] Iranian scientists smile under the pressures and are hopeful that, with help from researchers in other countries, they can prevent President Trump from building walls around science this time around.

I declare no competing interests.

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Department of Error

Reynolds A, Mann J, Cummings J, Winter N, Mete E, Te Morenga L. Carbohydrate quality and human health: a series of systematic reviews and meta-analyses. Lancet 2019; **393:** 434–45—In this Article, the footer should state "Published online January 10, 2019". This correction has been made to the online version as of Jan 31, 2019, and the printed version is correct.

Cordonnier C, Demchuck A, Ziai W, Anderson CS. Intracerebral haemorrhage: current approaches to acute management. Lancet 2018; **392:** 1257–68—In this Series paper, the dose of tranexamic acid in the second international Tranexamic acid for hyper-acute primary IntraCerebral Haemorrhage (TICH-2) trial (p 1262) has been corrected to "1 g bolus followed by an infusion of another 1 g over a period of 8 h". This correction has been made to the online version as of Jan 31, 2019.