Scientists should be awarded: *International Orthopaedics* publishes the 2021 SICOT Research Awards

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In all Societies, there are incentive systems to raise performance. When people perceive the outside intervention as controlling, they reduce their intrinsic motivation. In contrast, when people are perceiving the outside intervention to be a support, their intrinsic motivation is raised. Awards are typically perceived as a support rather than control, and it is likely to affect performance positively.

Awards are everywhere and always have been

There are many awards in orders, medals, decorations, prizes, titles, and other honors. It would be hard-pressed to find any area of society in which awards are absent. Not only governments bestow awards. Awards are also of importance in culture, arts, and sports. For arts, prominent examples are the *Academy Awards (Oscars)*, film festivals at Cannes, Venice, or Berlin, the *Emmy* award for television, and the *Grammy* award for music. There are regular sports for the title of *Olympic* or *World Champion*. Awards also apply to the military, where decorations are extremely important, old, and abundant. The awards relate to social status, social comparisons, reference groups, identity, reputation, symbolic and intrinsic incentives, and, of course, the whole area of motivation.

Academic awards

As a place of rational interaction, we might expect that Academia represents an exception. Most scientists have been doing science research for pleasure, excitement, or enthusiasm and help transfer knowledge and contribute to knowledge and maybe save patients' lives. It is hard remember any scientist who chose to do research in the game of earning an award. Conducting research to elucidate science is a major award itself. Despite the rational in science, Academia has an elaborate and extensive awards system. Consider all the universities handing out the titles honorary doctor or professor or professional organizations awarding a huge number of medals, the most important one probably being the *Nobel Prizes*.

The most prestigious of awards in science [1] in the world are the Nobel Prize, the Turing Prize, the Fields Medal, the Abel Prize, and the Breakthrough Prize. The Nobel Prize is named as the Swedish inventor of dynamite, Alfred Nobel. The Nobel Prize is awarded each year in the fields of physics and physiology or medicine, chemistry, economics, literature, and peace. To compensate the inhumane use of his invention, Alfred Nobel, a year before his death in 1998, donated the majority of his wealth to found the Nobel Prizes promoting humanitarian scientific efforts. The Laureates receive a gold medal, a decorated diploma, and a cash award (8 million SEK, about €1.16 million). The Turing Prize is named after English mathematician Alan Turing, who is often referred to as the father of computer science. Turing Prize is awarded each year by the Association of Computing Machines (ACM) to those who have made significant contribution to advancement in the field of computer sciences [2]. The Fields Medal is given every 4 years to two, three, or four young mathematicians (under 40 years of age) by the International Congress of the International Mathematical Union (IMU) for advanced mathematics achievements. The first young female scientist who received this award (with three other young scientists) was Maryam Mirzakhani in 2014.

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The Fields Award includes a gold medal representing an Archimedes profile and CA \$15,000. The Abel Prize is new and famous awards in the field of mathematics donated by the King of Norway to outstanding mathematicians in commemoration of the 200th anniversary of the birth of Norwegian mathematician Niels Henrik Abel (1829–1802) [2].

We acknowledge that awards make previously unknown researchers of varying caliber contribute to the pyramid, allowing us to see further in science [1]. However, these are not the sole. There is also a complicated system of titles (not always connected to functions), such as that of lecturer, reader, assistant professor, associate professor with or without tenure, full professor, named professor, university professor, and distinguished professor. And then there is the flood of best paper awards handed out at conferences and by journals.

SICOT Research Awards

However, some less known scientists work hard in their research field, most often a pro bono; the junior scientists are numerous. The risk is that they get disappointed and stop research, as those that do not have funding, usually from third countries, as well as those that consider nepotism and lack of meritocracy as a fact in science; they should also be awarded. Although it is creditable to acknowledge a scientist's work, judging, selecting, and awarding scientific work is an ungainly situation and often biased by many limitations; a scientific work may not be valuable until many years after its presentation, topical research is often awarded, and some scientists may be more advantageous compared to others in terms of laboratory settings or scientific writing and presentation of their work. We concur with these biases in awarding science, and we try to provide our judgment in a clear, transparent, objective, and meritocratic manner.

In our opinion, awards in science provide motivations for excellence and productivity. Inevitably, most scientists will not get any award. But, awarding a single person, a research team, a laboratory, or a university should not mean to negate the others; no one should go home feeling his/her research has lesser value than the work of others. Awards in science do not make a competition neither it erodes the spirit of collaboration and progress. In contrast, we believe that awards in science augment fair play and sportsmanship in science ("sciencismanship"). Those not awarded have contributed similarly to science [1].

The SICOT Research Awards date back some years and offer substantial awards to SICOT members who present their research papers to the SICOT annual meeting. The SICOT Research Awards Programme comprises six awards. All the winners are chosen by the Research Academy, with one winner in each following area: (1) Clinical Research,

(2) Basic Science, (3) Young Investigator (first author must be less than 40 years old), (4) Female Researcher/Clinician (first author must be female), (5) Best Surgical Technique/Case Report, and (6) Best Abstract of the Year. The first author of each winning paper must be prepared to present the paper at the SICOT Orthopaedic World Congress. However, because science does not exist unless it is written, the authors of the winning papers are encouraged to write their papers and submit for a constructive peer review to *International Orthopaedics* [3–6], the Official Journal of the Société Internationale de Chirurgie Orthopédique et de Traumatologie (SICOT). The journal reserves its pages for those papers with the higher educational value that possibly might lead to a change in practice. Publishing the awarded papers in *International Orthopaedics* aims to award further the authors who performed science, make their work more visible to scientists, and increase its visibility by publishing high-quality research [7–13].

International Orthopaedics 2021 SICOT Awards

The idea of publishing the SICOT Research Awards in *International Orthopaedics* dates six years before; it is attributed to Past Presidents Keith Luk and Shanmuganathan Rajasekaran and was supported by the following Presidents John Dormans and Ashock Johari. The SICOT Research Awards were initially intended to encourage young researchers or clinicians to attend to the Word SICOT meeting and present their scientific work. An Awards Committee convened by Marc Patterson does a selection of abstracts. During the meeting, the awards were attributed to what is judged collectively to be the most "meritorious" presentation as research or clinical presentation. The awards took the form of a certificate and a "cash prize" at the beginning for the Presenter of the Award Paper on the SICOT annual meeting.

The awarded scientists are encouraged to submit their papers to *International Orthopaedics*. After a "stuttering initial phase," this idea was developed as an important "jewel" in this journal by the Editor in Chief Marius Scarlat. In the beginning, some papers were submitted but could not immediately reach the level of acceptance for publication in the journal and needed some improvements in quality. For this change, the support of Philippe Hernigou, Andreas Mavrogenis, and Jacques Caton were important. With this acknowledgment comes the growing recognition that the peer review process needs to change from a punitive "gotcha" approach that wears authors down to a developmental process that lifts them up. It is straightforward to point out all the flaws in a submitted manuscript, but it is much more challenging to help authors find a way to address them and move their work

forward. Currently, the peer review process is evolving. *International Orthopaedics* acknowledges the importance of this development, and the future depends on the ability to support and develop our SICOT community. Awards are a terrific way to recognize and support developmental reviewing.

In this article, *International Orthopaedics* celebrates the 2021 SICOT Research Awards. The odds of having a submission accepted for publication in *International Orthopaedics* are few; getting an award even more so. First, clang the gong, ignite the sparklers, ring the bells, and light the fireworks. Congratulations are this much for our awards celebration. This issue of *International Orthopaedics* publishes three SICOT awards papers: Diagnostic value of necrotic lesion boundary in bone collapse of femoral head osteonecrosis [14]; Jig-assisted modified Harrington reconstruction for metastatic bone destruction of the acetabulum [15]; and Sonication of explants enhancing the diagnostic accuracy of synovial fluid and tissue cultures to determine the appropriate antibiotic therapy for prosthetic joint infections [16].

Fan et al. evaluated the prognosis of hip necrosis with a novel approach. The boundary of necrotic lesions in the femoral head was measured on radiographs (antero-posterior view and lateral view). By calculating the intact and pathologic portion and their rate, the ratio on the antero posterior view and on the frog leg view were used to predict collapse of the femoral head. This retrospective study was performed on 146 osteonecrotic hips during a follow-up of average five years. With femoral head collapse as the endpoint, a Kaplan–Meier analysis was applied to calculate the femoral head’s survival rate according to the necrotic zone’s boundary limits. The study demonstrated that using these two parameters in plain radiography images on an antero-posterior and lateral views may contribute to better hip preservation [14]. Rajasekaran et al. developed a “jig-aided technique” to improve pin placement during the Harrington technique. During a cemented hip replacement for metastatic destruction of the acetabulum, the reconstruction of the acetabulum is easier. The jig-aided device allows improving the safety placement of antegrade pins in the acetabulum. With the jig, large diameter pins and cage are possible during the reconstruction of the acetabulum with minimal complication rates [15]. Aliyev et al. evaluated the advantages of sonication cultures for prescribing antibiotic treatment of 64 patients when arthroplasty revision was scheduled for infection. Aspiration fluid was obtained from all patients, and the antibiotic therapy changes after sonication evaluated. Sonication of the explants changed the antibiotic therapy strategy in some patients because different microorganisms than those observed without sonication are detected [16].

Without further ado, onward and upward with the awards

Because of the way academic publishing is different from a congress award, the award papers on the journal are typically multi-authored, comprising a range of contributors from junior post-doctoral fellows to senior leaders, and this has allowed an improvement of the manuscripts at the time of submission. We salute several authors and institutions recognized for their publication; obviously, such outstanding research performance requires both talent and dedication. It is important to recognize that despite the name of “awards,” it is not a competition. Definitely, presentations and presenters receive a special mention, but we should avoid terminology such as “best of” or “winners.” There are many good presentations during the SICOT meeting, but, just as investigation or research, the journal has limitations and is limited in the number of publications that it can recognize. Awards are efficient supports to celebrate our members together. It is about community, not competition.

The year 2022 we will also be looking for opportunities to promote the selected projects as much as possible; this requires the *International Orthopaedics*’ readers and SICOT members to participate to the 2022 meeting in Kuala Lumpur and submit their work for a possible evaluation by the SICOT Awards Committee. *International Orthopaedics*, through the auspices of SICOT, will invite manuscripts after the Kuala Lumpur meeting for the 2022 awarded scientists, as well as it will encourage all attendees to submit their papers for publication in the journal.

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