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PREFACE

Openness and How to Stay 'Open'

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At the beginning of the new volume of our journal a few words on a today's definitely unavoidable topic among scientific editors – openess in scientific publishing. Indeed, in every debate on science and its role in the modern society the most often used terms start with „open". We speak of open science, open publishing, open excess, open review, open data (*1*). Have we really made science so closed that opening is the most required trend in our further development? It seems so. Not so long ago, scientists were persons of trust. Their habitus was marked by their methodology, their scientific, empirical approach to solving problems, their scepticism in reaching conclusions, and their carefulness in sending out statements, both throughout the scientific community, as well as publicly. It is for these reasons that scientific opinions have been cherished, appreciated, and taken into account by both policy makers and broader public. Scientists, particularly those working in public institutions, have never been adequately paid, but their social status was defined by the appreciation of their social environment. Science was fun. Science was important.

Since then, situation has slowly but inevitably changed. New industrial revolutions in the recent years made societies more and more dependent on knowledge and education. We needed more scientists, particularly in countries where science was not highly developed, prevalently in Asia and South America, but also in Europe and North America. Previously, scientists were known and appreciated for their discoveries. With the growing number of scientists, the need for measuring scientific output using exact measures has become more pronounced. This was the door of the golden age of scientometry, or, as Eugene Garfield calls it, 'the science of science' (*2*). We started to 'weigh' scientists not by their discoveries, but by the number of published papers, impact factors, h-indexes. Greater numbers mean a better scientist, and a better scientist means more money for research, more post-doctoral and doctoral positions, more invitations to scientific meetings, more awards, more appreciation by peers. Soon 'publish or perish' policy has come to reign over the kingdom of science and we entered a dark age of scientometry (*3*). Just like fire, scientometry is a good servant but a bad master. As it started to dominate scientific community, scientists started to fabricate results, there was no time for repeating experiments, research was sliced in as many papers as editors were willing to accept, plagiarism started to spread like a disease, and a majority of published results were not reproducible. We experienced more and more disputed and retracted papers, unhealthy competition among and within research groups, increased difference between 'the rich' and 'the poor' scientific communities. Science was not fun anymore.

The specificity of science and scientists is that they rely on peer reviewing. An actor is evaluated by the audience, a manager by the stakeholders, a solicitor by the clients, a physician by the patients, but a scientist can only be evaluated by other scientists. Scientometry has taken the evaluation of science away from scientists. As a result, scientists today are not trustworthy anymore, their results are not reliable and are not to be believed. Their influence on the process of creating the future society has weakened and is often replaced by other influences, not based on facts and evidence.

The open science movement is the scientists' response to the unsustainable situation science has found itself in. By 'opening' scientists want to regain control over science. They no longer want to donate their results obtained by spending public money to large private publishing enterprises who gain profit out of them. They want to control the dissemination of their findings and use journals as services to help them instead of controlling their

projects, their professional positions, thus even their salaries. So, what would be the new direction so profoundly formulated in the Plan S (*4*) adopted by major European public science financiers? First of all, the Plan defines that all results obtained by research financed through public funds must be openly accessible to the whole scientific community and society. Authors would not transfer their copyrights to publishers, and publishing costs would be covered by the financiers. They, in turn, would set quality criteria journals would have to fulfil and they would limit the eligible cost of publication. Under such conditions, depositing publications in institutional or other openly accessible repositories would become not only possible but even recommendable. Following this development, such repositories may eventually replace scientific journals and serve as sites for posting manuscripts together with the open data collections, and open reviews (*5*). These data would be publically accessible, and of course the scientific reputation of the reviewers would provide the required credibility that nowadays largely (and sometimes with no actual justification) resides in the name, or the impact factor of the journal in which a paper is published. In this way, the task of scientific publication would pass from publishing companies to universities, institutes, or even scientists themselves. It is plausible to perceive that this would largely decrease the costs of dissemination and release more funds for research itself. How this would reflect the future roles of publishing houses remains to be seen.

Food Technology and Biotechnology journal, as a diamond open access journal, promotes these values. All papers are available online for free and the journal does not charge any article processing fees. Up to now, this was enabled by the financial support of the Croatian Ministry of Science and Education. This first issue in 2019 comprises fourteen papers dealing with different interesting scientific topics from the field of food technology and biotechnology, from bioethanol production using novel constructed *S. cerevisiae* hybrids (*6*), to palm oil production wastes as a source of biotechnologically interesting compounds like 4-hydroxybenzoic, gallic and ferrulic acids and pyrogallol (*7*). An interesting study by Miklavčić *et al.* (*8*) describes genetic diversity of jujube grown in the Adriatic region of Slovenia, while two papers (*9,10*) deal with biochemical factors influencing stability and activity of proteins. Kurbakov *et al.* (*11*) describe novel multiplex real-time PCR method for the detection of *Lacobacilli*, while Huang *et al.* (*12*) developed oral vaccine for hepatitis B using transgenic mushroom *Flammulina velutipes*. Two papers (*13,14*) describe antioxidant activity and stability of grape extracts and salad dressing with cocoa butter, respectively, while Canel *et al.* (*15*) explored different packaging conditions and their applicability in meat industry. Three papers deal with different aspects of food processing, one with the non-thermal ways of reducing the number of microorganisms on basil (*16*), another with extraction of bioactive compounds from *Moringa* leaves (*17*), and the third with fortification of milk with iron ions (*18*). Finally, construction and performance of a novel pyramid photobioreactor, shown on the cover page of this issue, is described by Khoobkar *et al.* (*19*).

I hope that our readers will find these topics interesting and enjoy reading the new issue of *Food Technology and Biotechnology*. The journal will try to stay on the course of the Plan S agenda, but what the future holds mainly depends on the policy makers and their vision of models of financing the open access publishing in Croatia in the following years.

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