



Editorial

Starting a new peer reviewed open access journal diagnosticpathology.eu

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Abstract

This is an introduction editorial on behalf of the implementation of the peer reviewed open access journal diagnosticpathology.eu that covers all aspects in diagnostic pathology. The advantages, constraints, the present stage and expectations of open access publication are discussed, and details of the new journal are described.

Keywords: [Electronic publication](#), [open access](#); [surgical pathology](#); [virtual slides](#), [acoustic information](#).

Brief history of electronic publication in surgical pathology

Distribution of information remains a main task in science, research, and medicine. In general, communication requires a solid and constant “data carrier”, an assured understanding between the sender (author) and the receiver (reader), and correct and non biased creation of information that should be transferred (publisher).

In history, these conditions have been assured by visual information distribution, i.e., scientific publications on a paper written basis. The contribution of printed scientific journals started in the 19th century, and continues until today. Printed information cannot be changed. The interest of readers is assured by the fact that they have to pay, if they want to read an article or the complete journal.

The establishment of acoustic information transfer (telephone) did not generally involve scientific publication in contrast to the progress of electronic visual communication, that started with the development of mobile electronic data storage (floppies), and that has been matured to open (social, scientific, chat (Twitter)) forums, etc.

Twenty years ago, on March 1, 1995 we implemented the first solely electronically distributed peer reviewed scientific journal, the *electronic journal of pathology and histology*. It was distributed on floppies, and included already new functional issues that cannot be distributed on paper. These issues included the display of algorithms (for example display of ciliated movement dependent upon parameters to be selected by the reader), so-called interactive publication, and others. The floppies have been replaced by CDs at a later stage. The journal has been terminated



in 2000 when the internet offered new techniques to distribute scientific information, so called open access journals.

Herein, two significant factors play a role, namely (1) worldwide and free distribution of journals and their articles, and (2) transfer of publication expenses from the reader to the author. Both are the main characteristics of open access publication. Certainly, additional mandatory issues such as assurance of scientific quality (review), copy rights, assurance of accurate and continuous storage of distributed information can be and are handled solely electronically too.

Advantage and constraints of open access scientific publication

The advantages and constraints of open access publications are related to two different issues, namely (1) the information itself or its electronic data acquisition, transfer and display, and (2) its financial environment, commonly called globalization.

Electronic data acquisition to be distributed in manuscripts obviously requires the ordered display of information to the reader, i.e., typing, tables, graphs, and images. Acoustic information transfer is commonly not distributed by open access journals.

All these (visible) issues are much easier to distribute than in the “pre-electronic” times. In addition, paste and copy functions allow an easy transfer from one medium to another. Mathematical functions can run and visualized, for example presentation of completely acquired histological glass

slides (virtual slides, VS) and automated search for “areas of interest” (AOI) that contains the most significant diagnostic information, and others. Automated, i.e. from the reader guided image measurements can be implemented as well as automated search functions in open access libraries for comparison of other already published articles or information. Acoustic information, for example heart beats, hearing tests, etc. are easy to display too.

All these obviously positive elements have not or at least only partly been implemented until today to our best knowledge. Why?

Constraints of open access publication do exist too. In principle, these include strong and hard-to-fight properties of globalization.

The ethical principles of science, i.e., to detect and verify reproducible or time and space “independent” natural laws can be easily modified to ones own advantage, i.e. to fit into its own idea or assumption. The internet offers several methods to copy and / or even falsify data, with or without knowledge of the authors.

The easier it is to acquire information the easier superficial and wrong information is spread. The development of journalism and passive information distribution (TV) are the daily proof.

Contemporary external non scientific factors influence information distribution at a previously unknown level. This holds especially true for financial issues. Paper printed scientific journals have been never considered to become an important financial issue, because only a couple of several hundred readers contributed



to or hold the journal alive. In contrast, open access journals are no longer paid by the reader. The authors are the financial source of any open access journal, who do not pay by themselves but take their money from their grants, universities, companies, etc.

As a consecutive, the business model of open access publication promises a profit of several hundred of thousands of dollars per journal, a profit which is far out of range of a printed journal's income.

Advertisement is another income source, as "good running" home pages are visited by ten thousands of researchers per month, even of highly specialized journals (for example of those publishing issues of surgical pathology).

This overwhelming financial development invades science and research, and there is a significant danger that research is becoming corrupted by "business plans". A characteristic example is demonstrated by BiomedCentral (SpringerOpen), a publisher whom several editors have left or are leaving due to these reasons.

In addition, there is no information accessible to the public about the amount of publication fee these publishers are asking for. Interestingly, no grant provider is aware of this or has even asked for to the best of our knowledge.

Some of the publishers adjust their publication fee to the citation index (CI) of the corresponding journal. Why?

Citation index and open access publication

The citation index (CI) is a measure that has been introduced to allowing a crude quality judgement of the published articles. It is provided by an individual company (Reuters) only. It is still the dominant factor despite the fact that additional companies try to compete with it.

In principle, it is primarily a measure of the "scientific quality" of a journal, and not of the individual articles. It was founded at the time of paper printed scientific journals. Our first solely electronically published journal was rejected to be provided with a CI as "the *electronic journal of pathology and histology* was not available on printed paper".

Today, this policy has changed, and open access peer reviewed journals are provided with a CI too.

The main constraint, however, remains, namely, that the primary merit of the author's work is transferred to the journal's reputation, and not to the author or his publication. The CI is the main tool of researchers to verify the attractiveness of their research, to ask for new research funds, or to convince the administration of the successful acknowledgement of they work.

However, is CI still a useful measure for scientific information distribution?

The disadvantages of the CI are well known. They include incomparably different research fields (the maximum CI in surgical pathology ranges to a factor 6 – 7; that of natural sciences to a factor 15 – 20; etc.), low representation of innovative research (within research innovative methods



are usually rare, and sometimes meet competition or other negative factors of journal reviewers), and extensive money attraction for both, publishers and authors. All editors are tempted to publish so called review articles which usually are associated with numerous readers and several citations, i.e., are a promising tool to increase the CI.

The CI plays a different role in paper printed publication compared to open access journals. With the exception of some journals conventional paper printed articles do not depend upon any publication fee, and are paid by the readers, scientific societies, or advertisement. Therefore, the business model of paper printed journals is not directed to the number of published articles.

Open access journals demand an authors' fee, despite they might offer some waivers for colleagues who are working in developing countries. Therefore, any administration is at least tempted to influence the editors to publish as many articles as possible independent from their scientific quality. In addition, waiver "adjusted" articles are of less interest compared to "fully paid" ones. An internationally agreed regulation of publication fee does not exist to our knowledge.

Why to create a new peer reviewed open access journal?

Despite the mentioned and well known constraints we still believe in the innovative and unique advantages of electronic publication under the presumption that a fair and open accessible strategy of both the

publisher and science, i.e. the editor is implemented. This includes

1. fair and strict boundaries between the financial issues and science
2. complete independence of scientific issues from financial aspects
3. implementation of innovative regulations to assure scientific quality
4. introduction of electronically available opportunities.

Distribution of any information is a major source of financial profit in our days. It includes spot to spot interactive communication (mobile phones, smart phones, etc.) as well as active and passive open information transfer (social and other forums, games, television, information collections (Wikipedia, etc.). An innovative open access journal should not be limited to publish articles in an electronically adjusted conventional method, but to provide additional features that can bridge daily work with access to the latest available information. In addition, training and tests to prove the published statements of the authors should be accessible to the reader too as well as an internal article scoring provided by an international board of experts, for example by international professional societies such as European Society of Pathology, International Academy of Pathology, or similar organizations. The implementation of such innovative issues is, in fact, not difficult, and can be performed in several ordered steps.



Considering this new journal on diagnostic pathology we are convinced that the mandatory inclusion of virtual slides, an archive of cases with virtual slides, an express review forum with a corresponding duty plan of included reviewers are essential at the start an innovative peer reviewed open access journal. Additional features such as automated measurements, submission of each article to an international article grading board in order to provide each article with its own scientific level, automated search for article associated publications in the NIH library (PubMed) will follow in a short time. These issues – and others - will open the door to a new level of open access publication which has not been reached by any other publisher to our knowledge.

Perspectives

At the beginning distribution of scientific information requires a world wide spread of the knowledge of available data transfer systems (journals), the creation of potential authors' interest, and finally the submission of their articles for publication. The authors do expect a fast and fair handling of their manuscripts, fast publication, and international acknowledge or spread of their research results. Therefore, an internationally experienced and well known editorial board is essential as

well as direct contact to the authors and fast administrative procedures. Our editorial board has been carefully selected. Direct contact to the authors is assured as well as a non complicated and experienced administration.

We, therefore, are optimistic that we can fulfil all expectations on the future development of this newly created journal.

We are completely independent from any big publishing company. A fair, independent and supportive distribution of research and medical information is our only aim. We are convinced that honesty in medical communication is mandatory to avoid any bias in potential application of research results, especially in treatment of patients. This independence allows us to flexibly implement new communication issues that are not available in other journals. Thus, the sailing beyond the horizon and exploring new landscapes are the mere engine of our work.

We are grateful to all colleagues who are willing to collaborate with us, especially at the start of our journal. Authors, reviewers, and critical readers are welcome on board when we go on our journey. Let us see how the horizon becomes vital with all its challenges and new perspectives.

Klaus Kayser

Editor-in-chief