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## The rapidly changing landscape of scientific publishing

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Publishing scientific research today is experiencing a dramatic and rapid conceptual and clearly visible transformation within just a few years.

Four major forces are driving this metamorphosis: (1) higher pressure on scientists to publish in general because evaluations on both individual and university-discipline-related quality level are using bibliometric data and parameters (citations/number of publications/impact factors (IFs)) in a rapidly increasing way to document and describe scientific trends and developments. Ranking of individuals, universities and countries can use the same system and comparisons are possible and used. (2) Also publishers of scientific journals can now use electronic publishing as the main way to present research results, which reduces costs and enables worldwide distribution of discoveries on the Internet to anyone interested. This opens up the possibility for new actors on the publishing scene and the presence and support of large publishing companies is no longer a necessity. (3) The largest change is of course the switch from what is referred to ‘Subscription models of publishing’, that is, the reader/subscriber/library pay for the editorial and printing costs of the journal, compared to the ‘Open Access’ model, implying that total costs are paid by the authors/departments/universities. (4) Furthermore, it is today very easy to produce a scientific journal with equivalent knowledge on the computer technologies to the knowledge of how to make a home page. This will immediately make it possible to gain influence on the publishing market by initiation of a huge number of new scientific journals.

*Tumor Biology* has, as a scientific journal, been around since 1987, when it was first launched. It started with another name *International Journal of Oncodevelopmental Biology and Medicine*, and the journal was closely connected to ‘The International Society of Oncodevelopmental Biology and Medicine’ (ISOBM) with focus on similarities between oncological and developmental biology and expression in tumours of similar biomarkers that could be monitored also during pregnancy, in both the placenta and the foetus. Karger in Switzerland was the publisher during the first 23 years. Not more than, on average, 40 articles per year were published during those years. The nomenclature encapsulating the concept of ‘tumor markers’ was

very much in focus in the content of the journal, and during two decades, it was dominated by the use of oncology-related ‘tumor markers’ and their functional significance and clinical utility.

The wish to grow as a journal was however opinionated, geared by the fact that it was not really possible to produce a scientific journal of exquisite scientific quality with such a low printing volume, and alternative collaborations with other publishers were initiated. Following some years of negotiations, Springer was selected as our new partner with the first issue published in 2010. Being the Editor-in-Chief those days, it was indeed amazing to see the journal rapidly expand in printing volume, manuscript submissions, downloads and citations. During the years 2010–2014, the growth was exponential in all these parameters with a factor of 2, implying approximate doubling of all these numbers every year, indeed a spectacular development. Also, the IF displayed a continuous increase, starting from below 1 and reaching 3.6 in the year 2015. Also, the content was significantly diversified during these years with introduction of advanced DNA and messenger RNA (mRNA) technologies, pathway analysis, mutation analyses, cell death mechanisms, selective inhibitors and targeted therapy.

‘Open Access’ has been very much discussed within the society of ISOBM. In what way does such a transformation affect the publishing behaviour from both authors’ and reviewers’ point of view in terms of priorities. What happens with the number of submissions? Citations? IF? Are the costs for the authors reasonable? The advantages are that the data are freely available online immediately upon publication and completely free to view and download for all.

I think ISOBM today is pleased to conclude that the development of the publishing world is certainly moving in the direction of Open Access, and we recognize this movement. We are indeed pleased to take the step with this very first issue as a new ‘Open Access’ journal together with SAGE.

The number of ‘Open Access’ journals is now also showing a dramatic increase, and the possibility for authors to get published has been dramatically opened up. In just a few years, more than 10,000 new open



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access journals have been launched, however with small publishing volumes. *Tumor Biology* will start from an already established level, and we look forward to this. But this puts significant restrictions also on the editorial board and associate editors to pursue high-quality review processes and maintain high ethical standards, including the COPE rules and use of the iThenticate programs to

maintain high quality in order to reach higher scientific levels.

The transfer to SAGE will be an exciting new endeavour in the transforming landscape of scientific journals.

**Torgny Stigbrand**  
*Editor-in-Chief*