A 25-Year Journey as Author and Associate Editor of Pharmacological Reviews—Editorial

My first contact with Pharmacological Reviews as an author was in the late 1990s. My mentor at the time, the late Dr. Otto-Erich Brodde, approached me one day asking whether I would like to join him in preparing a manuscript on adrenergic and muscarinic receptors in the heart for Pharmacological Reviews. When he mentioned the name of the journal, I could see in his eyes how awed he was by the idea. He clearly conveyed the idea that authoring a paper in Pharmacological Reviews was the scientific equivalent of being knighted. He also warned me at the time that preparing the comprehensive manuscript the journal was looking for would be a lot of work, but it would be worth it because it would be rewarded by high citation rates for many years. All his predictions on this matter came true.

The paper entitled “Adrenergic and muscarinic receptors in the human heart” was written, submitted, and eventually accepted and published (Brodde and Michel, 1999). It ended up having 39 printed pages and several hundred references. It goes without saying that searching for the underlying publications and extracting relevant content from them was a major piece of work. Mind you, at the time, the internet was available to scientists in a rudimentary form only (at least by today’s standards), and the transmission rate for checking databases such as PubMed via your modem was in the Kbytes/s range. Collections of journal tables of contents were still largely done based on printed summaries such as Current Contents. Electronic journals hardly existed yet. If you had identified a potentially relevant article, you had to go to the library, find the journal, pull the relevant volume, and then photocopy the paper or send a postcard to the authors requesting a reprint on paper, which may or may not have arrived a few weeks later. And if you had done all that, your PC at the time had no hard drive but used 3.5-inch disks, and reference management software such as Endnote was not yet in common use. Thus, each reference needed to be entered manually and formatted for journal style. When all of this was complete, the manuscript was printed out in three copies and sent to the journal via the postal office. Bottom line, writing this manuscript was a lot of work. Otto-Erich had been right on that.

On the other hand, this large amount of work was rewarded by being cited very often. As assessed in mid-October 2023, Google Scholar notes 932 articles referencing this paper since its publication in 1999. Perhaps even more interesting is the temporal patterns of such citations (Fig. 1). As expected in the time of journals only being available in their print edition, there were limited citations in the first year. However, they soon reached 40–50 a year and stayed stable at this level for more than a decade, only starting to decline more than a dozen years after initial publication. Even in 2022, annual citations were still more than 50% compared with those in years 3 to 4 after publication.

In the late 1990s, I also had the pleasure of chairing a Nomenclature and Standards Committee of the International Union of Basic and Clinical Pharmacology on neuropeptide Y receptors. The report of this committee was also published in Pharmacological Reviews (Michel et al., 1998). This was a slightly different experience. Having a total of nine authors, the workload in literature searching and section drafting was distributed over more shoulders. The main effort in such work was to agree on the interpretation of published data as it is with all committee reports. Prior to the availability of teleconferences via Zoom or similar, this was largely done during personal meetings at scientific conferences followed by an exchange of e-mails and, in some cases, letters. Moreover, the total amount of literature to be surveyed was less. Thus, the resulting published paper was shorter and had only eight printed pages. The subdivision of mammalian neuropeptide Y receptors into five subtypes we proposed in 1998 stood the test of time, and our predictions that these receptors were involved in the control of cardiovascular function were borne out by the many studies that have confirmed this in subsequent years. Perhaps even more interesting is the temporal patterns of such citations (Fig. 1). As expected in the time of journals only being available in their print edition, there were limited citations in the first year. However, they soon reached 40–50 a year and stayed stable at this level for more than a decade, only starting to decline more than a dozen years after initial publication. Even in 2022, annual citations were still more than 50% compared with those in years 3 to 4 after publication.

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pharmacokinetics and pharmacodynamics of curcumin with emphasis on cancer (Heger et al., 2013) was cited 538 times. A very recent article on treatments of urinary incontinence (Michel et al., 2023) has already been cited nine times despite being only published in July, i.e., within the first 4 months. However, there are exceptions: in 2008, we comprehensively reviewed single nucleotide gene polymorphisms in G protein–coupled receptors and their association to drug treatment responses of cardiovascular disease (Rosskopf and Michel, 2008). This article attracted only 42 citations in 15 years. The most likely explanation is that our conclusion at the time was that many findings in the field were not reproduced by others and/or that effects of the gene polymorphisms on drug action were of limited clinical relevance. Apparently, there is limited appetite for articles that do not support a field representing hope for improved treatment and receiving a lot of hype.

Speaking more generally, many citations and a long citation half-life (more than 10 years) are a common feature of articles published in Pharmacological Reviews. Thus, these papers truly have an impact on the scientific community and on the peer recognition of the authors. Although the latter is nice, it comes at a price: you can expect to receive many invitations to review manuscripts related to the topic of your article in Pharmacological Reviews, often from journals you had never heard of.

Since 2009, I have the pleasure of serving Pharmacological Reviews as Associate Editor, a position in which you are expected to recruit authors for 2 to 3 manuscript submissions per year. This poses new challenges. Firstly, there is an art to identifying suitable topics for a comprehensive review. On the one hand, it should be a field of sufficient maturity so that an authoritative review can be written that is likely to stand the test of time. If a field is reviewed too early, the conclusions of the article are likely to be soon outdated. If a field is reviewed too late, the conclusions are more likely to be valid but not very interesting because everybody already knows them.

The second challenge is to identify suitable authors. The journal typically looks for authors who are established experts in a field. However, these authors are targeted by many journals, conferences, and advisory boards, and they tend to be more time pressed than the average scientist. How can they be recruited, nonetheless? The most promising approach in my experience is when the Associate Editor personally knows the authors and can apply little persuasion. The more rational argument is being very transparent on the amount of work involved in generating a comprehensive review and at the same time pointing out that this not only provides a major service to the field but also firmly establishes and confirms the reputation of the authors in that field. Finding active coauthors is always a good idea to share the workload.

The third challenge is that authors that have committed to contributing a manuscript very often miss the self-proposed timelines for submissions, and in some cases never submit a promised manuscript. I must plead guilty in this respect myself.

At the end of the day, you may conclude that Pharmacological Reviews is a journal that is highly attractive to authors with a strong work ethic who are willing to invest considerable numbers of hours in the preparation of a manuscript that serves the field for years, if not decades, to come and strongly supports the reputation of the author(s) within this field. If these characteristics fit you,

**Fig. 1.** Annual number of citations to two articles published in Pharmacological Reviews in 1998 (Michel et al., 1998) and 1999 (Brodde and Michel, 1999). The x-axis represents year after publication (publication year is 0), and the y-axis represents number of citations within that year based on Google Scholar.
you may find that you will fall in love with *Pharmacological Reviews* as I did a quarter of a century ago.

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**References**


