

LETTER FROM THE EDITOR

Brain Pathology: Past, Present, and Future

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This is the 10th year of publication for *Brain Pathology*, “brainchild” of the founding editor Dr. Paul Kleihues. With the support of the International Society of Neuropathology, the Journal has prospered and served the biomedical community well. Watching a child grow-up is fraught with heart stopping moments, however, in hindsight it is fair to say, we can look back upon the Journal and conclude that it has matched even the Founding Editor’s greatest expectations. For those interested in tracking the success of *Brain Pathology*, we have analyzed available citation data and provided this synopsis.

First issued at the International Congress of Neuropathology in Kyoto in September of 1990, *Brain Pathology* has received unflagging support from its founding society, the International Society of Neuropathology. As encapsulated so succinctly in the first Dear Reader column, our mission was and remains:

“that *Brain Pathology* should become the reading matter of choice for all those interested in diseases of the nervous system, irrespective of whether or not they are practicing neuropathologists. Particular emphasis will be placed upon disease mechanisms as truly reflected in this first issue. However, clinical neuropathology will also be covered and surveys of modern diagnostic tools will be included.”

How successful have we been at obtaining this mission?

Fearing that Editors may not be the most objective sources for such an evaluation, other sources must be tapped to measure a journal’s success. In scientific writing perhaps the most universally accepted measure of importance is how frequently a manuscript is cited. Without question this “measure” and all of its underlying assumptions are problematic. Being recursive, it runs the risk of being circular. If I cite my own work

does that truly increase its impact? Revolutionary findings may be temporally relegated to the citation dustbin, only to be extracted years later for appropriate “appreciation.” Finally, I have read reviews that are so good, I never cite them since they allow me to return to original literature that I could never keep at my finger tips. Does a well-written review have a truly lower impact?

All that said, it is also true that what cannot be measured cannot be discussed (productively). This modern information age allows us to not only disseminate knowledge more rapidly, it also allows us to measure the efficacy of this dissemination. Perhaps the most widely accepted (but by no means only) method of measuring citation impact was designed by Eugene Garfield of the Institute of Scientific Information (ISI) in Philadelphia. Ever since ISI created the “Impact Factor” these numbers have been used (and often misused) by the entire scientific community. What is an “Impact Factor?” How is it measured? Is all the brouhaha about Impact Factor really warranted?

To begin with the last question, it would seem that a Journal’s Impact Factor is extremely important. Impact Factors are discussed all of the time, they define whether a library will purchase a journal for its collection and in some institutions they determine whether faculty will be employed or promoted!

The Impact Factor for a Journal is calculated by dividing the number of current citations to “source articles” published in the two previous years by the total number of articles published in the two previous years. A deceptively simple definition that couldn’t be simpler, couldn’t be more objective — or could it? Well, suppose you publish an article in the January 2000 issue of *Brain Pathology* that is picked up by the news wires and cited 50 times before the end of the year when you publish the follow-up article in Nature. The next year, investigators start citing the Nature article (well not everyone gets *Brain Pathology* and not everyone cites primary sources!). What does the January 2000 article contribute to the Journal’s Impact factor when measured in 2003? Nothing! None of the published citations from 2000 count, so you cross your fingers and hope the tenure

	Impact Factor	Clinical Neurology	Pathology	Neurosciences
1994	4.25	7	5	19
1995	8.57	1	1	6
1996	6.46	2	2	9
1997	5.66	2	2	14
1998	4.90	6	3	20

Table 1. Impact factor and subject rankings, 1994-1998.



Figure 1. Impact factor charted, 1994-1998.

committee delves a little deeper. Of course you can take the Pollyanna approach and assume that everything works out in the end. Perhaps the bottom line is we have to live with the Impact Factor, so it is time to cut to the chase and look at the numbers.

From the first year that *Brain Pathology's* success was measured by the Impact Factor as defined by ISI, 1994, the Journal had an impact factor of 4.25 and ranked 5th amongst the 64 pathology journals. This was simply astounding and denotes a phenomenal initial acceptance. In the subsequent 5 years, the Journal has maintained an impressive standing in the top biomedical journals in Clinical Neurology, Pathology and the Neurosciences in general (Table 1). Nevertheless, when one examines longitudinal data, one needs to look at trends and there would appear to be a disturbing trend in the slope of the *Brain Pathology's* Impact Factor (Figure 1).

Is the sky falling? Fortunately not! In fact *Brain Pathology* continues its meteoric rise, fulfilling and expanding upon its mission. The symposia that define our Journal cover a broad range of topics and are well written and cited in the literature with an average annual citation in the first 2 years following publication of 5.77 (low of 2.1 to a high of 11.7). A quick review of the top 10 published symposia confirms the great depth and breadth of our scope (Table 2). The Editorial decision to accept premier research articles has in no way diluted our impact. In fact, average research article citations are virtually indistinguishable from average symposium

article citations (5.46 versus 5.77). As illustrated by the top 10 cited articles, our research articles focus on the pathogenic mechanisms, true to our mission (Table 3). Expansion of our scientific coverage is dramatically illustrated in growth of the size of *Brain Pathology* from its first volume (332 pages) to its most recent volume (775 pages). With the introduction of our web site (<http://brainpathology.upmc.edu>), dissemination is also dramatically different than it was in the past. The growing availability and acceptance of files in Adobe's Portable Document Format (PDF) will make future dissemination even more efficient.

So with all of these improvements, why doesn't the Impact Factor show the positive changes? Well the simple answer is, the Impact Factor is not our mission. Were the Impact Factor of central importance, we could not satisfy our broader based mission. Were Impact Factor our mission, we would publish fewer articles, ignore our

1.	Vol. 3 No. 3: Brain Tumors: Morphological Aspects and Classification (11.7)
2.	Vol. 4 No. 1: Focal Cerebral Ischemia (9.93)
3.	Vol. 6 No. 3: Immunopathogenesis of Demyelinative Diseases (9.86)
4.	Vol. 3 No. 1: Neuronal Proteins (7.93)
5.	Vol. 7 No. 3: CAG Repeats in Neurodegeneration (7.50)
6.	Vol. 6 No. 1: Muscular Dystrophies (6.63)
7.	Vol. 7 No. 2: Pediatric Neuro-Oncology (6.42)
8.	Vol. 4 No. 3: Glial Fibrillary Acidic Protein (6.40)
9.	Vol. 6 No. 4: Cell Death in the Nervous System (6.31)
10.	Vol. 5 No. 2: Hereditary Tumor Syndromes (5.90)

Table 2. Top 10 symposium topics listed by article impact.

1.	K Watanabe et al: Overexpression of the EGF Receptor and p53 Mutations are Mutually Exclusive in the Evolution of Primary and Secondary Glioblastomas (Vol. 6 No. 3)
2.	A von Diemling et al: Subsets of glioblastoma multiforme defined by molecular genetic analysis (Vol. 3 No. 1)
3.	I Ferrer et al: Evidence of nuclear DNA fragmentation following hypoxia-ischemia in the infant rat brain and transient forebrain ischemia in the adult gerbil (Vol. 4 No. 2)
4.	C Gratas et al: Fas Ligand Expression in Glioblastoma Cell Lines and Primary Astrocytic Brain Tumors (Vol. 7 No. 3)
5.	KH Plante et al: Molecular mechanisms of developmental and tumor angiogenesis (Vol. 4 No. 3)
6.	J Gehrmann et al: Microglial reaction in the rat cerebral cortex induced by cortical spreading depression (Vol. 3 No. 1)
7.	A Giese et al: Neuronal Cell Death in Scrapie-Infected Mice Is Due to Apoptosis (Vol. 5 No. 3)
8.	E Newcomb et al: A correlative study of p53 protein alteration and p53 gene mutation in glioblastoma multiforme (Vol. 3 No. 3)
9.	F Gray et al: Neuropathology of Early HIV-1 Infection (Vol. 6 No. 1)
10.	JT Povlishock et al: Traumatically induced axonal injury: Pathogenesis and pathobiological implications (Vol. 2 No. 1)

Table 3. Top 10 research articles listed by article impact.

historical roots, eliminate cases and turn a blind eye to the International Society of Neuropathology's Congress. In fact, if we did all of that we would have a most impressive Impact Factor! (Table 4 and Figure 2). Then again we would not be *Brain Pathology*.

Without a crystal ball, it is difficult to confidently predict what the future offers for our readership. While not ignoring ISI and the infamous Impact Factor, we will maintain a clear focus on the true impact of *Brain Pathology*. We will continue to concentrate on publishing superb symposia and articles that by their very nature are autocatalytic. While we know all of our subscribers will continue to demand hard copies of the Journal, we can not ignore the electronic media wave. In fact, we need to ride that wave to maintain our position. We began our web site with full searchable titles on January 26th 1998. By the time the International Congress meets in Birmingham in 2000, we will have the abstracts from all *Brain Pathology* issues along with all the 2000 Congress abstracts on the web. Beginning with the January issue of 1998, all research articles and symposia are available as PDF files. Those who have used these files need not be reminded of their importance. Those who have not used them thinking they may be another electronic time sink, let me urge you to think again. They are as important to the new millennium as the Xerox machine was to the latter quarter of the 20th century (and you probably wish you owned that stock, but that is grist for a different article). The *Brain Pathology* web site continues to rise in popularity with over 30,000 user sessions in 1999 alone.

Sadly I must end my Editorship of *Brain Pathology*. As I round this lap I have mixed emotions about passing the baton to the new Editor, Dr. Harry Vinters. In some ways I would like to run another lap. I can think of few activities that have given more joy and feeling of accomplishment than working with the authors and editors of *Brain Pathology*. I will miss it, but I will also take solace in the fact that the new editor can add a new perspective and a new burst of energy, something every journal needs. Given the tenure of the Founding Editor and my own, perhaps there is something magical about 5 years as an editor. We won't know until 2005.

A final word of thanks: while I will be guilty of omitting many names of individuals who have been crucial to the Journal's success, there are several individuals I must single out, because without them this last 5 years would never have been navigable. The founding editor, Paul Kleihues continues to offer invaluable advice and encouragement. His unflinching devotion to the Journal has made a critical difference. I have already thanked

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1998	8.02	2	1	8

Table 4. 1998 Impact Factor reflecting adjusted content (without International Congress articles or cases.)



Figure 2. Impact Factor charted reflecting adjusted content, 1994-1998.

the Associate Editorial board and all of the reviewers but it is completely appropriate to thank them again. In no small part, their efforts define the Journal. I am also indebted to Ms. Karen Weber who was the first Production Editor in the United States. Karen made the transition from Switzerland to Pittsburgh occur seamlessly. She constantly managed the journal with a graceful and unflappable style. In 1997, Mr. Duncan MacRae began as the Production Editor and has transformed the Journal both financially and electronically. He has single handedly given the Journal a presence on the web at the highest level. Not only is the site aesthetically pleasing, but its powerful functions facilitate new modes of communication. Duncan is also a living legacy, as he will move with the Journal to Los Angeles to continue as Production Editor with Harry. May I close by wishing the New Editor all the joy for a productive new millennium with *Brain Pathology*.