



# The history of the first 40 years of *Neurological Sciences*

Antonio Federico<sup>1</sup> · Giuliano Avanzini<sup>2</sup>

Published online: 12 October 2019

© Fondazione Società Italiana di Neurologia 2019

## A prestigious past

This year, we celebrate 40 years from the foundation of our *Neurological Sciences*, which is also the journal of the Italian Society of Neurology (SIN).

The first issue of the journal, at that time entitled “*Italian Journal of Neurological Sciences*,” was published in November 1979. Figure 1 shows the cover of the first issue and the list of the Editorial Board and Advisory Board members in the first page.

This journal was founded by Renato Boeri, at that time Scientific Director of the Carlo Besta Neurological Institute in Milan, who was between the neurologists who greatly renewed the organization of the Italian Society of Neurology. He was the secretary of the SIN board whose president was Fabio Visintini, from Parma. The discussion for the foundation of a new journal was very long starting 2 years before the first issue appeared. An agreement was established with Masson as publisher, and the property of the journal remained to the Italian Society of Neurology.

The first Editor in Chief was Renato Boeri (Fig. 2), and Associate Editors were Giorgio Macchi as President of the Italian Society of Neurology and Luigi Amaducci as Secretary, Italian Society of Neurology. Carlo Loeb and Paolo Pinelli collaborated in the Editorial Board. The Advisory Board was composed of many Italian neurologists belonging to the different neurological schools, also by sever-

al Italian neurologists working abroad in the USA, Europe, or Australia.

The list of the Editorial Board members throughout the years is reported in Table 1.

From 1993 to 2012, the Editor in Chief was Giuliano Avanzini (Milan, Istituto Neurologico C. Besta) followed by Antonio Federico (University of Siena, up-to-date) (Fig. 3).

Together with many Italian neurologists, also important foreign neurologists joined the Editorial Board (Robert Frackowiak, Lewis Rowland, Timoty Pedley) and most recently, after 2017, colleagues from The Netherlands (prof. De Visser), Israel (prof. Bornstein), Romania (prof. Muresanu), and Russia (prof. Gueckt).

In the next months, the foreign group of Associate Editors will be further enriched with experts from Austria, Germany, China, Slovenia, Tunisia, Australia, and Taiwan, thus increasing our international impact, which is already reflected in the list of reviewers, the majority of whom are from international origin.

The journal was published every 4 months, in VIII format from 1980 to 1981. In relationship to the increase of the number of the submitted and published articles, the yearly issues were increased from 3 to 4 (1982–1985) and from 4 to 6 (1986–2012), while a larger format (IV) was introduced in 1996 (Fig. 4). In 2013, the issues per year were further increased to 12, thus establishing the current monthly periodicity.

At the end of 1997, the SIN board decided to change publisher, with an agreement with Springer-Verlag Italia.

The cover was changed and the first issue was published in February 1998 (Fig. 5).

In April 2000 also the journal title was changed to *Neurological Sciences* to underline the international dimension of the journal (Fig. 6).

In this year, the journal moved from 0.18 impact factor (IF) to more than one, and the IF increase was more evident after the name changed to *Neurological Sciences*.

✉ Antonio Federico  
Federico@unisi.it

<sup>1</sup> Department of Medicine, Surgery and Neurosciences, Medical School, University of Siena, 53100 Siena, Italy

<sup>2</sup> Istituto Neurologico C. Besta, Milan, Italy

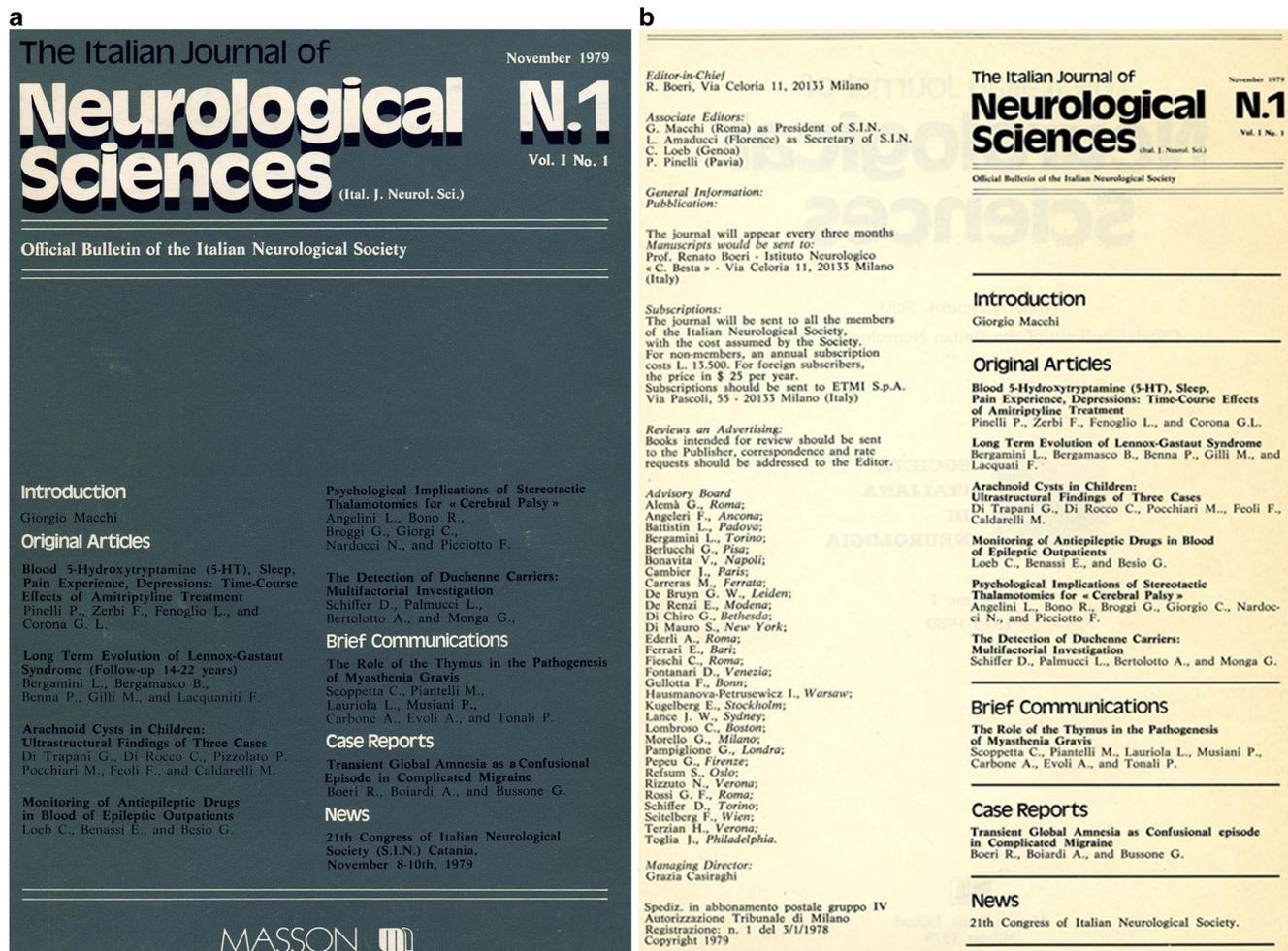


Fig. 1 Cover of the first published issue (a) and list of the Editorial Board and Advisory Board members in the first page (b)



Fig. 2 Prof. Renato Boeri

In 2012, we performed a cover restyling and provided the journal with a more modern feature that still characterizes it nowadays (Fig. 7) [1].

## The recent history

In 2013, *Neurological Sciences* took the innovative decision to make all primary research articles available online only. Research papers are available online in both html and PDF format with permanent free access to SIN members and journal subscribers, so it can be printed locally and distributed as required at no cost. The reason of this choice is mainly due to the changing scholarly literature landscape. The Internet has fundamentally changed publishing, and scholarly articles are now primarily accessed electronically.

## Editorial Board revision

A large revision of the Editorial Board has been performed in 2018: 10 new members joined the Associate

**Table 1** Main appointed Editors contributing to *Neurological Sciences* over the years

Period	Editor in Chief	Associate Editor	Associate Editor ex officio	
November 1979	Renato Boeri	Carlo Loeb	Giorgio Macchi	
1980–1981		Paolo Pinelli	Luigi Amaducci	President SIN Secretary SIN
		Carlo Loeb	Luigi Bergamini	President SIN
1982–September 1984		Paolo Pinelli	Tomaso Caraceni	Secretary SIN
		Carlo Loeb	G.A. Buscaino	President SIN
December 1984–1987		Paolo Pinelli	Mario Manfredi	Secretary SIN
		Carlo Loeb	Elio Lugaresi	President SIN
1988–1990		Paolo Pinelli	Domenico Mancia	Secretary SIN
		Carlo Loeb	Eugenio Ferrari	President SIN
1991–October 1991		Paolo Pinelli	Agostino Baruzzi	Secretary SIN
	Carlo Loeb	Mirko Carreras	President SIN	
December 1991–June 1993	Paolo Pinelli	Antonio Federico	Secretary SIN	
	Luigi Amaducci	Mirko Carreras	President SIN	
	Giuliano Avanzini	Ferdinando Cornelio	Vice President SIN	
	Gian Luigi Lenzi	Antonio Federico	Secretary SIN	
October 1993–February 1994	Giuliano Avanzini	Paolo Livrea		
		Nicolò Rizzuto		
		Luigi Amaducci	Mirko Carreras	President SIN
		Gian Luigi Lenzi	Ferdinando Cornelio	Vice President SIN
March 1994–June 1994		Paolo Livrea	Antonio Federico	Secretary SIN
		Nicolò Rizzuto		
		Luigi Amaducci	Cesare Fieschi	President SIN
		Gian Luigi Lenzi	Vito Toso	Vice President SIN
September 1994–1996		Paolo Livrea	Antonio Federico	Secretary SIN
		Nicolò Rizzuto		
		Luigi Amaducci	Cesare Fieschi	President SIN
		Giuseppe Caruso	Vito Toso	Vice President SIN
1996–1998		Gian Luigi Lenzi	Antonio Federico	Secretary SIN
		Nicolò Rizzuto	Corrado Messina	President SINC
		Antonio Federico	Domenico De Grandis	Secretary SINC
		Gian Luigi Lenzi	Luigi Amaducci	President SIN
1998–1999		Mario Manfredi	Bruno Jandolo	Vice President SIN
		Nicolò Rizzuto	Leandro Provinciali	Secretary SIN
		Lewis P.Rowland	Giuseppe Caruso	President SINC
		Antonio Federico	Giancarlo Comi	Secretary SINC
April 1999–2001		Richard Frackowiak	Bruno Jandolo	President SIN
		Gian Luigi Lenzi	Leandro Provinciali	Vice President SIN
		Mario Manfredi	Luigi Murri	Secretary SIN
		Nicolò Rizzuto	Lucio Santoro	President SINC
2001–2002		Lewis P.Rowland		Secretary SINC
		Vincenzo Bonavita	Nicolò Rizzuto	President SIN
		Antonio Federico	Vito Toso	Vice President SIN
		GianLuigi Lenzi	GianLuigi Mancardi	Secretary SIN
2002–2003		Mario Manfredi	Luigi Murri	President SINC
		Timoty A. Pedley	Lucio Santoro	Secretary SINC
		Vincenzo Bonavita	Nicolò Rizzuto	President SIN
		Antonio Federico	Vito Toso	Vice President SIN
2003–2004		Gianluigi Lenzi	Gianluigi Mancardi	Secretary SIN
		Mario Manfredi	Paolo Girlanda	President SINC
		Timoty A. Pedley	Paolo M. Rossini	Secretary SINC
		Vincenzo Bonavita	Nicolò Rizzuto	President SIN
2004–2006		Antonio Federico	Vito Toso	Vice President SIN
		Gianluigi Lenzi	Gianluigi Mancardi	Secretary SIN
		Mario Manfredi		
		Timoty A. Pedley		
2004–2006		Vincenzo Bonavita	Corrado Messina	President SIN
		Antonio Federico	Tomaso Sacquegna	Vice President SIN
		Gianluigi Lenzi	Gianluigi Mancardi	Secretary SIN

**Table 1** (continued)

Period	Editor in Chief	Associate Editor	Associate Editor ex officio	
2006–2008		Mario Manfredi Timoty A. Pedley Nicolò Rizzuto Vincenzo Bonavita Antonio Federico Gianluigi Lenzi Corrado Messina Timoty A. Pedley Nicolò Rizzuto	Mario Manfredi Fabrizio A. de Falco Gioacchino Tedeschi	President SIN Vice President SIN Secretary SIN
2008		Vincenzo Bonavita Antonio Federico Gianluigi Lenzi Mario Manfredi Timoty A. Pedley Nicolò Rizzuto	Giorgio Bernardi Roberto Sterzi Gioacchino Tedeschi	President SIN Vice President SIN Secretary SIN
2009		Vincenzo Bonavita Stefano Cappa Antonio Federico Gianluigi Lenzi Mario Manfredi Timoty A. Pedley Nicolò Rizzuto	Giorgio Bernardi Roberto Sterzi Gioacchino Tedeschi	President SIN Vice President SIN Secretary SIN
2009–2011		Alfredo Berardelli Carlo Caltagirone Stefano Cappa Giancarlo Comi Domenico Inzitari GianLuigi Mancardi Leandro Provinciali Aldo Quattrone Paolo Maria Rossini Franco Taroni Gioacchino Tedeschi	Antonio Federico Giuseppe Micieli Alfredo Berardelli Gioacchino Tedeschi	President SIN Vice President SIN Secretary SIN Treasurer SIN
2011–2012		Giuseppe Vita Alfredo Berardelli Carlo Caltagirone Stefano Cappa Giancarlo Comi Domenico Inzitari GianLuigi Mancardi Leandro Provinciali Aldo Quattrone Paolo Maria Rossini Franco Taroni Gioacchino Tedeschi	Giancarlo Comi Carlo Serrati Alfredo Berardelli Gioacchino Tedeschi	President SIN Vice President SIN Secretary SIN Treasurer SIN
October 2012–2013	Antonio Federico	Giuseppe Vita Alfredo Berardelli Carlo Caltagirone Stefano Cappa Giancarlo Comi Domenico Inzitari GianLuigi Mancardi Leandro Provinciali Aldo Quattrone Paolo Maria Rossini Carlo Serrati Franco Taroni Gioacchino Tedeschi	Giancarlo Comi Carlo Serrati Alfredo Berardelli Gioacchino Tedeschi	President SIN Vice President SIN Secretary SIN Treasurer SIN
2013–2015		Giuseppe Vita Alfredo Berardelli Carlo Caltagirone Stefano Cappa Giancarlo Comi Domenico Inzitari GianLuigi Mancardi	Aldo Quattrone Bruno Giometto Carlo Ferrarese Mario Zappia	President SIN Vice President SIN Secretary SIN Treasurer SIN

**Table 1** (continued)

Period	Editor in Chief	Associate Editor	Associate Editor ex officio	
2015–2017		Leandro Provinciali Aldo Quattrone Paolo Maria Rossini Carlo Serrati Franco Taroni Gioacchino Tedeschi Giuseppe Vita	Leandro Provinciali Elio Clemente Agost Leonardo Lopiano	President SIN Vice President SIN Secretary SIN
		Alfredo Berardelli Carlo Caltagirone Stefano Cappa Giancarlo Comi Domenico Inzitari GianLuigi Mancardi Leandro Provinciali Aldo Quattrone Paolo Maria Rossini Carlo Serrati Franco Taroni Gioacchino Tedeschi Giuseppe Vita		
2017–2019		Alfredo Berardelli Natan Bornstein Carlo Caltagirone Stefano Cappa Valeria Caso Giancarlo Comi Pietro Cortelli Nicola De Stefano Marianne De Visser Massimo Filippi Alla Guekht Gianluigi Mancardi Dafin F. Muresanu Aldo Quattrone Paolo Maria Rossini Lucio Santoro Massimo Zeviani	Gianluigi Mancardi Roberto Eleopra Mario Zappia Antonio Toscano	President SIN Vice President SIN Secretary SIN Treasurer SIN

**Fig. 3** Prof. G. Avanzini (a) and prof. A. Federico (b)





Fig. 4 The new format (1996)

Editors panel and 34 new members joined the Advisory Board (Fig. 8).

### Editorial office activity

Nowadays, we are receiving a huge amount of contributions. After a slight decrease in 2016–2017, the trend was inverted in 2018, and in 2019, we expect to receive more than 1800 article submissions with a 37% increase vs the previous year (Fig. 9)

The rejection rate in the period January–August 2019 is about 70%.

The significant growth of article submissions determined a slight increase in the peer review processing time (Fig. 10). In 2019, so far, the whole process has been completed in 125 days on average, while 44 days is the average time between submission and first decision.

As far as the geographical breakdown of submissions in 2018 is concerned, Asia-Middle East (50%) and European countries (43%) were the mainly represented areas, although the considerably high rejection rates recorded for Asiatic countries resulted in a reversed pattern of acceptance rates (Europe 56%, Asia-Middle East 40%) (Fig. 11).

Italian contributions accounted for the 24% of whole submitted papers in 2018, while noteworthy are the contributions from emerging countries such as China (29% of whole



Fig. 5 The first issue edited by Springer in 1998, cover layout

submitted papers), Turkey (9%), Iran and Korea (5.3% each), and India (3%).

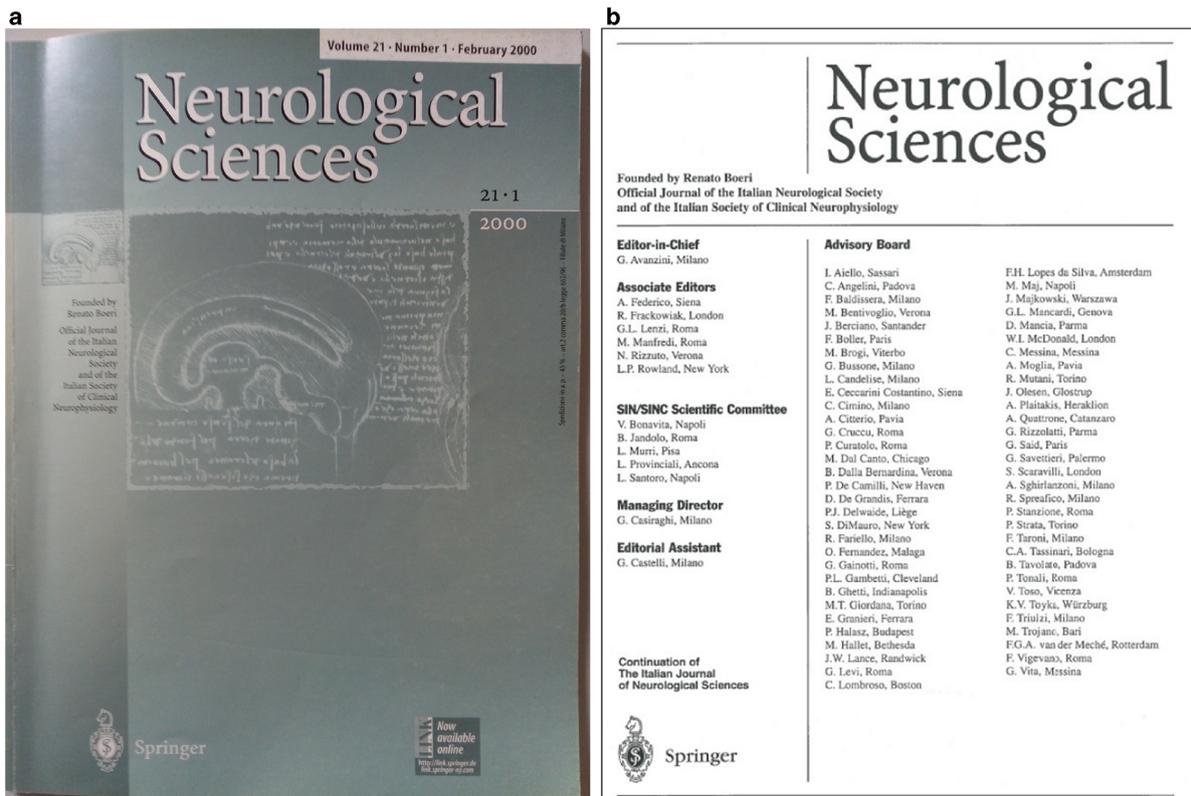
Despite the modest contribution of US authors in 2018 (2.5% of whole submitted papers), the increase of US submissions in 2018 is noteworthy (+ 62% vs 2017) and a further 50% increase is expected in 2019 (Table 2). Significant submission increases are being recorded in 2019 so far also for German (10-fold increase), Brazilian (2.6-fold increase), Iranian (+ 84%), UK (+ 50%), Chinese (+ 46%), and Japanese (+ 35%) authorship (Table 2).

### Production flow

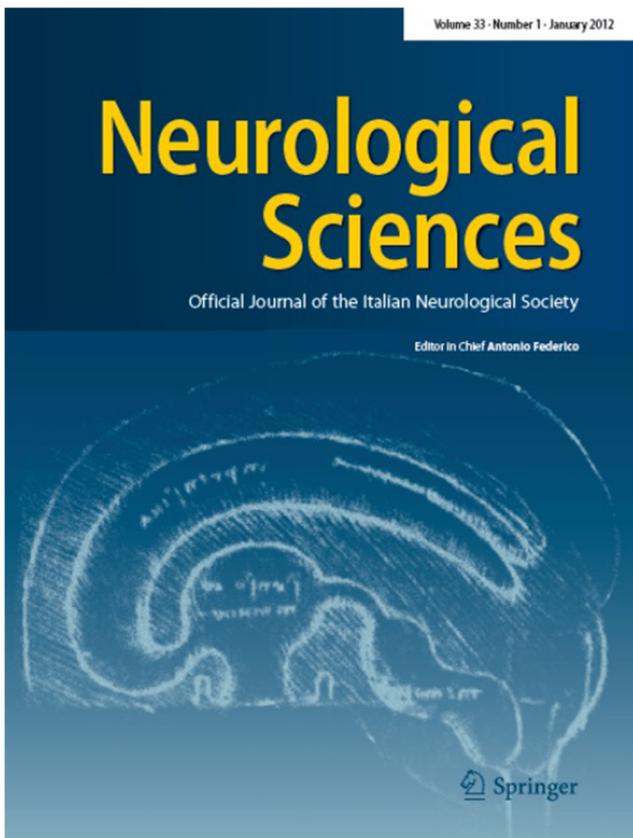
Despite the significant increase of submissions recorded in the most recent years, turnaround times of the production flow are in line with most of the peer-reviewed journals in the field (Fig. 12).

Accepted articles are published online first before inclusion into a regular issue. Online-first articles are in citable form since articles metadata are sent to all relevant abstracting and indexing services immediately after online publication.

In the most recent years, the number of online-first articles published in *Neurological Sciences* is in line with the number of published articles in issues; this prevented large online-first article backlogs and articles staying long times in the online-first status (Fig. 13). An average of 30–33 articles per issue is currently published.



**Fig. 6** The front cover of the first issue with the journal title *Neurological Sciences* (a) along with the Editorial Board composition as appearing in the introductory journal page in 2000 (b)



**Fig. 7** Current cover layout as restyled in 2012

In 2017, we published 362 articles in 12 regular issues and 50 articles in two supplements [Vol. 38, Suppl 1, STRESA HEADACHE 2017-International Multidisciplinary Seminar, *Guest Editor: G. Bussone* (May 2017) & Vol. 38, Suppl 2, Standardizations and guidelines in clinical and laboratory neuroimmunology, *Guest Editors: A. Uccelli, G.L. Mancardi* (October 2017)].

In 2018, we published 383 papers in 12 regular issues and 58 articles in one supplement [vol 39, Suppl 1, IX National ANIRCEF Congress: HEADACHES TURNING TO THE FUTURE, *Guest Editor: F. Frediani* (June 2018)].

Regular issues are timely published and turnaround times are sufficiently low. To date, 110 online-first articles are waiting to be included in regular issues; these may cover about 3.5 forthcoming issues.

Original articles and Letters to the Editors are the article types usually included at the highest rates in journal regular issues. Over the years, we managed to increase the number of Review articles (Table 3). This may positively affect the journal impact due to their significant contribution to the journal citation rate (see the “Citations” paragraph).

## Usage

Journal articles are hosted in the SpringerLink journal homepage (<https://link.springer.com/journal/10072>). We

**Fig. 8** Editorial Board composition as revised in 2018

# Neurological Sciences

**Official Journal of the Italian Neurological Society**  
**Founded by Renato Boeri (1979–1993) continued by Giuliano Avanzini (until 2011)**

---

**Editor-in-Chief**  
A. Federico, Siena, Italy

**Associate Editors**  
A. Berardelli, Rome, Italy  
N. Bornstein, Tel Aviv, Israel  
C. Caltagirone, Rome, Italy  
S. Cappa, Pavia, Italy  
V. Caso, Perugia, Italy  
G. Comi, Milan, Italy  
P. Cortelli, Bologna, Italy  
N. De Stefano, Siena, Italy  
M. De Visser, Amsterdam, The Netherlands  
M. Filippi, Milan, Italy  
A. Guekht, Moscow, Russia  
G.L. Mancardi, Genoa, Italy  
D. Muresanu, Cruj, Romania  
A. Quattrone, Catanzaro, Italy  
P.M. Rossini, Rome, Italy  
L. Santoro, Naples, Italy  
M. Zeviani, Cambridge, UK

**Editorial Assistant**  
G. Castelli, Milan, Italy

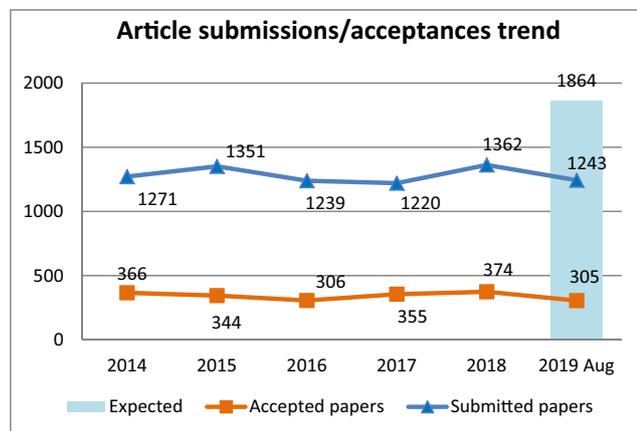
**Continuation of  
The Italian Journal  
of Neurological Sciences**

**Advisory Board**

G. Abbruzzese, Genoa, Italy U. Aguglia, Reggio Calabria, Italy C. Angelini, Padua, Italy P. Annunziata, Siena, Italy C. Baracchini, Padua, Italy E. Beghi, Milan, Italy P. Benna, Turin, Italy U. Bonuccelli, Pisa, Italy P. Calabresi, Perugia, Italy M. Ceroni, Pavia, Italy A. Chiò, Turin, Italy E. Ciceri, Verona, Italy G. Cruccu, Rome, Italy F. De Falco, Naples, Italy M.T. Dotti, Siena, Italy R. Eleopra, Milan, Italy C. Ferrarese, Monza, Italy R. Ferri, Troina, Italy A. Filla, Naples, Italy M. Filosto, Brescia, Italy F.M. Galassi, Zurich, Switzerland D. Galimberti, Milan, Italy A. Gambardella, Catanzaro, Italy C. Gandolfo, Genoa, Italy B. Giometto, Padua, Italy M.T. Giordana, Turin, Italy P. Girlanda, Messina, Italy E. Granieri, Ferrara, Italy G. Hadjigeorgiou, Larissa, Greece G.L. Lenzi, Rome, Italy	L. Leocani, Milan, Italy G.C. Logroscino, Bari, Italy M. Mancuso, Pisa, Italy M.G. Marrosu, Cagliari, Italy G. Meola, Milan, Italy G. Miceli, Pavia, Italy S. Monaco, Verona, Italy M. Musico, Milan, Italy F. Orzi, Rome, Italy L. Pantoni, Milan, Italy D. Pareyson, Milan, Italy A. Quartarone, Messina, Italy S. Ricci, Perugia, Italy S. Sacco, L'Aquila, Italy A. Salmaggi, Lecco, Italy M. Salvetti, Rome, Italy F.M. Santorelli, Pisa, Italy G. Savettieri, Palermo, Italy A. Schenone, Genoa, Italy G. Siciliano, Pisa, Italy A. Silvani, Milan, Italy M. Silvestrini, Ancona, Italy R. Soffietti, Turin, Italy S. Sorbi, Florence, Italy P. Tinuper, Bologna, Italy A. Toscano, Messina, Italy M. Trojano, Bari, Italy M. Valeriani, Rome, Italy M. Zappia, Catania, Italy D. Zee, Baltimore, USA
---	--



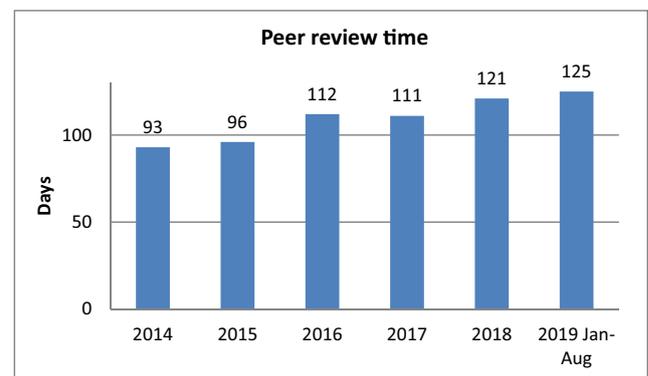
recorded an increasing trend of full-text article downloads over the most recent years (2014–2018). If the trend is



**Fig. 9** Yearly submissions and acceptances in the publication years 2014–August 2019 (source: Editorial Manager)

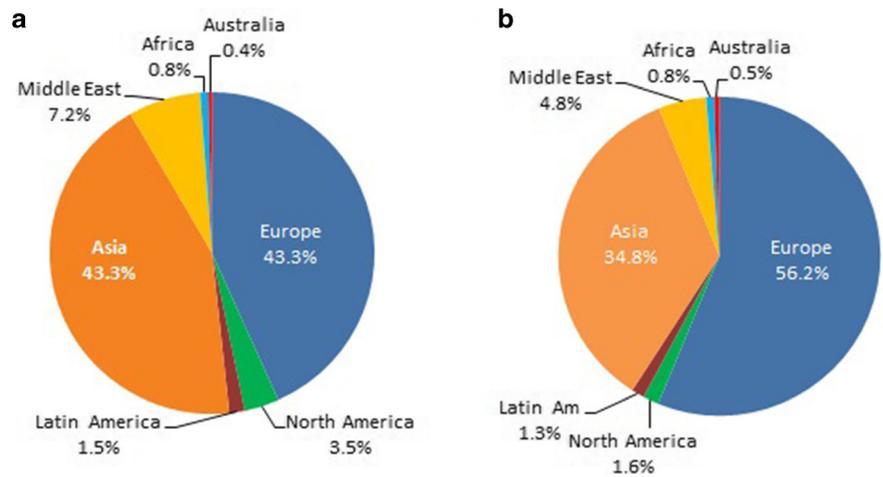
confirmed, in 2019, we expect a further 28% increase of article downloads vs the previous year (Fig. 14).

Surprisingly, the largest percentage of SpringerLink users are coming from the USA (26%) although their contribution



**Fig. 10** Overall peer review times in the publication years 2014–August 2019 (source: Editorial Manager)

**Fig. 11** The pies describe the geographical distribution of article submissions (a) and acceptances (b) in 2018 (source: Editorial Manager)



**Table 2** Top 20 most submitting countries in Jan–July 2019 vs the same period of 2018 (source: Editorial Manager)

Author country	Subs July 2018	Subs July 2019
China	220	322
Italy	182	211
Turkey	72	85
Islamic Republic of Iran	39	72
Republic of Korea	40	49
Japan	23	31
USA	21	29
India	23	29
Brazil	8	29
Spain	13	18
Croatia	9	17
Germany	1	14
UK	6	13
Taiwan	4	9
Poland	6	9
Saudi Arabia	7	7
Portugal	8	7
France	2	7
Egypt	8	7
Mexico	3	6

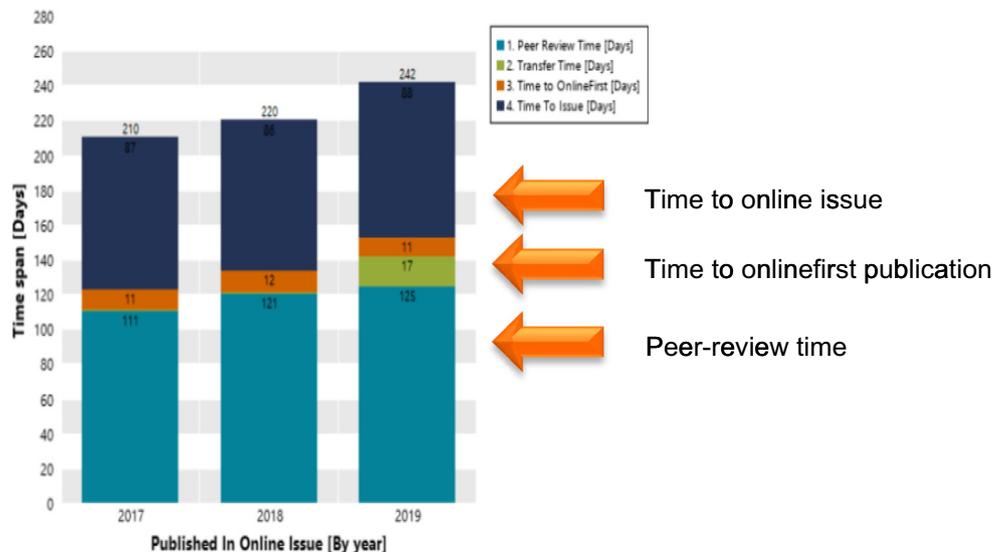
in terms of article submissions is very limited (2.5% of the whole 2018 submissions).

Noteworthy are the usage data coming from some emergent countries such as China, India, and Australia (Fig. 15).

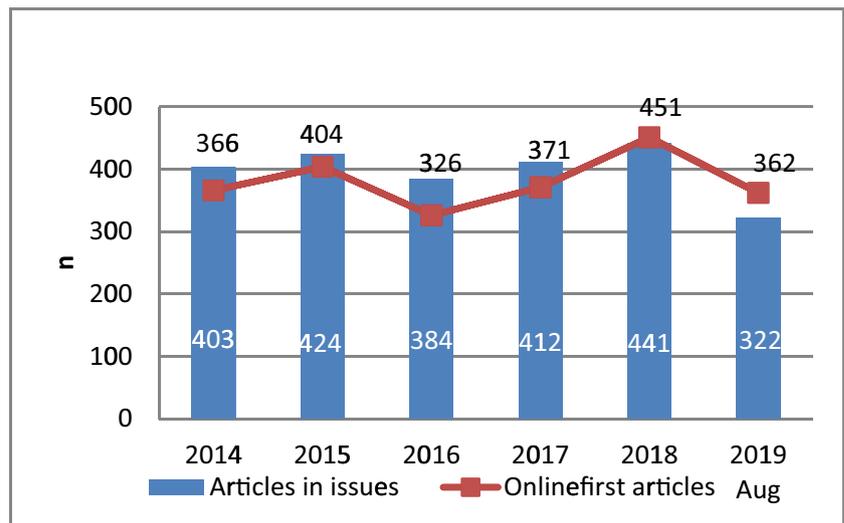
**Citations**

*Neurological Sciences* is included in the following abstracting and indexing services: Science Citation Index, Science Citation Index Expanded (SciSearch), Journal Citation Reports/Science Edition, PubMed/Medline, SCOPUS, PsycINFO, EMBASE, Google Scholar, EBSCO, CSA, Academic OneFile, Academic Search, Biological Abstracts, BIOSIS, CSA Environmental Sciences, Current Contents/Clinical Medicine, Gale, Health Reference Center Academic, OCLC, ReadCube, SCImago, and Summon by ProQuest.

**Fig. 12** Average times between submission of a manuscript and publication into a regular issue (source: Springer Nature MRPA-SRG)



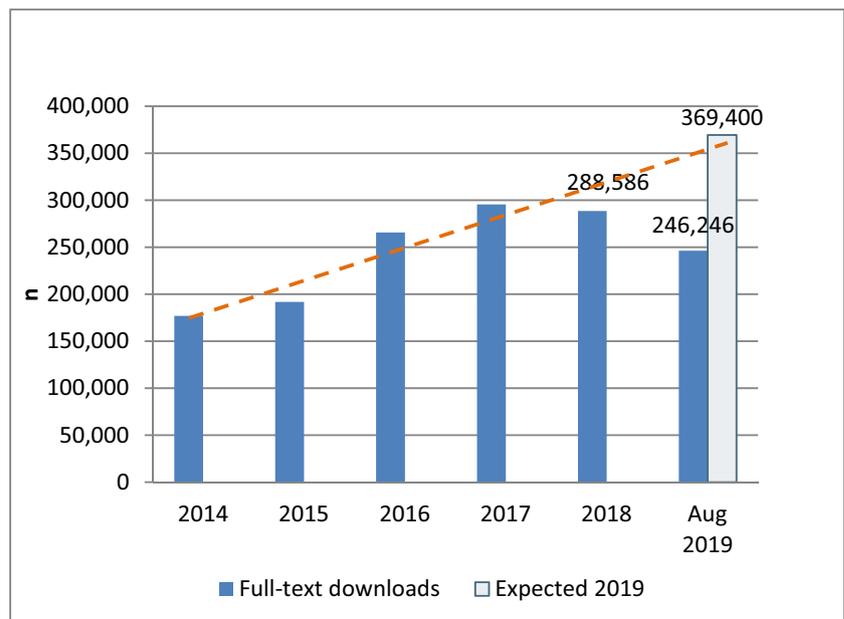
**Fig. 13** Yearly article output. Bars indicate articles included in regular issues while the line represents online-first publications (source: SpringerLink)



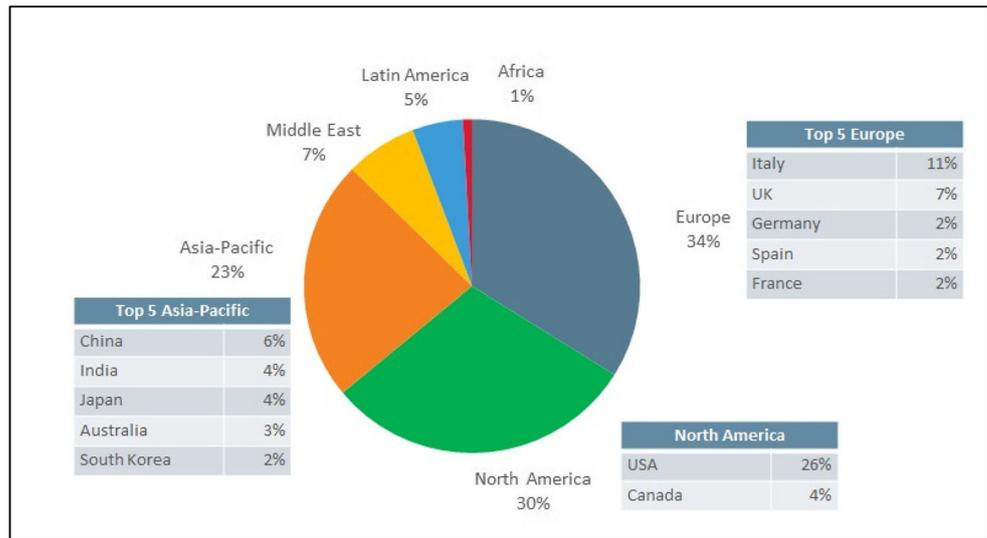
**Table 3** Publications per article category in the years 2016–September 2019 (source: SpringerLink)

Article type	2016, n (%)	2017, n (%)	2018, n (%)	September 2019, n (%)
Original article	170 (51.50%)	183 (51.5%)	170 (44.5%)	154 (50.1%)
Letters to the Editor	75 (22.7%)	84 (23.7%)	114 (29.8%)	77 (25.1%)
Review articles	29 (8.8%)	32 (9%)	38 (9.9%)	25 (8.1%)
Brief Communications	33 (10%)	32 (9%)	33 (8.6%)	31 (10.1%)
Highlights	12	12	12	9
Quiz Cases	3	2	3	5
Editorial	1	3	3	1
History of Neurology	2	3	7	3
Healthcare organization	1	-	-	-
Neurological digression	1	1	-	-
News & Views	-	1	-	1
Simulation in Neurology	-	-	-	-
Updates in Clinical Neurogenetics	1	-	-	-
Obituary	1	2	-	-
Erratum	9	4	5	11

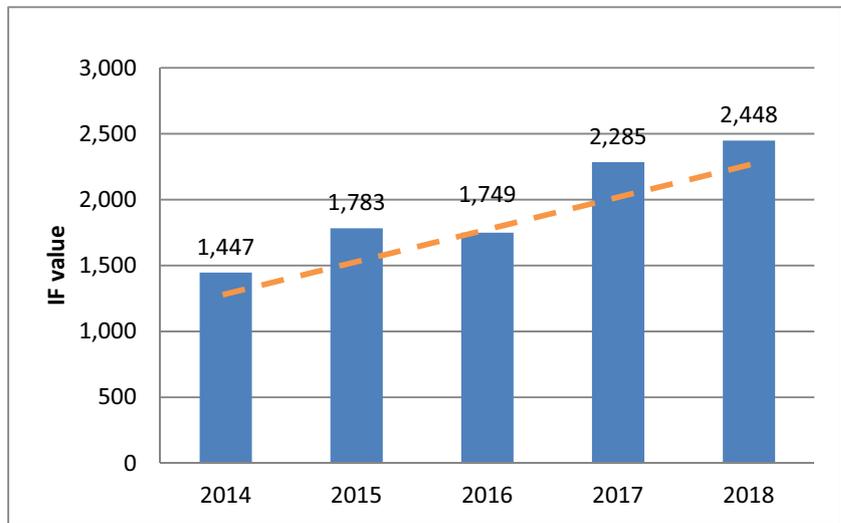
**Fig. 14** Yearly full-text article downloads (years 2014–August 2019). The orange line indicates the growing trend over the years (source: SpringerLink)



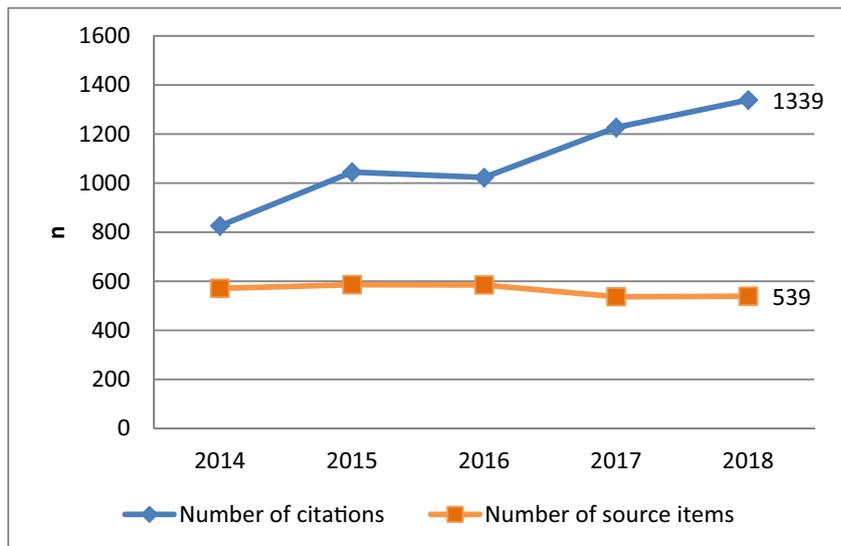
**Fig. 15** Visits by geography in 2018 (source: SpringerLink)

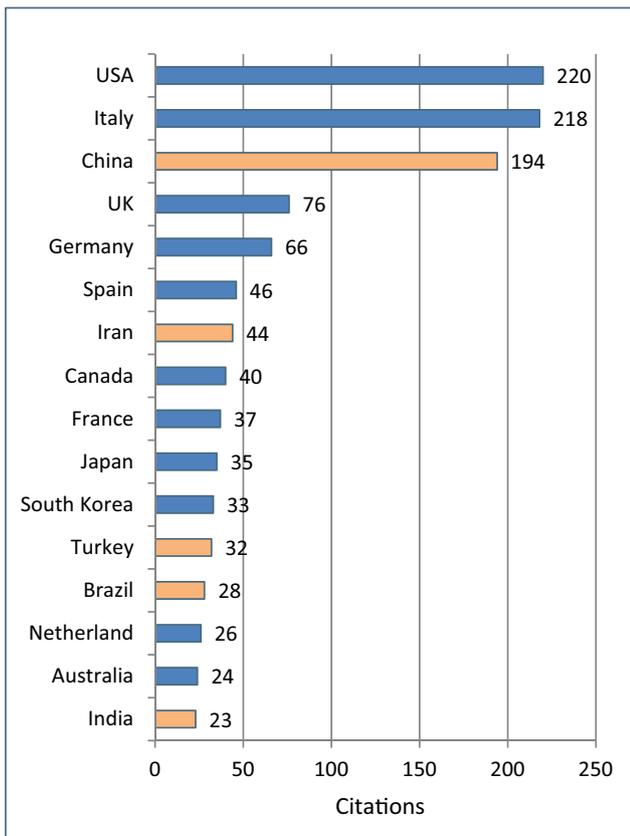


**Fig. 16** Impact factor trend (citation years 2014–2018). The orange dotted line indicates the increasing IF trend over the years (source: JCR, Clarivate Analytics)



**Fig. 17** Number of yearly citations and source items. Citation years 2014–2018 (source: JCR, Clarivate Analytics)





**Fig. 18** Geographical breakdown of citations: top-citing countries. Bars indicate the number of times that listed countries cited *Neurological Sciences* articles included in IF (2018) calculation (Source: InCites, Clarivate Analytics)

Clarivate Analytics yearly releases the Journal Citation Reports including Impact Factor calculations (Fig. 16). Citations and source items details related to the last impact factor calculation (2018) for *Neurological Sciences* are reported in Fig. 17.

Despite the low contribution of the USA in terms of article submissions, the largest percentage of citing papers came from Italian and US authorship, followed by Chinese authors. The top 16 citing countries are displayed in the table below. Emerging countries (in orange) as a whole contributed 24% of overall citations (Fig. 18).

## Conclusions

In these 40 years, we assisted to a continuous increase of reputation of *Neurological Sciences* in the panorama of the world clinical neurosciences publications also confirming the good quality of the Italian Neurology. We are sure that this trend will continue in the future, attracting a large number of young researchers that with their enthusiasm and innovation will represent our future.

**Acknowledgments** We thank Dr. Barbara Pedrotti (Springer-Verlag Italia) for the journal data retrieval and analysis and Giovanna Castelli, editorial assistant, for the continuous and efficient work for the journal in these 40 years.

## Reference

1. Avanzini G. (2011) *Neurological Sciences*. Rivista della Società Italiana di Neurologia. In 100 anni della Società Italiana di Neurologia. Le Origini e Gli sviluppi. A. Federico, G. Alemà, G. Bernardi, V. Bonavita, M. Manfredi, N. Rizzuto, G. Zanchin EDTs. Quaderni di Neurologia SIN, Vol 1, p 281

**Publisher's note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.