Editorial

New STH 2023 Impact Factor, Most Highly Cited Papers, and Other Journal Metrics

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This Editorial continues our now standard approach, to announce our newest Journal Impact Factor (IF) and other journal metrics, upon release of the latest IF.¹ ² ³

2023 STH Impact Factor

The latest IF for Seminars in Thrombosis and Hemostasis (STH), as for all journals with an IF, was announced in late June of 2024, which was for the year 2023. The 2023 IF for STH was 3.6, which marked an anticipated decrease over the 2022 and 2021 IFs, which were respectively 5.7 and 6.938. For the interest of the readership, I have provided a figure outlining the STH IF from 2003 to 2023 (► Fig. 1). The 2021 IF of 6.398 was the highest IF that STH has ever achieved. To some extent, these IF variations were anticipated. First, there were some changes to how the IF was calculated for 2020, 2021, and 2022. Whereas IF data historically reflected dates of final (e.g., print) publication, a change was instigated for 2020 to include dates of online publication, which for most journals occurs several months ahead of final print versions. These are called eFirst articles for STH, and are available at: https://www.thieme-connect.com/products/ejournals/issue/eFirst/10.1055/s-00000077. The change in calculation progressed further in 2021 to utilize dates of online publication instead of final print. Finally, further adjustment to the calculation occurred for the 2022 IF. Second, additional journals continue to be included in the database used for generating IFs, meaning additional citation potential from the inclusion of these additional journals. Third, we have all been affected by the pandemic that “was” COVID-19 (coronavirus disease 2019). One silver lining to the pandemic was the drive by scientific and medical teams to understand and combat the virus that is SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2), being the infectious agent leading to COVID-19. At time of writing, the majority of countries have stopped reporting statistics, but according to available data, COVID-19 has infected over 700 million people worldwide, and been responsible for over 7 million deaths.¹

One of the more amazing medical/scientific achievements has been the rapid development, production, and deployment of a multitude of COVID-19/SARS-CoV-2 vaccines, for which 5.5 billion doses have since been administered.²⁻⁴ The pandemic also created research and writing “frenzies,” with 434,136 COVID-19-related publications now listed in PubMed,⁵ with just 113 of these attributable to STH. It needs to be remembered that although COVID-19 is an infectious disease, it is also a prothrombotic disease, and thus many COVID-19-related papers have appeared in thrombosis and hemostasis (T&H)-related journals. Indeed, STH has published four issues entirely focused on COVID-19,⁶⁻¹⁰ one in each year for 2020 to 2023 inclusive. Moreover, much of the COVID-19-related material was made freely available by the publisher. It is accordingly now also very clear that these publications have been both quite popular with the readership¹¹⁻¹⁴ and also well-cited in the literature.¹⁻³ Thus, to

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some extent, an increase in the IF for 2021 was predicted, and was in part driven by COVID-19-related publications. However, as the COVID-19 pandemic turned into an endemic that we now continue to live with, and as we all go back to “business as usual,” it could be anticipated that the 2022 and 2023 IFs would correspondingly fall. STH is certainly not alone in this anticipated trend, which was evident for most T&H-focused journals. I have therefore included several other figures here that compare the IF changes across several T&H-focused journals.

► Fig. 2 shows the changes in IF for several T&H-focused journals from year to year from 2001. The STH IF has always been somewhere in the middle of the pack. Interestingly, the IF for the majority of these journals for 2023 was between 2 and 4. ► Fig. 3 shows the changes for several T&H-focused journals from year to year for the past 4 years; the change from 2019 to 2020 is shown in ►Fig. 3A, that from 2020 to 2021 shown in ►Fig. 3B, that from 2021 to 2022 shown in ►Fig. 3C, and the final change from 2022 to 2023 shown in ►Fig. 3D. In general, most T&H-focused journals showed an increase in IF in both 2019 to 2020 and 2020 to 2021, representing the periods of greatest interest in COVID-19, but then showed subsequent reductions in IF from 2021 to 2022 and again from 2022 to 2023. Indeed, some journals achieved a huge increment in IF in 2021 on the back of a few very highly cited COVID-19 publications (some received in excess of 2,000 citations). However, these journals in general also showed the largest proportional falls in 2022 and 2023 IFs. It is likely that IFs will now stabilize and perhaps 2023 represents a transition to some sort of new equilibrium.

It is of course also important to note that the IFs for STH in 2021 and 2022 were not solely related to an increase in citations of COVID-19 material. Finally, the IF is just only one of several markers of journal “quality” that we should consider, and the limitations of any individual marker (including the IF) as a “quality” indicator, have previously been discussed.

In any case, perhaps a better indicator of ongoing “quality” is specific-related ranking among peer journals. STH was ranked 25/97 in the Hematology category of the Science Citation Index Expanded (SCIE) in 2022, compared with 20/79 in 2022, 21/78 in 2021, 28/76 in 2020, and 36/76 in 2019. Similarly, STH was ranked 22/96 in the Peripheral Vascular Disease category of the SCIE in 2022, compared with 15/67 in 2022, 14/67 in 2021, 21/65 in 2020, and 26/65 in 2019. Importantly, STH remains in Quartile 1 of the Peripheral Vascular Disease category.

Most Highly Cited Papers Contributing to the 2023 STH Impact Factor

As I also now do annually, the highest 2023 cited (2021/2022-published) contributions from this journal are listed in ►Table 1 for the potential interest of the readership and contributing authors. This table identifies STH publications that most contributed to the 2023 IF, and each publication was cited six or more times in the IF database literature in 2023. For those interested, the current listing can be compared with those of the most recently published top downloaded article listings from STH, the basis of the Eberhard F. Mammen “Most Popular” awards.

Most of the manuscripts appearing in ►Table 1 represent review articles, since STH publishes mostly review articles. Nevertheless, quite a few original studies also appear in ►Table 1, including the two most highly cited papers. Although COVID-19 is no longer a specific focus of the journal, many of the listed papers are related to COVID-19, with many of these also listed in the most popular listings, as well as in prior high-citation lists. It therefore continues to be pleasing that there is at least partial concordance between popularity (as assessed by article downloads) and a paper’s “impact” (as judged by the number of citations; ►Table 1). It is also pleasing to continue to see Young Investigator winners in these lists, and also that

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**Fig. 1** The Impact Factor for *Seminars in Thrombosis and Hemostasis* from 2003 to 2023.
several original studies are on these lists. This vindicates the Editorial decision to publish select original studies, and also the publisher’s continued support of the Young Investigator Awards.

Several past issues of the journal are also worthy of highlighting as most contributing to the 2023 IF. Seven issues of STH managed to achieve a total citation count of more than 30 citations per issue:

- Maintaining Hemostasis and Preventing Thrombosis in Coronavirus Disease 2019 (COVID-19)-Part II. Guest Editors: Emmanuel J. Favaloro, Giuseppe Lippi. Published in mid-2021, this issue includes five papers in the top listing, including the second most highly cited paper.

- Maintaining Hemostasis and Preventing Thrombosis in Coronavirus Disease 2019 (COVID-19)-Part III. Guest Editors: Emmanuel J. Favaloro, Giuseppe Lippi. Published as the first issue of 2022, this issue represented the first of four issues specifically compiled to celebrate the first 50 years of STH publishing, and included three papers.

- Hemostatic and Nonhemostatic Effects of Heparan Sulfate Proteoglycans. Guest Editors: Yona Nadir and Ton Lisman. Published in mid-2021, and includes three papers.

- Editorial Compilation X. Guest Editors: Emmanuel J. Favaloro, Giuseppe Lippi. Published in late 2021, and marking the 10th compilation issue in this ongoing “non-themed” issue compilation series centered on bleeding and laboratory testing, included one paper.

- Recent Advances in Thrombosis and Hemostasis-Part VII. Guest Editor: Sam Schulman. Published in late 2021, and marking the 7th compilation issue in this ongoing “non-themed” issue compilation series centered on thrombosis, included two papers.


Fig. 2 The evolution in Impact Factor for Seminars in Thrombosis and Hemostasis and several other journals focused on thrombosis and hemostasis between 2001 and 2023.

Fig. 3 The change in Impact Factor for Seminars in Thrombosis and Hemostasis and several other journals focused on thrombosis and hemostasis between 2020 and 2019 (A), 2021 and 2020 (B), 2022 and 2021 (C), and most recently between 2023 and 2022 (D). Trends between T&H-focused journals were broadly similar, with generalized increases in 2020 and 2021, and then generalized falls in 2022 and 2023. T&H, thrombosis and hemostasis.
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*These papers were cited 6 or more times in 2023; thus, those published in 2021/2022 contributed most to the STH 2023 Impact Factor (IF). Citation rank is rank according to number of citations; publications with the same number of citations have been given the same rank.

Function. Guest Editors: Hau C. Kwaan, Mark Walsh, Paul F. Lindholm, and Maha Othman. Published in late 2022, and marking the first of two issues on viscoelastography, this issue includes the most highly cited paper in Table 1.

Metrics around Publication Acceptance Rates

This editorial also provides an update on some metrics around submission and acceptance rates for unsolicited manuscripts. As previously noted, STH now publishes a mixture of themed and nonthemed “composite” issues. All issues of STH contain around 10 full articles each, for a total of approximately 80 full articles per year (in total 8 issues/year). The vast majority of full articles published in STH are reviews, in keeping with our past publication history and our primary focus as a review journal. However, as we move somewhat away from a purely specifically themed-issue concept, STH now also publishes unsolicited material, including the occasional original study, although these are limited to a maximum of around 10 or so per year (or approximately 15% of full article content). Moreover, original studies are more likely to be published in the nonspecifically themed “composite” issues, and more likely to reflect unsolicited material. In contrast, most content in the specifically themed issues would represent solicited material, and thus mostly reviews. Of course, some original papers may form a very small component of specifically themed issues, and indeed could also originate from solicited material. Irrespective, what this all means is that STH receives similar equal numbers of unsolicited reviews and original studies, but original studies are more likely to be declined.

Some data from 2015 to 2023 are shown in Figs. 4 to 6. – Fig. 4 identifies the trends for unsolicited papers received versus published in STH over the years 2015 to 2023 inclusive. As shown, STH currently receives around 50 unsolicited original studies and around 40 unsolicited reviews per year; STH also receives several Letters to the Editor (“Correspondence”) per year. In total, STH receives close to 100 unsolicited items/year. The years 2020 to 2022 also saw a jump in Letters to The Editor (“Correspondence”) received, perhaps in part since we advise some authors of original articles, for which we decline to publish as original articles, that STH might instead consider to publish a portion of their study if resubmitted as Correspondence.
STH publishes only a proportion of the unsolicited manuscripts received (~10 original studies per year; ~20 unsolicited reviews/year) (Fig. 4). Additional clarity is provided by Fig. 5, which identifies the proportion of unsolicited manuscripts published by year; only approximately 20% of unsolicited original studies, and approximately 60% of unsolicited reviews are published per year. These data need to consider the number of submissions received for additional context; for example, although we published 100% of correspondences received in the years 2015 and 2016 (Fig. 5), we received very few such papers in these years. In total, STH has published 6 to 16 original papers per year from 2015 to 2023 (Fig. 4), with this representing an overall average of <15% of all full papers published over these years (Fig. 5). STH also publishes a Preface with each issue, as well as several Editorials per year.

The final data that I will share are shown in Figs. 6 to 8. Fig. 6 shows both the number of issues of STH published per year, as well as the number of pages published per year in the print issues. STH began in 1974 with the journal publishing just two issues per year, under the direction of the Founding Editor in Chief, Eberhard F. Mammen; STH published just 210 pages in that first year. The journal content doubled the second year, publishing four issues with over 400 pages. The growth of the journal continued, with a move to six issues per year from 1996, with 500 to 700 pages per year. The final change was a move to eight issues per year in 2006, with over 800 pages published per year. 2020 identifies a landmark year in which the journal published just over 1,000 pages, with 2021 and 2022 publishing just shy of 1,000 pages (994 pages in each year). STH published a more standard 866 pages in 2023. It is without doubt that 2024 will see the number jump to above 1,000 pages, given we are publishing some historical content, as related to 50 years of publishing. Fig. 7 shows the number of articles published by year as listed in the PubMed database. Although STH publishes a similar number of articles per year in the final print editions, these articles are increasingly being published online early (eFirst) articles.
published earlier online (as eFirst), and thus appearing on PubMed much earlier than the final print publication date. Finally, Fig. 8 provides the cumulative count of papers published in STH and indexed in PubMed. STH now has in excess of 4,000 papers listed in PubMed!

This leads me to speak once again about “anniversaries.” The year 2023 marked the 50th year of STH publishing, and the year 2024 marks the “official” 50th “birthday” for STH. Similar to what we did to mark the 40th year anniversary in 2014, where we published two issues of STH to celebrate, we managed to compile four issues to celebrate the latest landmark. The first of these issues appeared as the last issue (November) of 2022, the second early in 2023, the third as the first issue of 2024, and the fourth and final in mid-2024 in time to celebrate our 50th birthday at the International Society on Thrombosis and Hemostasis 2024 meeting in Bangkok, Thailand (Fig. 9). 2024 also marks my 15-year association with the journal as Editor in Chief, an event reflecting a kind of halfway point in comparison to Eberhard Mammen, who steered STH as Editor in Chief for some 34 years. Of course, my personal association with STH goes way beyond 15 years. I published my first paper in STH in 2002, this paper reviewing one of my favorite topics even then, on the von Willebrand factor collagen binding assay as an aide to the diagnosis of von Willebrand disease. My editorial association with STH actually began in 2006, when I...
was given duties as a “Regional Editor” for the journal, at that
time covering the Asia-Pacific region. This position was short-
lived, as Eberhard Mammen, the then Editor in Chief, passed
away a few years later, in 2008,5,7 and then I was asked by
the Publisher to take over the role of Editor in Chief from 2009.

Happy birthday to STH, with hopes that you stay around
for at least another 50 years, although I doubt if I will be
around to celebrate your 100th birthday!

Conflict of Interest
None declared.

References
1 Favaloro EJ. New STH (2020) Impact Factor, most highly cited
papers, and other journal metrics. Semin Thromb Hemost 2021;
47(07):745–753
2 Favaloro EJ. New Seminars in Thrombosis and Hemostasis (STH)
2021 Impact Factor, most highly cited papers, and other journal
metrics. Semin Thromb Hemost 2022;48(06):634–642
3 Favaloro EJ. New Seminars in Thrombosis and Hemostasis 2022
Impact Factor, most highly cited papers, and other journal metri-
cs. Semin Thromb Hemost 2023;49(07):661–669
data.who.int/dashboards/covid19/cases
5 WHO. COVID-19 vaccination, World data. Accessed 27 June 2024 at:
6 National Library of Medicine/National Center for Biotechnology
pubmed.ncbi.nlm.nih.gov/?term=covid-19
7 Favaloro EJ, Lippi G. Maintaining hemostasis and preventing
Thromb Hemost 2020;46(07):757–762
8 Favaloro EJ, Lippi G. Maintaining hemostasis and preventing
Semin Thromb Hemost 2021;47(04):333–337
9 Favaloro EJ, Lippi G. Maintaining hemostasis and preventing
thrombosis in coronavirus disease 2019 (COVID-19)-Part III.
Semin Thromb Hemost 2022;48(01):3–7
10 Favaloro EJ, Pasalic L, Lippi G. Maintaining hemostasis and pre-
vailing thrombosis in coronavirus disease 2019 (COVID-19)-Part
IV. Semin Thromb Hemost 2023;49(01):3–8
11 Favaloro EJ. 2021 Eberhard F. Mammen Award Announcements:
Part I-Most Popular Articles. Semin Thromb Hemost 2021;47(05):
467–476
12 Favaloro EJ. 2022 Eberhard F. Mammen Award Announcements:
Part I-Most Popular Articles. Semin Thromb Hemost 2022;48(05):
502–513
13 Favaloro EJ. 2023 Eberhard F. Mammen Award Announcements:
Part I-Most Popular Articles. Semin Thromb Hemost 2023;49(05):
417–426
14 Favaloro EJ. 2024 Eberhard F. Mammen Award Announcements:
Part I-Most Popular Articles. Semin Thromb Hemost 2024 (e-pub
15 Favaloro EJ. The Journal Impact Factor: don’t expect its demise any
16 Favaloro EJ. Measuring the quality of journals and journal articles:
the impact factor tells but a portion of the story. Semin Thromb
Hemost 2008;34(01):7–25
17 Grobbelaar LM, Kruger A, Venter C, et al. Relative hypercoagu-
lopathy of the SARS-CoV-2 beta and delta variants when compared
to the less severe omicron variants is related to TEG parameters,
the extent of fibrin amyloid microclots, and the severity of clinical
illness. Semin Thromb Hemost 2022;48(07):858–868
18 Engelen MM, Vandenbriele C, Balthazar T, et al. Venous throm-
boembolism in patients discharged after COVID-19 hospitaliza-
19 Larsen JB, Hvas AM. Thrombin: a pivotal player in hemostasis and
20 Favaloro EJ, Henry BM, Lippi G. COVID-19 and antiphospholipid
antibodies: time for a reality check? Semin Thromb Hemost 2022;
48(01):72–92
21 Parisi R, Costanzo S, Di Castelnuovo A, da Gaeta G, Donati MB,
Iacoviello L. Different anticoagulant regimens, mortality, and
bleeding in hospitalized patients with COVID-19: a systematic
review and an updated meta-analysis. Semin Thromb Hemost
2021;47(04):372–391
22 Iba T, Wada H, Levy JH. Platelet activation and thrombosis in
23 Favaloro EJ, Henry BM, Lippi G. Increased VWF and decreased
ADAMTS-13 in COVID-19: creating a milieu for (micro)thrombo-
sis. Semin Thromb Hemost 2021;47(04):400–418
24 Favaloro EJ, Henry BM, Lippi G. Is lupus anticoagulant a significant
Thromb Hemost 2022;48(01):55–71
25 Mabrouk M, Guessous F, Naya A, Merhi Y, Zaid Y. The pathophys-
iological role of platelet-derived extracellular vesicles. Semin
Thromb Hemost 2023;49(03):279–283
26 Kearney KJ, Aeriens RAS, Macrea FL. The role of fibrin(ogen) in
wound healing and infection control. Semin Thromb Hemost
2022;48(02):174–187
27 Schellong S, Ageno W, Casella IB, et al. Profile of patients with
isolated distal deep vein thrombosis versus proximal deep vein
thrombosis or pulmonary embolism: RE-COVERY DVT/PE study.
Semin Thromb Hemost 2022;48(04):446–458
28 Iba T, Levi M, Thachil J, Levy JH. Disseminated intravascular
coagulation: the past, present, and future considerations. Semin
Thromb Hemost 2022;48(08):978–987
29 Al-Samkari H. Systemic antiangiogenic therapies for bleeding in
hereditary hemorrhagic telangiectasias: a practical, evidence-
based guide for clinicians. Semin Thromb Hemost 2022(05):
514–528
N, Formato M. Circulating heparan sulfate proteoglycans as
biomarkers in health and disease. Semin Thromb Hemost 2021;
47(03):295–307
31 Lippi G, Favaloro EJ. Cerebral venous thrombosis developing after
COVID-19 vaccination: VITT, VATT, TTS, and more. Semin Thromb
Hemost 2022;48(01):8–14
32 Vlodavsky I, Barash U, Nguyen HM, Yang SM, Ilan N. Biology of the
heparanase-heparan sulfate axis and its role in disease patho-
33 Candeloro M, Schulman S. Arterial thrombotic events in hospital-
ized COVID-19 patients: a short review and meta-analysis. Semin
Thromb Hemost 2023;49(01):47–54
34 Oshima K, King SI, McMurtry SA, Schmidt EP. Endothelial heparan
sulfate proteoglycans in sepsis: the role of the glyocalyx. Semin
35 Onorato D, Pucci M, Carpena G, Henry BM, Sanchis–Gomar F, Lippi
G. Protective effects of statins administration in European and
North American patients infected with COVID-19: a meta-analy-
36 Alamin AA. The role of red blood cells in hemostasis. Semin
Thromb Hemost 2021;47(01):26–31
37 Lippi G, Henry BM, Favaloro EJ. Mean platelet volume predicts severe
38 Ortega-Paz L, Talasaz AH, Sadeghipour P, et al. COVID-19-associ-
ated pulmonary embolism: review of the pathophysiology, epi-
demiology, prevention, diagnosis, and treatment. Semin Thromb
Hemost 2023;49(08):816–832