


## Editorial

## Toward 50 Years of Seminars in Thrombosis and Hemostasis

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Semin Thromb Hemost 2022;48:875–879.

*Seminars in Thrombosis and Hemostasis* (STH) has been part of the Thrombosis and Hemostasis landscape for almost 50 years. STH was first published in 1974, and so will turn 50 in 2024. As we head toward this landmark date, we thought it useful to embark on a series of STH issues containing content of a somewhat historical nature. The current issue of STH, the last for 2022, marks the first of these issues. We are not yet 50, but we are getting close.

STH was founded by Eberhard F. Mammen (► **Fig. 1**), who I would consider a giant in the Thrombosis and Hemostasis field at that time. The journal started small, with only two issues and some 210 printed pages in its first year. This essentially doubled in the next year (1975), with four issues and 408 printed pages. This growth has continued over the years, with STH now publishing eight issues, and some 900 printed pages, per year (► **Fig. 2**). STH actually achieved a landmark of over 1,000 printed pages in 2020, and published just shy of 1,000 pages in 2021. At the time of writing, 2022 content will likely return to the more typical count of close to 900 pages.

All the material published by STH now appears online, and although STH still publishes in print, most content is now sourced by readers online. It is incredible that all of the STH content, from 1974 to now, is available for the STH readership (<https://www.thieme-connect.de/products/ejournals/issue/10.1055/s-012-53274>), except the inaugural first issue, which appears unfortunately lost to us. If anyone has a copy of the first issue, we would love to have this to add the content online to complete the journal's online content.

There has been much change and progress in the intervening 50 years. In regards to the journal, at the time of writing there were over 3,500 entries attributed to STH in



**Fig. 1** Eberhard F. Mammen (1930–2008).

PubMed, with content obviously increasing on a year to year basis (► **Fig. 3**). There were also a few bumper issues with additional content published in some years – for example, 1990 and 1992, with these perhaps acting as a primer to increase the number of issues/year from 4 to 6 in 1996.

Eberhard Mammen remained Editor in Chief (EIC) of STH from 1994 to the year of his passing, 2008, at which time I was asked by the publisher to take over. I had previously been a Regional Editor (covering the Asia-Pacific region; from 2006–2008) and had also Guest Edited several issues of the journal prior to that. Accordingly, Eberhard had essentially been EIC of the journal for 35 years, whereas my tenure to date has only been 14 years. I suspect I will not be EIC in 2044, so it is unlikely that my tenure, or indeed the tenure of any future STH EIC, will surpass that of Eberhard.

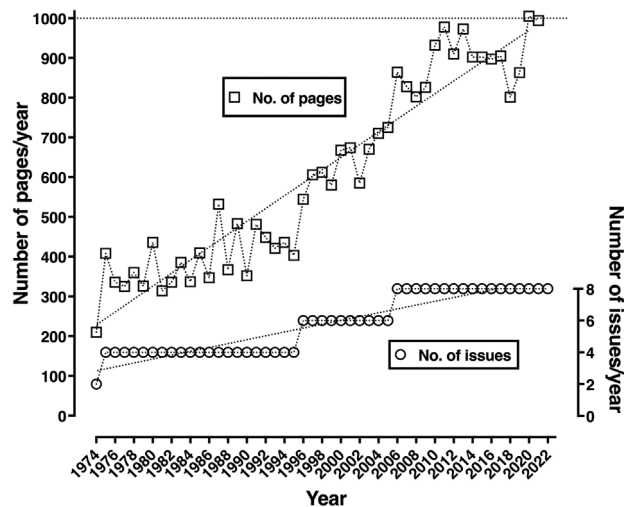
I met Eberhard and his wife on a trip they took to Australia in 2007. Perhaps he was contemplating retirement from his

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**Issue Theme** Celebrating 50 Years of Seminars in Thrombosis and Hemostasis—Part I; Guest Editor: Emmanuel J. Favaloro, PhD, FFSc (RCPA)

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Thieme Medical Publishers, Inc.,  
333 Seventh Avenue, 18th Floor,  
New York, NY 10001, USA

DOI <https://doi.org/10.1055/s-0042-1756189>.  
ISSN 0094-6176.

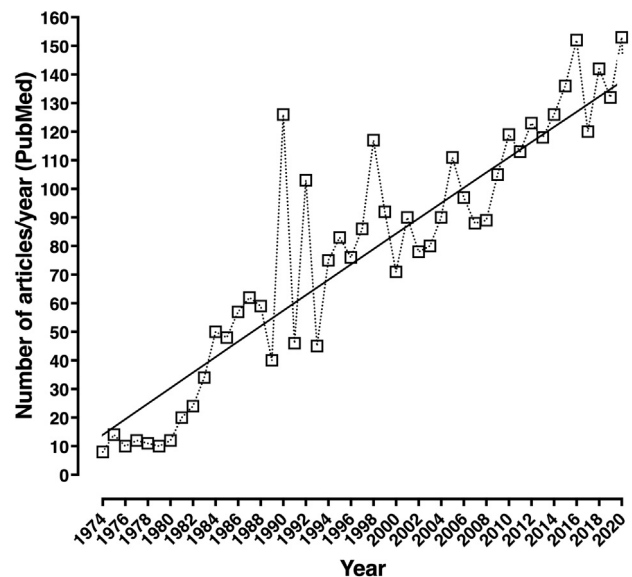


**Fig. 2** Number of pages (left y-axis) and number of issues (right y-axis) published in *Seminars in Thrombosis and Hemostasis* per year by year 1974 to 2021.

EIC position at that time, and naturally the journal came up in conversation several times. He may even have been evaluating me as a potential replacement EIC, although I had no such ambitions at that time (I was then in my late 40s). Nevertheless, Eberhard's failing health and eventual passing in 2008 created a time-critical need for a replacement EIC, and I was asked by the publisher to take on the role. I remember 2008 and 2009 as tumultuous times, having to create content for the journal quickly and in sufficient quantity to keep the journal publishing. I guest edited the eight issues of STH in both years, not something that I felt was good for either me or the journal in the long term.

I published my first paper in STH 20 years ago in 2002.<sup>1</sup> It is perhaps appropriate that this paper is reflected on in a somewhat historical context, with the topic being the role of the von Willebrand factor (VWF) collagen-binding (VWF:CB) (activity) assay in the diagnosis of von Willebrand disease (VWD). The VWF:CB remains a personal favorite of mine, and I still continue to publish on both the VWF:CB and VWD, with several related papers published in 2022.<sup>2-6</sup> Nevertheless, the VWF:CB does deserve another historical evaluation in STH, but this can await another issue in this series. I mention this in part because VWD was also a favorite of Eberhard's.

It is also perhaps fitting that another of Eberhard's pet topics, the platelet function analyzer (PFA), also became a pet topic of mine. Indeed, one of his early papers on the PFA-100 remains one of the all-time five most cited papers from STH (► **Table 1**).<sup>7</sup> It also represents Eberhard's most cited publication. Another paper on the PFA-100, published in 1995, is also on this top five list (► **Table 1**).<sup>8</sup> That paper provided the first ever comprehensive description of the PFA-100 in the scientific and medical literature. Another paper from Eberhard on the PFA-100 was also published in 1995.<sup>9</sup> It is no doubt that these three papers on the PFA-100 paved the way for the manufacturer to gain regulatory approval/clearance for the instrument in several countries. One of my own publications around the PFA-100, written as a tribute to Eberhard Mammen



**Fig. 3** Number of articles published in *Seminars in Thrombosis and Hemostasis* per year by year 1974 to 2020 according to PubMed.

in 2008,<sup>10</sup> is also well cited, being in the all-time 30 most cited papers from STH (► **Table 1**). Fast track to 2022, and a PubMed search of “PFA-100 or “platelet function analyzer” or PFA-200” yields over 1,000 hits, with 27 papers published in STH.

In a contemporary search of PubMed, Eberhard Mammen is only listed as having a total of 16 publications in STH, but this is in error. Indeed, one of the PubMed publications is noted to have a title of “Seminars in Thrombosis and Hemostasis,” and a search of this entry on the Publisher website (<https://www.thieme-connect.com/products/ejournals/issue/10.1055/s-002-7899>) actually shows that Eberhard was responsible for almost the entire content of the January, 1983, issue of STH, writing on a wide variety of factor abnormalities or deficiencies, separately including factors I (fibrinogen), II, V, VII, VIII, IX, X, XI, XIII, and several fibrinolytic markers.<sup>11</sup> During his career, Eberhard published over 100 papers in the scientific and medical literature. These were published on a wide variety of thrombosis and hemostasis topics. In addition to VWD and the PFA, fibrinogen was another of his favorites, as was the prothrombotic condition “Sticky platelet syndrome,”<sup>12,13</sup> which many workers in the field of thrombosis and hemostasis have skepticism that it even exists.<sup>14</sup> Perhaps also fitting in terms of historical context is that Eberhard's final publications in STH comprise two pre-faces<sup>15,16</sup> that he wrote to head two issues of the journal that I guest edited in 2006, these issues being only the second and third that I had guest edited for the journal by that time. I have already mentioned that VWD, in particular, its laboratory diagnosis or exclusion, is one of my favorite topics! I suspect it was our shared passions and interests that helped identify me as the successive EIC of STH post Eberhard's departure.

Of course, a journal is much more than the contributions of its EICs, past and present. As mentioned, at the time of writing, STH has published over 3,500 papers, certainly not as many as the journal “Thrombosis and Haemostasis” (“T&H”; 14,348 results in PubMed from 1976), currently a “sister” journal to

**Table 1** The most highly cited papers from Seminars in Thrombosis and Hemostasis<sup>a</sup>

Number	Citation	Number of times cited	
		WOS <sup>b</sup>	Scopus <sup>c</sup>
1	Baskurt OK, Meiselman HJ. Blood rheology and hemodynamics. <i>Semin Thromb Hemost</i> 2003;29(5):435–450	598	662
2	Rodgers RP, Levin J. A critical reappraisal of the bleeding time. <i>Semin Thromb Hemost</i> 1990;16(1):1–20	497	583
3	Kundu SK, Heilmann EJ, Sio R, Garcia C, Davidson RM, Ostgaard RA. Description of an in vitro platelet function analyzer–PFA-100. <i>Semin Thromb Hemost</i> 1995;21(suppl 2):106–112	411	467
4	Mammen EF, Comp PC, Gosselin R, et al. PFA-100 system: a new method for assessment of platelet dysfunction. <i>Semin Thromb Hemost</i> 1998;24(2):195–202	352	400
5	Linhardt RJ, Gunay NS. Production and chemical processing of low molecular weight heparins. <i>Semin Thromb Hemost</i> 1999;25(suppl 3):5–16	322	353
6	Jurk K, Kehrel BE. Platelets: physiology and biochemistry. <i>Semin Thromb Hemost</i> 2005;31(4):381–392	299	318
7	Boccardo P, Remuzzi G, Galbusera M. Platelet dysfunction in renal failure. <i>Semin Thromb Hemost</i> 2004;30(5):579–589	283	312
8	Hellgren M. Hemostasis during normal pregnancy and puerperium. <i>Semin Thromb Hemost</i> 2003;29(2):125–130	256	298
9	Savi P, Herbert JM. Clopidogrel and ticlopidine: P2Y <sub>12</sub> adenosine diphosphate-receptor antagonists for the prevention of atherothrombosis. <i>Semin Thromb Hemost</i> 2005;31(2):174–183	251	293
10	Finkelstein JD. Pathways and regulation of homocysteine metabolism in mammals. <i>Semin Thromb Hemost</i> 2000;26(3):219–225	250	280
11	Mammen EF, Koets MH, Washington BC, et al. Hemostasis changes during cardiopulmonary bypass surgery. <i>Semin Thromb Hemost</i> 1985;11(3):281–292	248	289
12	Tschoepe D, Roesen P, Esser J, et al. Large platelets circulate in an activated state in diabetes mellitus. <i>Semin Thromb Hemost</i> 1991;17(4):433–438	241	234
13	Jänicke F, Schmitt M, Graeff H. Clinical relevance of the urokinase-type and tissue-type plasminogen activators and of their type 1 inhibitor in breast cancer. <i>Semin Thromb Hemost</i> 1991;17(3):303–312	241	246
14	Caprini JA, Arcelus JJ, Hasty JH, Tamhane AC, Fabrega F. Clinical assessment of venous thromboembolic risk in surgical patients. <i>Semin Thromb Hemost</i> 1991;17(suppl 3):304–312	240	266
15	Nagy JA, Chang SH, Shih SC, Dvorak AM, Dvorak HF. Heterogeneity of the tumor vasculature. <i>Semin Thromb Hemost</i> 2010;36(3):321–331	233	246
16	Schrör K. Aspirin and platelets: the antiplatelet action of aspirin and its role in thrombosis treatment and prophylaxis. <i>Semin Thromb Hemost</i> 1997;23(4):349–356	230	267
17	Fenton JW II. Regulation of thrombin generation and functions. <i>Semin Thromb Hemost</i> 1988;14(3):234–240	230	177
18	Sierko E, Wojtukiewicz MZ. Platelets and angiogenesis in malignancy. <i>Semin Thromb Hemost</i> 2004;30(1):95–108	221	242
19	van Giezen JJ, Humphries RG. Preclinical and clinical studies with selective reversible direct P2Y <sub>12</sub> antagonists. <i>Semin Thromb Hemost</i> 2005;31(2):195–204	219	247
20	Niitsu Y, Jakubowski JA, Sugidachi A, Asai F. Pharmacology of CS-747 (prasugrel, LY640315), a novel, potent antiplatelet agent with in vivo P2Y <sub>12</sub> receptor antagonist activity. <i>Semin Thromb Hemost</i> 2005;31(2):184–194	212	248
21	Savcic M, Hauert J, Bachmann F, Wyld PJ, Geudelin B, Cariou R. Clopidogrel loading dose regimens: kinetic profile of pharmacodynamic response in healthy subjects. <i>Semin Thromb Hemost</i> 1999;25(suppl 2):15–19	208	249
22	Favaloro EJ. Clinical utility of the PFA-100. <i>Semin Thromb Hemost</i> 2008;34(8):709–733	206	232
23	Rak J. Microparticles in cancer. <i>Semin Thromb Hemost</i> 2010;36(8):888–906	201	216
24	Østerud B, Bjørklid E. Sources of tissue factor. <i>Semin Thromb Hemost</i> 2006;32(1):11–23	197	206

(Continued)

**Table 1** (Continued)

Number	Citation	Number of times cited	
		WOS <sup>b</sup>	Scopus <sup>c</sup>
25	Esmon CT. Inflammation and the activated protein C anticoagulant pathway. <i>Semin Thromb Hemost</i> 2006;32(suppl 1):49–60	196	209
26	Vervloet MG, Thijs LG, Hack CE. Derangements of coagulation and fibrinolysis in critically ill patients with sepsis and septic shock. <i>Semin Thromb Hemost</i> 1998;24(1):33–44	196	255
27	Bachmann F, Kruithof IE. Tissue plasminogen activator: chemical and physiological aspects. <i>Semin Thromb Hemost</i> 1984;10(1):6–17	196	143
28	Falanga A, Rickles FR. Pathophysiology of the thrombophilic state in the cancer patient. <i>Semin Thromb Hemost</i> 1999;25(2):173–182	190	247
29	Bick RL. Coagulation abnormalities in malignancy: a review. <i>Semin Thromb Hemost</i> 1992;18(4):353–372	188	222
30	Walker FJ. Protein S and the regulation of activated protein C. <i>Semin Thromb Hemost</i> 1984;10(2):131–138	181	118

<sup>a</sup>Top 30 cited papers from STH (using citation data from Web of Science).

<sup>b</sup>Citation data from Web of Science.

<sup>c</sup>Citation data from Scopus.

STH (<https://www.thieme-connect.com/products/ejournals/issue/10.1055/s-012-53835>), which actually started life in 1957, and for a time was the official journal of the International Society on Thrombosis and Haemostasis (ISTH); not even as many papers as the journal “Journal of Thrombosis and Haemostasis (“JTH”; 7,780 results in PubMed from 2003),” and currently the official journal of the ISTH. And yet, those 3,500 or so papers published by STH have certainly found a home in many of our offices, or these days in many of our computers. STH has published a huge variety of topics related to the broad field of thrombosis and hemostasis, but it publishes primarily review papers. This is in contrast to most other thrombosis and hemostasis journals, which tend to primarily

publish original studies. Thus, STH stands separate to most other thrombosis and hemostasis journals, which was undoubtedly the original vision of Eberhard Mammen. Another point of difference is that STH has in the past tended to solely publish “themed” issues, with each issue being related to a separate topic within the field of thrombosis and hemostasis. Some examples over recent years are shown in ►Table 2.<sup>17–26</sup> Of course, since online activity has overtaken print usage, the collation of highly specific themes perhaps becomes less imperative, and so STH now also collates issues with broader themes around thrombosis,<sup>27–29</sup> and laboratory diagnostics and bleeding,<sup>30–35</sup> as well as material related to COVID-19 (coronavirus disease 2019).<sup>36–38</sup>

**Table 2** A list of recent themed issues from Seminars in Thrombosis and Hemostasis

1. Hvas CL, Kwaan HC, Hvas AM. Hemostasis and neuroscience-hemostasis and fibrinolysis involved in brain pathology and brain disorders. <i>Semin Thromb Hemost</i> 2022;48(3):274–276
2. Franchini M, Tufano A, Coppola A. Cardiovascular and thromboembolic diseases in oncology: novel aspects and revisited issues. <i>Semin Thromb Hemost</i> 2021;47(8):896–898
3. Larsen JB, Lisman T, Hvas AM. Altered fibrinolysis-clinical impact and diagnostic challenges. <i>Semin Thromb Hemost</i> 2021;47(5):477–479
4. Nadir Y, Lisman T. Hemostatic and nonhemostatic effects of heparan sulfate proteoglycans. <i>Semin Thromb Hemost</i> 2021;47(3):238–239
5. Preston RJS, O’Sullivan JM. Personalized approaches to the treatment of hemostatic disorders. <i>Semin Thromb Hemost</i> 2021;47(2):117–119
6. Lisman T, Intagliata NM. Bleeding and thrombosis in patients with liver diseases. <i>Semin Thromb Hemost</i> 2020;46(6):653–655
7. Hagemeyer CE, Lisman T, Kwaan HC. Nanomedicine in thrombosis and hemostasis: the future of nanotechnology in thrombosis and hemostasis research and clinical applications. <i>Semin Thromb Hemost</i> 2020;46(5):521–523
8. Hvas AM, Larsen JB, Pasalic L. Acquired platelet dysfunction-laboratory and clinical implications. <i>Semin Thromb Hemost</i> 2020;46(3):235–237
9. Moore HB, Walsh M, Kwaan HC, Medcalf RL. The complexity of trauma-induced coagulopathy. <i>Semin Thromb Hemost</i> 2020;46(2):114–115 10.1055/s-0040-1702202
10. Hunt BJ, Levy JH. Perioperative thrombosis and hemostasis. <i>Semin Thromb Hemost</i> 2020;46(1):6–7

It is unlikely that I will lead the production of another 3,500 papers in *STH*, but in the interim, let us celebrate the first 50 years of *STH*, and its place in the field. The 2021 Journal Impact Factor was recently released, and *STH* achieved its highest ever Impact Factor of 6.398, a fitting tribute to Eberhard Mammen's vision.

I also wonder how many clinicians and scientists it has helped to develop over these years. I am certainly one of them. Finally, if you have a copy of the inaugural 1974 issue of *STH*, or any interesting stories around how *STH* has helped you in your practice or in your career, or indeed any stories related to Eberhard Mammen, we would love to hear from you, and will likely feature the most interesting ones in one of our future historical issues!

#### Conflict of Interest

None declared.

#### Acknowledgments

The journal thanks all past contributors to *STH*, as both related to publications in, and reviews for, the journal. The journal also thanks all past and present Editors of *STH*. *STH* would not be here without these contributors.

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