

Diverse career paths within thrombosis and haemostasis: perspectives from the ISTH Early Career Committee

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The combined fields of thrombosis and haemostasis (T&H) offer extensive opportunities for interdisciplinary professional establishment and collaborations, as highlighted in an editorial by the International Society on Thrombosis and Haemostasis' (ISTH) early career (EC) committee in 2024[1]. The dynamic nature of clinical and basic research in the field, driven by evolving technologies and researchers' ever-present goal to improve our understanding and management of thrombotic/haemostatic conditions, gives rise to diverse professions. For EC professionals (ECPs) who often train in an academic environment, this variety in career paths and abundance of transferrable skills obtained during their training may not be immediately apparent. In addition, availability of mentoring and career coaching resources for ECPs vary within different institutions.

Traditionally, research careers can be categorized as professions 'within' or 'outside' of academia, although there is considerable overlap in several professions. Academic research careers for clinicians may involve, for example, clinical research and conducting of clinical trials, often alongside their responsibilities in patient care and education. For basic science researchers, this encompasses laboratory-based research, management, leadership and educational roles. Research roles in biotechnology and pharmaceutical companies, conversely, are examples of non-academic research professions. Additional non-academic career pathways include entrepreneurship, where individuals may develop innovative healthcare technologies or services and launch startups, roles within governmental or non-governmental organizations (NGOs), healthcare advocacy and policy development, scientific writing, and spin-off companies. Collaborative career opportunities which bridge the gap between academia and industry also exist.

With such a wide range of career options, it is vital that ECPs are not only made aware of the diversity in roles but also possess the tools and confidence to navigate their professional development. A survey conducted in 2019 on more than 6,000 unselected graduate students worldwide indicated that 56% of individuals intended to pursue a career in academia, with others opting for careers in industry, government, medical and non-profit sectors[2]. However, another survey indicated that only 15% of individuals found useful career advice resources at their institutions[3]. During the 2025 ISTH Congress held in Washington D.C., USA, we surveyed ECPs regarding career paths and professional development (Fig.1).

36 Similar trends to the above-mentioned surveys were observed, with 44% of ECP responders
37 indicating a planned future career path in academia, but up to 33% of responders being
38 unsure. Of potential concern is the fact that most responders (60%) indicated they
39 possessed only a partial/incomplete skillset to pursue their desired career path, with 6% of
40 responders indicating they lacked the appropriate skillset altogether. Inadequate
41 information/uncertainty was identified as the biggest challenge preventing responders
42 pursuing their desired career path, followed by inadequate training background/skillset, and
43 inadequate mentorship (47%, 32% and 21% of responses, respectively). These
44 observations, specific to ECPs navigating the T&H field, highlight the importance of
45 adequate career mentoring and guidance, together with the potential professional impact of
46 shedding light on key transferable skills ECPs should develop as part of their training.

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48 The ISTH EC Committee recognises the challenges ECPs may face in navigating diverse
49 career paths, particularly unconventional routes where mentorship and guidance may be
50 limited. To address this, efforts have been developed to showcase individuals who have
51 been successful within alternative career paths and to support networking and mentoring
52 opportunities. In a recent ISTH career development webinar on research careers outside of
53 academia, the topic of career development and showcasing one's skillset was discussed.
54 The recent EC session at the ISTH 2025 congress focused on diverse career paths within
55 and outside of academia. Both initiatives by the ISTH EC Committee highlighted that ECPs
56 acquire invaluable skills during training that are highly sought after in other professions.
57 Examples include conceptualization of ideas, troubleshooting, meeting deadlines, reporting
58 of findings and budgeting. Furthermore, during their training, most ECPs become proficient
59 in interpretation and dissemination of complex concepts, collaboration, and written
60 communication. When exploring potential career paths, it is important to take time for
61 thoughtful self-reflection. Understanding one's strengths, preferred tasks and challenges,
62 areas of weakness and disinterests, could help in identifying personal and professional
63 priorities and align career choices with individual values and long-term goals.

64

65 Most surveyed ECPs in the T&H field reported a lack of information/uncertainty as the
66 primary challenge preventing them from pursuing their desired career path. This is a
67 multifaceted challenge, with lack of confidence, career counselling, and unavailability of
68 support resources being potential contributing factors. Although potentially intimidating,
69 networking with individuals within career paths of interest may increase awareness about
70 potential opportunities, specific requirements, and other key information. Likewise,

71 disseminating research data and receiving feedback from experts in the field allows
72 individuals to showcase their skillset and capabilities, which can greatly increase self-
73 confidence. Furthermore, building a network fosters credibility and collaborative working.
74 Common uncertainties associated with research in many sectors, including academia and
75 industry, include fixed-term funding and length of employment contracts. These are
76 important considerations for professional development which can be difficult to mitigate.
77 Identification of short and long-term goals may help in these times. Having knowledge of
78 different experiences, career paths/opportunities, research direction, under-researched
79 concepts, patient needs, and translational opportunities from one's network opens the door
80 to vast possibilities for career progression/transition.

81

82 Some institutions have professional development review processes in place for EC
83 staff/students to help individuals construct a tailored training plan, however, this is not
84 universal. Therefore, it is important for ECPs to take an active approach to career
85 development and discuss support with their supervisors. For many ECPs, their supervisor
86 acts as both research advisor and career mentor. ECPs may also seek additional mentor
87 relationships in more senior colleagues, an individual in a profession one would like to
88 pursue, or a member from one's institution from another research field. Potential mentors
89 can be contacted directly for informal conversations or more structured support, and
90 reaching out during conferences is a great time to meet these individuals in person.
91 Additionally, many institutions and societies offer mentoring schemes open to all ECPs. For
92 instance, the ISTH has set up mentorship opportunities to make finding connections with
93 mentors, coaches, and collaborators easier. Beyond mentorship from colleagues, ECPs
94 may benefit from a formal career assessment by an independent expert such as a career
95 counsellor, which can reveal overlooked career paths and offer valuable insights into
96 professional development. For instance, guidance on career transitions, CV reviews and
97 one-on-one counselling may be available at local graduate or faculty development offices.
98 Additional support may be found through employment-focused social media platforms (e.g.,
99 LinkedIn), external talent initiatives, and professional recruiting services.

100

101 The T&H research community is inclusive and supportive of ECPs. Ongoing implementation
102 of support schemes to assist with EC professional development is crucial. Also pivotal is
103 self-reflection of desirable skills, achievements, and transferable training requirements.
104 Making the most of opportunities to network and disseminate research can not only build

105 confidence but also increase awareness and open-mindedness towards the diverse career
106 opportunities available in the field.

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111 **APPENDICES**

112 **ISTH Early Career Committee (ECC) (2024-2025): ECC Advisor:** Flora Peyvandi, Milan,
113 Italy. **ECC Members:** Paul Armstrong, London, United Kingdom; Thita Chiasakul, Bangkok,
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120
121 **AUTHORSHIP CONTRIBUTIONS**

122 JSG wrote the first draft of the manuscript. JSG, NP, TC, SDM and SK conceptualised the
123 editorial piece. All authors contributed to revision and editing of the manuscript. SK provided
124 guidance throughout.

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126 **DISCLOSURE OF CONFLICTS OF INTEREST**

127 The authors declare no conflicts of interest.

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131 **REFERENCES**

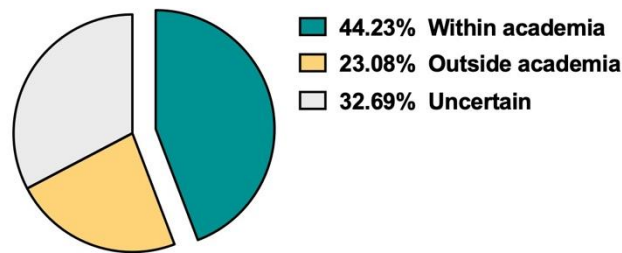
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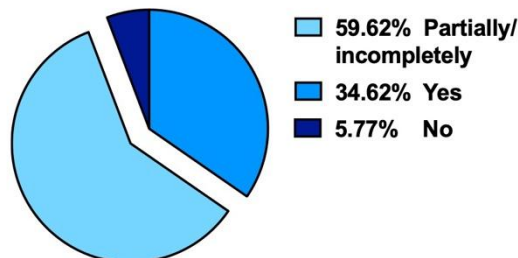
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FIGURES

Q1: Would you consider, in the future, a career path within or outside academia?



Q2: Do you feel you have developed the sufficient skill set to pursue your desired career path?



Q3: What is your biggest perceived challenge/concern in pursuing your desired career path? (check all that apply)

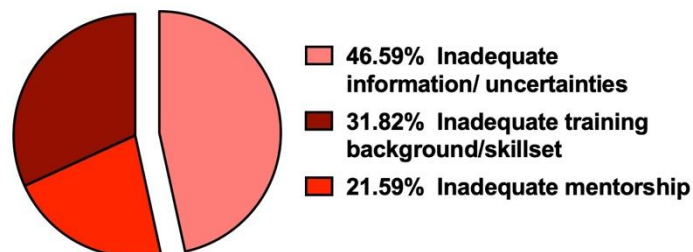


Figure 1 Results from professional development survey at the 2025 International Society on Thrombosis and Haemostasis congress. Early career professionals (ECPs) were asked to answer three questions (anonymously, via QR codes) regarding career development. The survey was made available to ECPs during the congress' early career (EC) session, throughout the congress in the EC lounge, and in the EC forum. Total responders = 52.