A Genre Analysis of Research Articles from a Chronological Perspective

Sayako Maswana

Synopsis

This paper presents a comparative genre analysis of English research articles in the discipline of medicine from 1995 and 2015 with a focus on the introduction sections and titles. While numerous genre studies have been completed on uncovering the characteristics of research articles, analyses from a chronological perspective, particularly ones using articles published after 2010, are limited. The current study compiled two corpora, each consisting of 30 introductions and titles of research articles from three medical journals published in 1995 and 2015. The rhetorical structure and linguistic features were compared between the two corpora. Although the overall rhetorical structure of the introduction sections did not change over the 20-year interval, some changes were observed in the use of verb tense and voice, the lengths of the sentences and titles, and title structures. The results of this study confirm the necessity of continuing genre analysis, and pedagogical implications and future research are also discussed.

Keywords: *genre analysis, English for Academic Purposes, chronological change, research article, move*

English for Specific Purposes (ESP) has attracted growing attention in English teaching over the past few decades, particularly in the university setting. As societies become more globalized and English is increasingly used as the world's lingua franca, students in many fields have to be competent in the particular genres and English writing styles required for their professions. The ESP approach, a pedagogically oriented method, usually starts with understanding the needs of learners in a particular domain (i.e., *needs analysis*) and then analyzes the genres of importance in that domain (i.e., *genre analysis*). The concept of genre in ESP is crucial, and it is generally defined as "a class of communicative events, the members of which share some set of communicative purposes" (Swales, 1990, p. 58). Genre analysis contains textual descriptions of the target genre and presents its prototypical textual structures and linguistic features.

    In academic settings where English for Academic Purposes (EAP), a subdivision of ESP (Jordan,

1997), is relevant to English learning and teaching, the most important genre is undoubtedly the research article. English teachers are often asked to provide instructions on reading and writing research papers at the graduate level and for research contexts. There have been a number of genre studies concerning the research article. Many of these studies have attempted to uncover generic rhetorical structures and linguistic features, such as lexical bundles, common vocabulary, and the accepted use of pronouns in particular disciplines, as well as across disciplines (e.g., Cortes, 2013; Holmes, 1997; Martínez, Beck, & Panza, 2009; Yang & Allison, 2003). In genre analysis, identifying a structural unit called a *move* is known as *move analysis*, which is employed in a wide variety of texts, while corpus techniques focus on frequency and range and other linguistic features such as collocation strength and grammatical class. The genre-based approach to academic writing has been considered effective for teaching (Hyland, 2003; Swales & Feak, 2004).

Because a genre is formed and defined by the members of its discourse community, it is natural to think that a genre is subject to change, possessing an evolving nature (Swales, 1990). Although numerous studies have focused on the rhetorical structures and linguistic features of research articles at the time of the research, a limited number of studies have examined how changes to the structural and linguistic elements of research articles occur over time. Because the past few decades have seen great development in the speed, means, and quantity of scientific publications, it is of great importance to analyze contemporary research articles and compare them to those before the development. By doing so, researchers will be able to understand historical changes in particular genres and be better equipped to predict the changes that may occur in the foreseeable future.

A few studies have examined the evolutionary changes in research articles, including one performed by Li and Ge (2009), which comprehensively examined medical articles, specifically comparing articles published between 1985 and 1989 to those between 2000 and 2004. Biber and Gray (2010) conducted a corpus analysis on research articles from the years 1965, 1985, and 2005. The former study focused more on the rhetorical structure of medical articles, whereas the latter concentrated on the grammatical features of articles across disciplines. To date, over 10 years have passed since these studies' target articles were published, and no research exists that examines the relationship between current research articles and those of the past 10 or 20 years, intervals that would update previous chronological studies. The current study is proposed as a preliminary survey to fill this gap and explore potential directions for future and larger genre research by comparing the introduction sections and titles of articles in a specific discipline from the years 1995 and 2015. Introductions and titles were chosen because they are common to all articles and disciplines and have an established method available for analyzing their structures. The study largely followed the previous chronological study by Li and Ge (2009) in its selection of the discipline and genre features. The results of the study have implications for pedagogy.

Methods

Corpora

The author selected articles from three accessible journals included in the previous study (Li & Ge,

2009): *The BMJ* (formerly *The British Medical Journal), The Journal of Clinical Investigation*, and *The Lancet*. These are all leading journals in the discipline of medicine, each having an impact factor well beyond 10, according to Journal Citation Reports (Thomson Reuters, 2014). The categories included in this study were "research papers," "research articles," "papers," and "articles" and those with clear introduction, methods, results, and discussion sections. Two corpora were compiled: one for 1995 and one for 2015. Each corpus contained 30 research article introductions and titles, 10 randomly selected articles from each journal from January to June of the respective year.

Data Collection and Analysis: Introductions

The study followed Swales' (1990) move analysis procedure. Introduction texts were first coded primarily by the author for rhetorical units (i.e., moves) based on function and content, referring to the Create a Research Space (CARS) model proposed by Swales (1990, 2004) and its linguistic clues. Mostly, a sentence served as the unit of moves, and another academic writing teacher reviewed coding. This model was employed here because its accuracy and applicability were validated by empirical studies (e.g., Anthony, 1999; Samraj, 2002). The model describes an introduction as consisting of three moves in the following order: Move 1) Establishing a territory, Move 2) Establishing a niche, and Move 3) Occupying the niche. Nwogu (1997) explained this model in more comprehensible terms by referring to Move 1 as presenting background information, Move 2 as reviewing related research, and Move 3 as presenting new research. The author followed the terms by Nwogu (1997). The cutoff ratio to determine whether a move was typical or obligatory was set at 60%, as in Kanoksilapatham (2005), meaning that a move had to be observed in at least 60% of the articles examined in the corpus. The CARS framework includes a smaller constituent unit of a move, a *step*, to delineate rhetorical structures; however, the present study focused on moves as a preliminary analysis to examine evolutionary changes in the overall rhetorical structure of introductions. Below are the introduction texts that exemplify the move coding from the corpora. The linguistic clues for signaling moves are underlined. See Appendix for the references of all the articles quoted in the examples.

> **Move 1:** "The appropriate sodium concentration of intravenous fluid used to maintain hydration in children in hospital <u>has generated much debate.</u>" (Ref. #1)

> **Move 2:** "<u>There has been no adequate comparison of outcomes</u> between recipients of organs from anti-HCV-positive donors and anti-HCV-negative donors." (Ref. #2)

> **Move 3:** "<u>We report</u> the incidence of interval cancers in women screened by the programme in the North Western region." (Ref. #3)

For linguistic features, this study focused on verb tenses and modals, first-person pronouns, voice, and number of words. The verb tenses and modality were chosen because they are reported to be closely related to rhetorical structure (Salager-Meyer, 1992). Particularly, the most frequent verb tenses—present,

past, and present perfect (Li & Ge, 2009; Salager-Meyer, 1992)—were examined. First-person pronouns are considered to be features of English academic writing that express the identity of the author (Hyland, 2002). First-person plural pronouns, including the subjective, objective, and possessive cases (we, us, and our), were mainly analyzed in the present study. Kuo (1999) reported that these pronouns were used far more frequently than other personal pronouns, including the first-person singular pronouns, in scientific articles. Indeed, the present study found only one case of first-person singular pronouns in the 1995 introductions. Data on verb voice and word count per sentence were also collected to better understand the linguistic evolution of a sentence. The author manually recorded the verb tense, modals, and the first-person pronouns, as well as voice, in each move of the introduction for 60 article introductions. The verb tense, modal, and voice were recorded only for the main clause, whereas the first-person pronouns were coded wherever they were observed. T-test and chi-square test were performed to compare the two corpora.

Data Collection and Analysis: Titles

This study followed Soler's (2007) method for identifying the title structures of all articles contained in the two corpora. Title structure was broadly divided into the following three categories: the nominal group construction, usually composed of noun phrases (e.g., "Fetal and infant growth and cardiovascular risk factors in women" [Ref. #4]); the compound construction titles, consisting of two parts and often linked via a colon (e.g., "Automated, electronic alerts for acute kidney injury: A single-blind, parallel-group, randomised controlled trial" [Ref. #5]); and the full-sentence construction (e.g., "An epigenetically distinct breast cancer cell subpopulation promotes collective invasion" [Ref. #6]). Although Soler (2007) separated full-sentence and question constructions, the study included the question construction in full-sentence constructions because the question construction rarely occurred (n=2). The author manually categorized titles and compared both the structures and the contained word counts of the titles between the two corpora, employing t-test and chi-square test.

Results and Discussion

This study compiled a 1995 article introduction corpus consisting of 9,703 words and a 2015 corpus of 13,629 words. The average numbers of words per introduction in the two corpora were 323.4 (SD = 171.93) and 454.3 (SD = 186.21), respectively, and the difference was significant, $t(58)$ = 2.83, $p < .01$. The numbers of sentences included in the corpora were 391 and 514, respectively. The average numbers of sentences per introduction were 13.0 (SD = 6.60) and 17.1 (SD = 7.62), respectively, and the difference was significant, $t(58)$ = 2.23, $p < .05$. The results for each analysis focus are presented and discussed below.

Introductions

This section reports and discusses changes in the introductions of the 1995 and 2015 corpora. It first

examines the rhetorical structure of the introductions, followed by verb tense and modals in each rhetorical unit and voice and pronouns. It also examines the changes in word count per sentence and discusses noun phrases in particular.

Move Structure

All three moves were found in 100% of the articles in each corpus, except Move 1 in 1995 articles (90%) and Move 2 in 2015 articles (97%). Li and Ge (2009) reported a more stable use of Move 3 in the articles between 2000 and 2004 compared to those between 1985 and 1989, and the present study supports this tendency continuing. Each move component was found to be obligatory. The conventional pattern—the CARS model expressed by the introduction constructed in the order of Moves 1, 2, and 3—was observed in a majority of the articles. For both corpora, 63% of the articles employed this pattern. The other patterns included repetitions of certain moves, such as Moves 1 and 2. Finally, from the fact that introductions were longer in 2015, it can be argued that, overall, rhetorical structures have not changed, but more detailed descriptions of the research and background information are believed to be necessary for the current article introductions to establish the research territory.

Verb Tense and Modals in Each Move

Table 1 shows the percentages of verb tenses and modals in main clauses per move. The table shows a significant difference between the uses of the past tense for Move 1 in 2015 and in 1995, $\chi^2(1, N = 355) = 9.86$, $p < .01$, and between the uses of the present tense in Move 2, $\chi^2(1, N = 380) = 6.33$, $p < .05$. Move 3 saw an increase in the use of simple past tense and a decrease in the use of present tense, although these changes were not significant.

Table 1 Percentage of Modals and Verb Tenses in Each Move

	1995 Introductions			2015 Introductions		
	Move 1	Move 2	Move 3	Move 1	Move 2	Move 3
Past tense	11%	22%	58%	3%**	14%	64%
Present tense	69%	41%	33%	73%	54%*	27%
Present perfect tense	15%	23%	6%	15%	22%	5%
Modals	4%	14%	2%	9%	9%	5%

Note. Significantly different compared to 1995 (**$p < .01$, *$p < .05$).

One instance of past perfect tense in Move 1 of 2015 introductions is not listed in the table.

Although verb tenses and modals included were only those in the main clause, a similar tendency to Li and Ge (2009) seemed to have continued: Both Moves 1 and 2 were more present tense-based in 2015 than in 1995. Swales (1990) discussed that Moves 1 and 2 employ both past and present tenses, depending on the reference style and the use of reporting verbs such as show, establish, or claim. Swales (1990, pp. 149, 153) claimed that an integral reference with a reporting verb (e.g., "Brie (1988) showed that…") tends to use the past tense, whereas a non-integral reference with non-reporting verbs (e.g., "The

moon is probably made of cheese (Brie, 1988)") uses the present tense or a modal. This classification, however, does not seem to explain the changes in the present study because most of the in-text citations in the selected journals were non-integral over the two different years. It would be necessary to examine reporting verbs to further understand the changes in the use of verb tenses. Move 3 is where the new research is presented, and both past and present tenses are often employed. The results show that in the current articles the past tense was more frequently observed in Move 3. It was found that the number of modals used in main clauses was not negligible, and no significant change was observed.

Voice and Pronouns

This study also counted the number of instances of passive voice in the main clauses of the introductions to better understand the sentence structure. In the 1995 article introductions, 25% of the verbs in the main clause were in the passive voice, whereas in 2015, the number had decreased to 18%. There was a significant difference between the two corpora, $\chi^2(1, N = 905) = 8.20$, $p < .01$. Passive voice is commonly observed in scientific writing (Halliday & Martin, 1993); however, these results seem to indicate a newer tendency to avoid the passive voice, at least in the introduction section.

Additionally, the number of words per sentence has significantly increased (the 1995 corpus: $M = 24.82$, $SD = 9.70$; the 2015 corpus: $M = 26.52$, $SD = 11.23$), $t(888.5) = 2.44$, $p < .05$. This increase could mean that current authors are attempting to convey more information efficiently in a sentence. Long noun phrases that were difficult to decode at first sight were often observed during the study's move coding. As Biber and Gray (2010) indicated, "compressed" discourse style, particularly found in noun phrases, is characteristic of academic writing. They demonstrated that non-clausal modifiers embedded in noun phrases are the major structural complexity, making written academic texts more compressed than elaborated. An example of a sentence consisting of compressed noun phrases from the corpus is as follows. The phrasal verb is underlined here to facilitate reading of this sentence.

> P2RX7-mediated activation of macrophage TF procoagulant function
> specifically <u>leads to</u> extracellular thiol-disulfide exchange-dependent generation
> of procoagulant MPs carrying TF and integrin β1 as well as P-selectin
> glycoprotein ligand 1 (PSGL1), a major counterligand for platelet P-selectin in
> thrombotic vessel occlusion. (Ref. #7)

Compressed noun phrases were observed in both corpora; however, as the average number of words per sentence indicates, it could tentatively be assumed that this tendency was more pronounced in the current articles. As Biber and Gray (2010) indicated, this discourse style is less explicit in meaning, and learners and novice researchers might find it difficult to understand the meanings of these sentences.

Significant changes were not observed in the frequency of plural first-person pronouns over the 20 years. The first-person pronouns "we" and "our" were used in 32 and 7 instances, respectively, in 1995, whereas the numbers were 53 and 9 for 2015 introductions. The pronoun "us" was not observed in either corpus. Most of these pronouns were used in Move 3, where the authors described the present research.

This result supports Li and Ge (2009), who indicated an increase of plural first-person pronouns in all article sections except the introduction section.

Titles

Figure 1 below shows the number of article titles categorized according to construction type in 1995 and 2015. A decrease in the nominal group construction and an increase in compound structures are apparent; both changes were statistically significant, $\chi^2(1, N = 60) = 16.70$, $p < .01$; $\chi^2(1, N = 60) = 5.41$, $p < .05$, respectively.

Figure 1 Title structures in 1995 and 2015
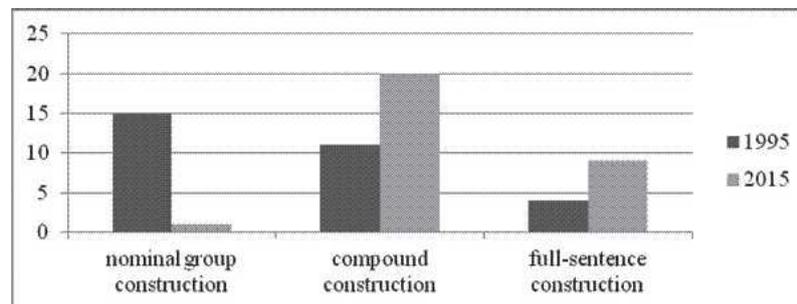
Although the number was not statistically significant, distinct changes in sentence structure were observed. For 1995 titles, two sentence titles out of four were in an interrogative form (e.g., "Why do so few patients appeal against detention under section 2 of the mental health act?" [Ref. #8]), whereas there was none in nine sentence titles in 2015. All sentence titles in 2015 were declarative in form and written in the present tense (e.g., "Lysyl hydroxylase 2 induces a collagen cross-link switch in tumor stroma" [Ref. #9]). All compound construction titles, except one of the 1995 titles which was a combination of a question and a noun phrase, were the combination of two noun phrases, such as "Risk factors for acanthamoeba keratitis in contact lens users: A case-control study" (Ref. #10).

Along with the changes in title structure, a significant difference was observed between the numbers of words composing titles, $t(52.08) = 2.02$, $p < .05$, with 2015 titles ($M = 16.50$, $SD = 7.01$) having more words than 1995 titles ($M = 13.33$, $SD = 4.94$), although titles in medicine were already reported to be longer than in other disciplines by Soler (2007). This increase likely came from the increase in compound titles, such as "Rituximab as second-line treatment for adult immune thrombocytopenia (the RITP trial): A multicentre, randomised, double-blind, placebo-controlled trial" (Ref. #11). In 2015 titles, the type of trial, study, or survey of the research was often described after the colon, as in the example. It appears titles have become more specific and concrete in the descriptions of their research.

Conclusion

This preliminary study revealed some chronological changes in the past 20 years, notably the use of tense, voice, sentence and title length, and title structure, while move structure largely remained the same. The

results confirmed the necessity of continuing genre analysis of research articles because instructions need to be continuously updated to provide accurate information to help learners write research articles. Based on the results, a pedagogical suggestion for teachers is to instruct learners that writing an introduction in medicine should follow the typical move sequence, while also explaining that more present tenses are common in Moves 1 and 2. In addition, with the increased number of words per sentence, instructors need to guide learners in how to, first, understand and, subsequently, write compressed noun phrases. For titles, instructors can teach learners to describe their research concretely in the form of compound constructions with noun phrases or declarative sentences. The teaching approach to these genre features can use authentic texts from research articles and could be both explicit and implicit in manner. Most importantly, however, instructors should provide opportunities for learners not only to acquire current genre features but also to understand the evolutionary nature of the genre by utilizing small-scale article corpora of their target field and journal. This approach will raise students' awareness of genre conventions and will allow them to adapt to the changing writing practices of the particular genre as necessary.

Changes revealed in this study might have come from the changes occurring in research projects and publications. There has been a significant increase in the number of authors per article over the past 20 years, $t(39.18) = 5.66$, $p < .01$, with an average of 12 authors ($SD = 6.35$) for 2015 articles, as opposed to five authors for 1995 articles ($SD = 2.70$). As many disciplines have become highly specialized and large research projects require various experts from highly segmented fields, introductions may have the role of providing greater explanation to the reader than before. Accelerated online publication may also be a possible factor influencing the changes revealed in the study. Longer sentences with compressed noun phrases may serve the reader to efficiently scan through an article, although their meaning is obscured for those who do not belong to the target discourse community. Titles may have become longer and more highly specified for articles to be more easily extracted online. However, a further analysis needs to be conducted to determine the factors influencing writing practices. Chronological studies like this one promote understanding of not only writing conventions but also the surrounding context that dictates the way in which the target texts are written.

The generalization of the results in this study is likely to be limited to the discipline of medicine and the selected journals. Data on chronological changes across disciplines will be relevant to the academic writing instruction of students from a variety of disciplines. Therefore, a larger corpus and extended analysis in terms of rhetorical structure, including other article sections, are needed for pedagogical applications that require collaboration with discipline specialists. Participation of discipline specialists would also help provide closer analysis of rhetorical structure using a smaller rhetorical unit (a step), which EAP teachers may find difficult to identify. Future studies should also include another coder for move and title analyses.

While this study used relatively small-sized corpora and had a preliminary and exploratory nature, it highlighted that the method used was sufficient to reveal historical changes in a specific area. This small-scale chronological genre analysis could be employed by EAP teachers for their respective learners. Alternatively, research article features that saw changes in this study's time period could be selected to be closely observed in a large-scale analysis, while other aspects could be investigated less frequently.

The results of this study support the concept of an evolving genre, in this case the research article. When its nature is correctly understood, instructors will be able to efficiently prepare learners and novice researchers to become active participants in the discourse communities of their disciplines. These learners and novice researchers will be the ones who will contribute to the ongoing development of writing practices in the research article genre.

Acknowledgments

References

Anthony, L. (1999). Writing research article introductions in software engineering: How accurate is a standard model? *IEEE Transactions on Professional Communication, 42*(1), 38–46.

Biber, D., & Gray, B. (2010). Challenging stereotypes about academic writing: Complexity, elaboration, explicitness. *Journal of English for Academic Purposes, 9*(1), 2–20.

Cortes, V. (2013). The purpose of this study is to: Connecting lexical bundles and moves in research article introductions. *Journal of English for Academic Purposes, 12*(1), 33–43.

Halliday, M. A. K., & Martin, J. R. (1993). *Writing science: Literacy and discursive power*. London, UK: Falmer Press.

Holmes, R. (1997). Genre analysis, and the social sciences: An investigation of the structure of research article discussion sections in three disciplines. *English for Specific Purposes, 16*(4), 321–337.

Hyland, K. (2002). Authority and invisibility: Authorial identity in academic writing. *Journal of Pragmatics, 34*(8), 1091–1112.

Hyland, K. (2003). Genre-based pedagogies: A social response to process. *Journal of Second Language Writing, 12*(1), 17–29.

Jordan, R. R. (1997). *English for Academic Purposes: A guide and resource book for teachers*. Cambridge, UK: Cambridge University Press.

Kanoksilapatham, B. (2005). Rhetorical structure of biochemistry research articles. *English for Specific Purposes, 24*(3), 269–292.

Kuo, C.-H. (1999). The use of personal pronouns: Role relationships in scientific journal articles. *English for Specific Purposes, 18*(2), 121–138.

Li, L.-J., & Ge, G.-C. (2009). Genre analysis: Structural and linguistic evolution of the English-medium medical research article (1985–2004). *English for Specific Purposes, 28*(2), 93–104.

Martínez, I. A., Beck, S. C., & Panza, C. B. (2009). Academic vocabulary in agriculture research articles: A corpus-based study. *English for Specific Purposes, 28*(3), 183–198.

Nwogu, K. N. (1997). The medical research paper: Structure and functions. *English for Specific Purposes, 16*(2), 119–138.

Salager-Meyer, F. (1992). A text-type and move analysis study of verb tense and modality distribution in medical English abstracts. *English for Specific Purposes, 11*(2), 93–113.

Samraj, B. (2002). Introductions in research articles: Variations across disciplines. *English for Specific Purposes, 21*(1), 1–17.

Soler, V. (2007). Writing titles in science: An exploratory study. *English for Specific Purposes, 26*(1), 90–102.

Swales, J. M. (1990). *Genre analysis: English in academic and research settings*. Cambridge, UK: Cambridge University Press.

Swales, J. M. (2004). *Research genres: Explorations and applications.* Cambridge, UK: Cambridge University Press.

Swales, J. M., & Feak, C. B. (2004). *Academic writing for graduate students: Essential tasks and skills* (2nd ed.). Ann Arbor, MI: University of Michigan Press.

Thomson Reuters. (2014). *Journal citation reports*. New York, NY: Thomson Reuters.

Yang, R., & Allison, D. (2003). Research articles in applied linguistics: Moving from results to conclusions. *English for Specific Purposes, 22*(4), 365–385.

Appendix

List of References Quoted in the Examples

1   McNab, S., Duke, T., South, M., Babl, F. E., Lee, K. J., Arnup, S. J., et al. (2015). 140 mmol/L of sodium versus 77 mmol/L of sodium in maintenance intravenous fluid therapy for children in hospital (PIMS): A randomised controlled double-blind trial. *The Lancet, 385*(9974), 1190–1197.

2   Pereira, B. G., Wright, T., Schmid, C., Levey, A., & The New England Organ Bank Hepatitis, C. S. G. (1995). A controlled study of hepatitis C transmission by organ transplantation. *The Lancet, 345*(8948), 484–487.

3   Woodman, C. B. J., Threlfall, A. G., Boggis, C. R. M., & Prior, P. (1995). Is the three year breast screening interval too long? Occurrence of interval cancers in NHS breast screening programme's north western region. *The BMJ, 310*(6974), 224–226.

4   Fall, C. H. D., Osmond, C., Barker, D. J. P., Clark, P. M. S., Hales, C. N., Stirling, Y., & Meade, T. W. (1995). Fetal and infant growth and cardiovascular risk factors in women. *The BMJ, 310*(6977), 428–432.

5   Wilson, F. P., Shashaty, M., Testani, J., Aqeel, I., Borovskiy, Y., Ellenberg, S. S., et al. (2015). Automated, electronic alerts for acute kidney injury: A single-blind, parallel-group, randomised controlled trial. *The Lancet, 385*(9981), 1966–1974.

6   Westcott, J. M., Prechtl, A. M., Maine, E. A., Dang, T. T., Esparza, M. A., Sun, H., et al. (2015). An epigenetically distinct breast cancer cell subpopulation promotes collective invasion. *The Journal of Clinical Investigation, 125*(5), 1927–1943.

7   Rothmeier, A. S., Marchese, P., Petrich, B. G., Furlan-Freguia, C., Ginsberg, M. H., Ruggeri, Z. M., & Ruf, W. (2015). Caspase-1–mediated pathway promotes generation of thromboinflammatory microparticles. *The Journal of Clinical Investigation, 125*(4), 1471–1484.

8   Bradley, C., Marshall, M., & Gath, D. (1995). Why do so few patients appeal against detention under section 2 of the mental health act? *The BMJ, 310*(6976), 364–367.

9   Chen, Y., Terajima, M., Yang, Y., Sun, L., Ahn, Y.-H., Pankova, D., et al. (2015). Lysyl hydroxylase 2 induces a collagen cross-link switch in tumor stroma. *The Journal of Clinical Investigation, 125*(3), 1147–1162.

10 Radford, C. F., Bacon, A. S., Dart, J. K. G., & Minassian, D. C. (1995). Risk factors for acanthamoeba keratitis in contact lens users: A case-control study. *The BMJ, 310*(6994), 1567–1570.

11 Ghanima, W., Khelif, A., Waage, A., Michel, M., Tjønnfjord, G. E., Romdhan, N. B., et al. (2015). Rituximab as second-line treatment for adult immune thrombocytopenia (the RITP trial): A multicentre, randomised, double-blind, placebo-controlled trial. *The Lancet, 385*(9978), 1653–1661.