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### Selecting a Database for Drug Literature Retrieval: A Comparison of MEDLINE, Scopus, and Web of Science

Svetla Baykoucheva<sup>a</sup>

<sup>a</sup> University of Maryland, College Park, Maryland

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## Selecting a Database for Drug Literature Retrieval: A Comparison of MEDLINE, Scopus, and Web of Science

SVETLA BAYKOUICHEVA

*University of Maryland, College Park, Maryland*

*Three widely used databases—MEDLINE, Scopus, and Web of Science—were compared for their relative ability to retrieve the largest number of articles within the drug literature, using three search terms: two for specific drugs (atorvastatin and olanzapine) and one for a major class of drugs (statins). These drugs and the class of drugs were chosen for their longevity and continued high clinical and scientific interest, as indicated by the many articles concerning them published in scholarly and professional journals over the last two decades. Significant differences were observed in the journal coverage and the number of documents each database retrieved, with Scopus significantly outperforming the other two databases in these respects. Based on the results from this limited but by no means atypical study of comparative strengths and degree of coverage, the best option for retrieving the largest numbers of articles on a particular drug in the literature would be to use both Scopus and Web of Science, as these two databases complement each other with respect to the journal coverage. MEDLINE retrieved much smaller numbers of documents in all searches and should be used only when the other two databases are not available.*

**KEYWORDS** *databases, information retrieval, drug literature, MEDLINE, Scopus, Web of Science, journal coverage*

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Address correspondence to Svetla Baykoucheva, Head of White Memorial Chemistry Library, University of Maryland, 1526 Chemistry Building, College Park, MD 20742, USA. E-mail: sbaykouc@umd.edu

## INTRODUCTION

With the enormous growth of the drug literature and the availability of several databases for retrieving it, users sometimes find it difficult to decide which database would serve them best. Considerations such as source coverage, access (e.g., free *vs* paid, number of simultaneous users), and functionality have been important factors in making these decisions.

For a long time the most widely used database for searching the biomedical literature has been MEDLINE, available either through PubMed or from platforms provided by different vendors (Bianchi 2002; Thompson and Williams 2007; Weiner 2009). The users' experiences and the results from searching the same database through different platforms may vary, as better and more sophisticated analytical and refining tools are being constantly developed by vendors (Bandyopadhyay 2010). SciFinder (SF) is a platform that carries two large databases—CAPLUS and MEDLINE, which can be searched together or separately. This platform is used mainly by chemists and researchers involved in drug discovery (Haldeman et al. 2005). It is rarely used by researchers in the life sciences/biomedical field to search the drug literature, because they are usually not aware that SF also carries MEDLINE. Another reason SF has not gained wider acceptance for drug research is the fact that access to it is limited to only a few simultaneous users, depending on licensing arrangements.

Drug research is an area of science where chemistry, biology, and medicine intersect and some authors have pointed out that MEDLINE/PubMed alone is not always sufficient to retrieve biomedical literature (Suarez-Almazor et al. 2000). Interdisciplinary databases such as Scopus and Web of Science (WoS) are becoming more and more attractive to students and researchers for searching the drug literature. Several articles have compared Scopus and WoS for journal title overlap (Gavel and Iselid 2008), content and searching capabilities (Fingerman 2006; Salisbury 2009), and major features (Goodman and Deis 2007; Jacso 2005). Two other articles analyzed PubMed and Google Scholar (Anders and Evans 2010; Shultz 2007), and one article examined the strengths and weaknesses of PubMed, Scopus, Web of Science, and Google Scholar (Falagas et al. 2008).

Scopus and WoS are expensive services and there are many institutions that cannot afford subscribing to both of them. Librarians and users are often trying to find out how Scopus and WoS compare to each other and to MEDLINE/PubMed in covering the biomedical literature in general, and the drug literature in particular. The interest in knowing the answers to these questions justifies a quantitative evaluation of the performance of MEDLINE, Scopus, and WoS in retrieving the drug literature, which is the purpose of this study. The results reported in this article will help users decide which databases would suit them best; librarians will find the

quantitative data useful in recommending the best resource to users or when making recommendations for subscriptions.

In order to be able to compare the databases, identical keyword searches were performed in all databases using as examples the names of two individual drugs (atorvastatin and olanzapine) and the name of a group of drugs (statins). Atorvastatin (also known under its brand name Lipitor) is a cholesterol-lowering drug belonging to the group of statins (Pfizer 2010). It has been studied extensively for a long time and is the best-selling drug that has ever been on the market. Olanzapine (from Eli Lilly) is a second-generation antipsychotic that was approved for the treatment of schizophrenia, bipolar disorder, and associated agitation (Callaghan et al. 1999). Both drugs have been on the market for more than 20 years and have generated a significant volume of literature. The group of statins includes cholesterol-lowering drugs that have also been studied extensively for a long period of time (Davidson and Robinson 2006). The document sets obtained from each database were further analyzed and compared for total and annual output. The journal coverage was evaluated by analyzing and comparing the lists of the top 20 journal titles from which the databases have retrieved the highest number of documents.

## METHODOLOGY

### Databases

- MEDLINE (National Library of Medicine, National Institutes of Health) was searched through SciFinder Scholar Web (SF) (Chemical Abstracts Service). SF was chosen as a platform from which to search MEDLINE, because it provides sophisticated analytical tools that are similar to those available from Scopus and Web of Science. Such tools are not available when MEDLINE is used through PubMed. The initial searches performed in SF retrieved document sets that were further refined by database to limit the documents to those that were obtained from MEDLINE.
- Scopus (Elsevier).
- Web of Science (WoS) (ISI-Thomson Reuters).

### Selection of Drugs

The names of two individual drugs, atorvastatin (Lipitor) and olanzapine, and the name of a group of drugs, statins, were used as keywords in test searches performed in all databases. These drugs were selected for the following reasons: (1) Both atorvastatin and olanzapine have been on the market for more than 20 years and have been researched extensively; (2) using as models the literatures on two individual drugs and a group of

drugs that have such different properties, effects, and history may provide a basis for predicting the performance of the databases when retrieving literature on other drugs; and (3) using both individual drugs and a group of drugs as models allows testing the ability of the databases to search for literature on specific drugs or on a group of drugs.

### Search Strategy

The following identical keyword searches were performed in all databases:

Strategy 1: atorvastatin OR lipitor.

Strategy 2: olanzapine.

Strategy 3: (statin OR statins) AND cholesterol.

In strategies 1 and 2 the names of the individual drugs were used as key words. In Strategy 3 the name of the group of drugs (statin OR statins) and the term “cholesterol” were used as keywords, to avoid retrieving literature on drugs that contain the word “statin” as part of their names but that do not belong to the group of statins. The obtained document sets were analyzed for total and annual output. The journal coverage by the databases was evaluated by analyzing and comparing the lists of the top twenty journal titles from which the databases have found the highest number of articles. All searches were performed on July 27, 2010, and all documents retrieved from the databases by that date were included in the study.

## RESULTS

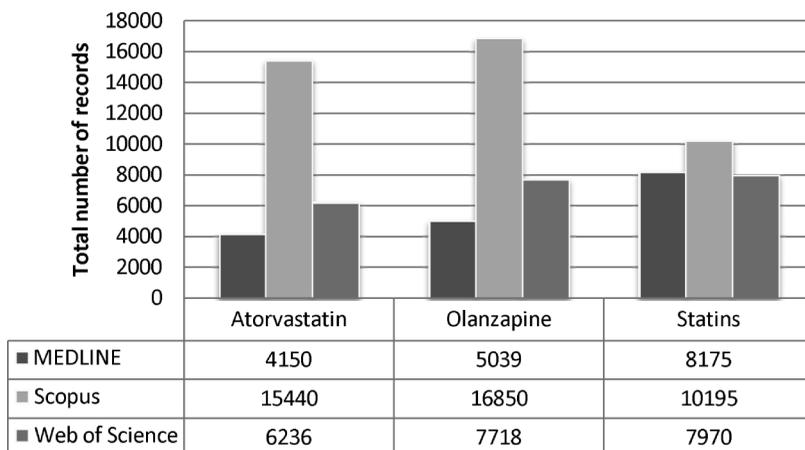
### Total and Annual Literature Output

Figure 1 shows the total numbers of records on atorvastatin, olanzapine, and statins retrieved by each database.

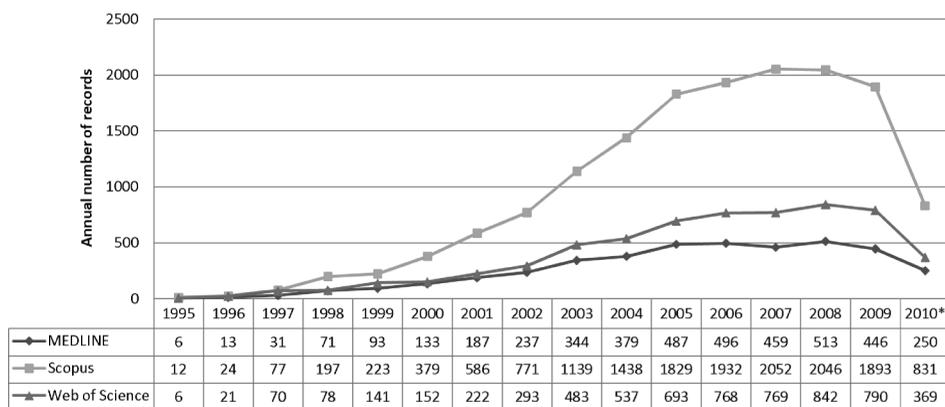
*Atorvastatin:* The results from analyzing the sets of documents on atorvastatin showed that the first record on atorvastatin was published in 1990 and was retrieved by both MEDLINE and Scopus. Figure 2 shows the yearly output of literature on atorvastatin published only from 1995 to 2010, which is the most active publication period for this drug.

*Olanzapine:* Figure 3 shows the annual output of literature on olanzapine published from 1995 to 2010. The time period for the literature on this drug started in 1992, with all databases retrieving two documents for that year.

*Statins:* The time period for the literature on statins started in 1976, with MEDLINE being the only database that contained records published before 1990 (it retrieved 116 documents published from 1976 to 1990). The

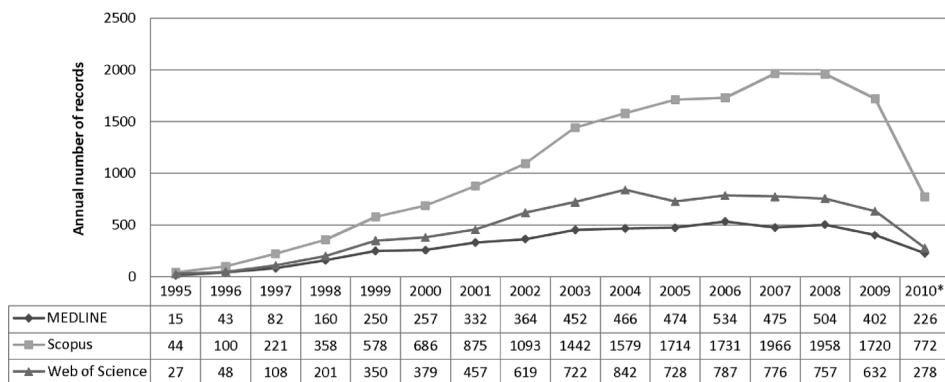


**FIGURE 1** Total output of records retrieved from the databases.



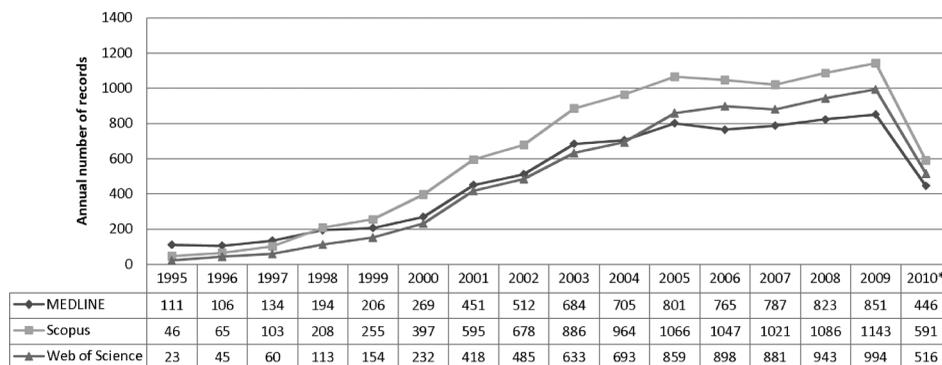
**FIGURE 2** Annual output of records on atorvastatin (1995–2010).

\* (Incomplete year)



**FIGURE 3** Annual output of records on olanzapine (1995–2010).

\* (Incomplete year)



**FIGURE 4** Annual output of records on statins (1995–2010).

\* (Incomplete year)

annual output of documents on statins retrieved by the databases for the time period from 1995 to 2010 is shown in Figure 4.

### Journal Coverage by the Databases

The journal coverage by the databases was evaluated by analyzing and comparing the lists of the top 20 journals from which the databases had retrieved the highest number of documents.

*Atorvastatin*: As shown in Table 1, seven of the top twenty journal titles that have published articles on atorvastatin were shared by all databases. The number of documents each database retrieved from these shared journals is illustrated in Figure 5. The list created by MEDLINE contained one unique title and twelve titles that were shared with one of the other databases. Scopus had six unique titles and seven titles that were shared with one of the other databases. WoS had nine unique titles and four journal titles that were shared with one of the other databases.

*Olanzapine*: Table 2 includes the lists of the top twenty journals from which the three databases have retrieved the highest number of documents published on the drug olanzapine. There were fourteen journal titles on these lists that were shared by all three databases shown in Figure 6. MEDLINE had three unique titles and three titles that were present on the list of one of the other databases. The list of Scopus had two unique titles and four titles that were present also on the list of one of the other databases. The list from WoS had three unique titles and three titles that were present also on the list of one of the other databases.

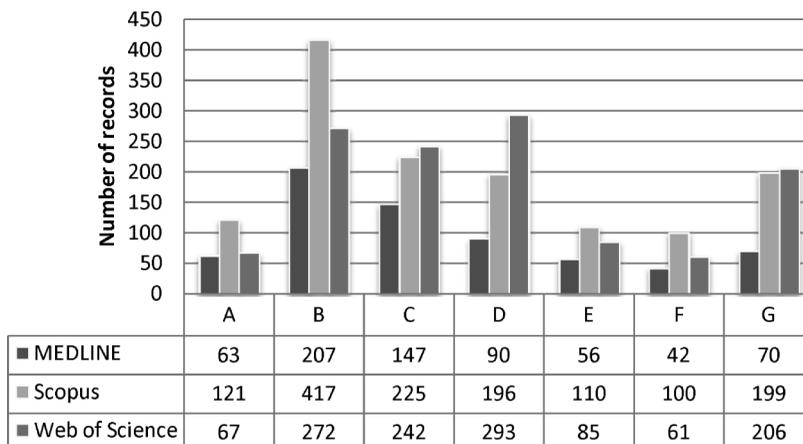
*Statins*: Table 3 shows the lists of the top twenty journals from which the databases have retrieved the highest number of documents on statins. These lists shared fourteen journal titles, presented in Figure 7. MEDLINE

**TABLE 1** List of the Top Twenty Journals, by Number of Records on Atorvastatin Retrieved by Each Database

MEDLINE	Scopus		Web of Science		
Source title	Records	Source title	Records	Source title	Records
<b>Am J Cardiol</b>	207	<b>Am J Cardiol</b>	417	<b>Circulation</b>	293
<b>Atherosclerosis</b>	147	<b>Atherosclerosis</b>	225	<b>Am J Cardiol</b>	272
<b>Circulation</b>	90	<b>J Am Coll Cardiol</b>	199	<b>Atherosclerosis</b>	242
<b>J Am Coll Cardiol</b>	70	<b>Circulation</b>	196	<b>J Am Coll Cardiol</b>	206
<b>Am Heart J</b>	63	Int J Clin Pract	127	<i>Atherosclerosis Supplements</i>	195
Arterioscler Thromb <sup>a</sup>	57	Curr Arterioscler Rep	121	<i>Eur Heart J</i>	142
<b>Curr Med Res Opin</b>	56	<b>Am Heart J</b>	121	Arterioscler Thromb <sup>a</sup>	94
N Engl J Med	50	<b>Curr Med Res Opin</b>	110	<b>Curr Med Res Opin</b>	85
Lancet	43	Pharmacotherapy	108	<i>Diabetes</i>	69
Clin Ther	42	<i>Pharm J</i>	104	<i>Clin Pharmacol Ther</i>	68
<b>Int J Cardiol</b>	42	<i>Curr Opin Lipidol</i>	102	<b>Am Heart J</b>	67
J Cardiovasc Pharmacol	35	Lancet	101	<b>Int J Cardiol</b>	61
<i>MMW Fortschr Med</i>	35	<b>Int J Cardiol</b>	100	<i>Diabetologia</i>	59
J Clin Pharmacol	34	<i>Brit J Cardiol</i>	99	Clin Ther	58
Ann Pharmacother	32	N Engl J Med	99	<i>J Hypertens</i>	56
J Atheroscler Thromb	31	<i>Cardiology Review</i>	96	Stroke	56
Stroke	29	Ann Pharmacother	94	Int J Clin Pract	51
Pharmacotherapy	28	<i>Expert Opin Pharmacother</i>	83	<i>Vallue Health</i>	50
Am J Med	27	<i>Drugs</i>	81	<i>Neurology</i>	49
Curr Atheroscler Rep	26	Am J Med	80	<i>Kardiologiya</i>	44

Note. All searches were performed on July 27, 2010. The source titles in boldface were present on the top twenty lists of all databases; those in regular fonts were on the lists of two databases; those in italics were on the list of only one database.

<sup>a</sup>Arteriosclerosis, Thrombosis, and Vascular Biology.



**FIGURE 5** Journal titles with records on atorvastatin that were shared by the top twenty lists of all databases: A, *American Heart Journal*; B, *American Journal of Cardiology*; C, *Atherosclerosis*; D, *Circulation*; E, *Current Medical Research and Opinion*; F, *International Journal of Cardiology*; G, *Journal of the American College of Cardiology*.

had four unique titles and shared two titles with one of the other databases. The list of Scopus had three unique titles and shared three titles with one of the other databases. The list of WoS contained five unique titles and shared one title with one of the other databases.

## DISCUSSION

The comparison of the total and annual output of documents obtained from the databases showed that Scopus performed better than the other two databases in these respects (Figures 1–4). The differences between the databases were less significant when the searches were performed using as keywords the name of a group of drugs (statins) (Figure 4) rather than the names of individual drugs (atorvastatin and olanzapine) (Figure 2 and Figure 3). Significant differences were found in the journal titles the databases are covering and in the number of documents they retrieved from the same journals (Tables 1–3).

A comparison of the number of documents from the seven overlapping journals that have published articles on atorvastatin showed that Scopus and WoS retrieved the highest number of articles from four and three journals, respectively (Figure 5). From all overlapping journals MEDLINE retrieved fewer documents than the other two databases. From the fourteen overlapping journal titles that have published articles on olanzapine (Figure 6), Scopus retrieved the highest number of documents from nine of the shared journals and WoS obtained the highest number of documents from five journals. There was not a single journal from which MEDLINE retrieved

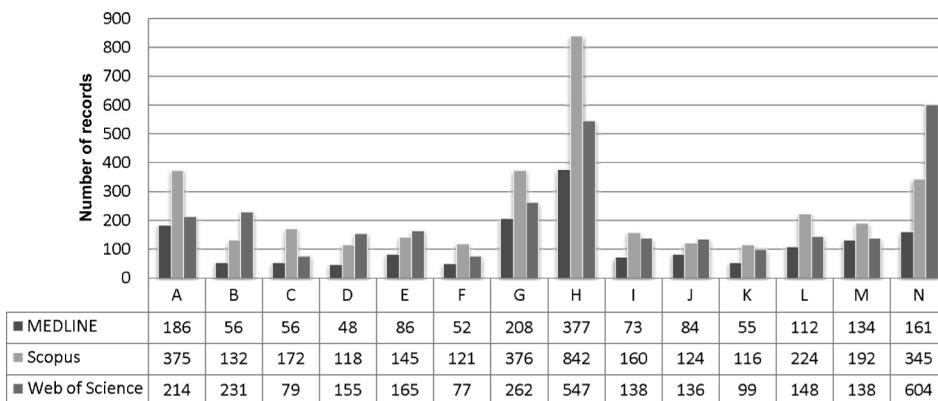
**TABLE 2** List of the Top Twenty Journals, by Number of Records on Olanzapine Retrieved by Each Database

MEDLINE		Scopus		Web of Science	
Source title	Records	Source title	Records	Source title	Records
<b>J Clin Psychiatry</b>	377	<b>J Clin Psychiatry</b>	842	<b>Schizophr Res</b>	604
<b>J Clin Psychopharmacol</b>	208	<b>J Clin Psychopharmacol</b>	376	<b>J Clin Psychiatry</b>	547
<b>Am J Psychiatry</b>	186	<b>Am J Psychiatry</b>	375	<i>Eur Neuropsychopharm</i>	284
<b>Schizophr Res</b>	161	<b>Schizophr Res</b>	345	<b>J Clin Psychopharmacol</b>	262
<b>Psychopharmacology</b>	134	<b>Progress in Neuro . . .<sup>a</sup></b>	224	<b>Biol Psychiatry</b>	231
<b>Progress in Neuro . . .<sup>a</sup></b>	112	<b>Psychopharmacology</b>	192	<b>Am J Psychiatry</b>	214
<b>Int Clin Psychopharmacol</b>	86	<b>CNS Drugs (172)</b>	172	<i>Int J Neuropsychopharmacol</i>	191
<b>Neuropsychopharmacology</b>	84	<b>J Psychopharmacol</b>	160	<b>Int Clin Psychopharmacol</b>	165
<b>J Psychopharmacol</b>	73	Can J Psychiatry	153	<b>Psychopharmacology</b>	157
Can J Psychiatry	62	<i>Primary Psychiatry</i>	151	<b>Eur Psychiatry</b>	155
<i>Ann Pharmacolther</i>	61	<b>Int Clin Psychopharmacol</b>	145	<b>Progress in Neuro . . .<sup>a</sup></b>	148
Aust NZ J Psychiatry	58	Aust NZ J Psychiatry	143	<b>J Psychopharmacol</b>	138
<b>Biol Psychiatry</b>	56	Br J Psychiatry	135	<b>Neuropsychopharmacology</b>	136
<b>CNS Drugs</b>	56	<b>Biol Psychiatry</b>	132	<i>Schizophr Bull</i>	113
<b>Pharmacopsychiatry</b>	55	<i>Psychiatr Serv</i>	126	<b>Pharmacopsychiatry</b>	99
<i>Eur J Pharmac</i>	52	<b>Neuropsychopharmacology</b>	124	Bipolar Disord	90
<b>J Child Adolesc<sup>b</sup></b>	52	Bipolar Disord	121	<b>CNS Drugs</b>	79
<b>Eur Psychiatry</b>	48	<b>J Child Adolesc<sup>b</sup></b>	121	Br J Psychiatry	77
Human Psychopharmacol	47	<b>Eur Psychiatry</b>	118	<b>J Child Adolesc<sup>b</sup></b>	77
<i>L'Encephale</i>	47	<b>Pharmacopsychiatry</b>	116	Human Psychopharmacol	75

Note. All searches were performed on July 27, 2010. The source titles in boldface were present on the top twenty lists of all databases; those in regular fonts were on the lists of two databases; those in italics were on the list of only one database.

<sup>a</sup>Progress in Neurology, Psychopharmacology & Biological Psychiatry.

<sup>b</sup>Journal of Children and Adolescent Psychopharmacology.



**FIGURE 6** Journal titles with records on olanzapine that were shared by the top twenty lists of all databases: A, *American Journal of Psychiatry*; B, *Biological Psychiatry*; C, *CNS Drugs*; D, *European Psychiatry*; E, *International Clinical Psychopharmacology*; F, *Journal of Children and Adolescent Psychopharmacology*; G, *Journal of Clinical Psychopharmacology*; H, *Journal of Clinical Psychiatry*; I, *Journal of Psychopharmacology*; J, *Neuropsychopharmacology*; K, *Pharmacopsychiatry*; L, *Progress in Neuro-Psychopharmacology & Biological Psychiatry*; M, *Psychopharmacology*; N, *Schizophrenia Research*.

the highest number of documents. From the fourteen shared journals that have published documents on statins (Figure 7), the performance of WoS, Scopus, and MEDLINE was best with respect to eight, four, and two journals, respectively.

This article shows that significant differences existed not only in the journal titles but also in the number of documents that the databases retrieved from the same journals. Scopus and WoS complemented well each other in terms of journal coverage, which makes using both of them the best option for comprehensive retrieval of the drug literature.

The results from this study provide information about the performance of Scopus and WoS in a specific area (drug literature). They support the results reported by other authors (Goodman and Deis 2007) who have concluded that the two databases are complementary and that a library that can afford it should subscribe to both of them.

## CONCLUSIONS

Since the introduction of Scopus in 2004, many users and librarians have been trying to evaluate and compare it to WoS. The much easier to navigate interface and the possibility of viewing immediately, on the same screen, the results from analyzing the search results make Scopus a very attractive option for searching the drug literature. In addition, as the results from this

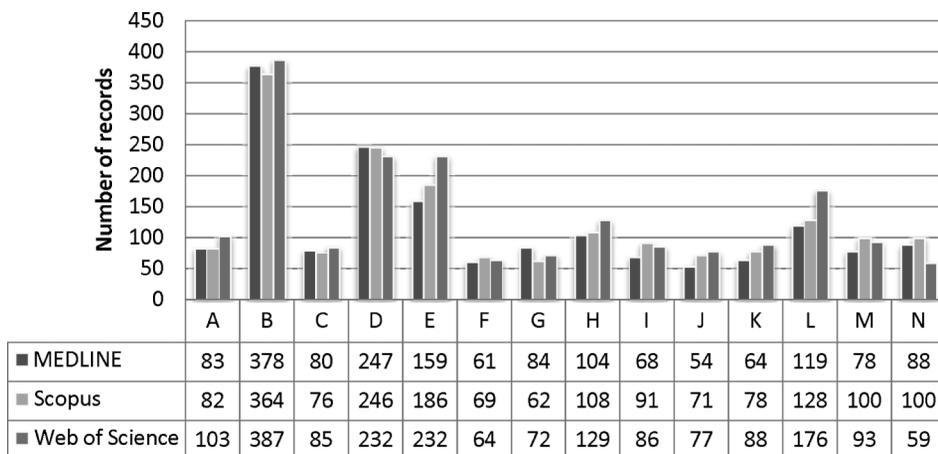
**TABLE 3** List of the Top Twenty Journals, by Number of Articles on Statins Retrieved by Each Database

MEDLINE		Scopus		Web of Science	
Source title	Records	Source title	Records	Source title	Records
<b>Am J Cardiol</b>	378	<b>Am J Cardiol</b>	364	<b>Am J Cardiol</b>	387
<b>Atherosclerosis</b>	247	<b>Atherosclerosis</b>	246	<b>Atherosclerosis</b>	232
<b>Circulation</b>	159	<b>Circulation</b>	186	<b>Circulation</b>	232
<b>J Am Coll Cardiol</b>	119	<b>J Am Coll Cardiol</b>	128	<b>J Am Coll Cardiol</b>	176
<b>Curr Med Res Opin</b>	104	<i>Curr Atheroscler Rep</i>	116	<b>Curr Med Res Opin</b>	129
<i>Curr Atheroscler Rep</i>	101	<b>Curr Med Res Opin</b>	108	<b>Am Heart J</b>	103
<b>Lancet</b>	88	<b>Lancet</b>	100	<b>Int J Cardiol</b>	93
<b>Clin Ther</b>	84	<b>Int J Cardiol</b>	100	<b>Int J Clin Pract</b>	88
<b>Am Heart J</b>	83	<i>Brit J Cardiol</i>	92	<b>Curr Opin Lipidol</b>	86
<b>Arterioscler Thromb<sup>a</sup></b>	80	<b>Curr Opin Lipidol</b>	91	<b>Arterioscler Thromb<sup>a</sup></b>	85
<b>Int J Cardiol</b>	78	<b>Am Heart J</b>	82	<b>Eur Heart J</b>	77
<b>Curr Opin Lipidol</b>	68	<b>Int J Clin Pract</b>	78	<b>Clin Ther</b>	72
<b>Int J Clin Pract</b>	64	<b>Arterioscler Thromb<sup>a</sup></b>	76	<i>Stroke</i>	67
<b>Clin Cardiol</b>	61	<b>Eur Heart J</b>	71	<i>Eur Heart J Suppl</i>	66
<b>Eur Heart J</b>	54	<b>Clin Cardiol</b>	69	<i>Atheroscler Suppl</i>	64
<i>MMW Fortschr Med</i>	54	<i>Eur Heart J Suppl</i>	66	<b>Clin Cardiol</b>	64
<i>J Lipid Res</i>	51	<b>Clin Ther</b>	62	<b>Lancet</b>	59
<i>Am J Med</i>	46	<i>AJMC<sup>b</sup></i>	57	<i>Ann Pharmacother</i>	58
<i>N Engl J Med</i>	46	<i>Stroke</i>	56	<i>Cardiovasc Drugs Ther</i>	55
<i>J Atheroscler Thromb</i>	45	<i>MMW Fortschr Med</i>	55	<i>JAMA</i>	52

Note. All searches were performed on July 27, 2010. The source titles in boldface were present on the top twenty lists of all databases; those in regular fonts were on the lists of two databases; those in italics were on the list of only one database.

<sup>a</sup>Arteriosclerosis, Thrombosis, and Vascular Biology.

<sup>b</sup>AJMC, American Journal of Managed Care.



**FIGURE 7** Journal titles with records on statins that were shared by the top twenty lists of all databases: A, *American Heart Journal*; B, *American Journal of Cardiology*; C, *Arteriosclerosis, Thrombosis, and Vascular Biology*; D, *Atherosclerosis*; E, *Circulation*; F, *Clinical Cardiology*; G, *Clinical Therapy*; H, *Current Medical Research and Opinion*; I, *Current Opinion in Lipidology*; J, *European Heart Journal*; K, *International Journal of Clinical Practice*; L, *Journal of the American College of Cardiology*; M, *International Journal of Cardiology*; N, *Lancet*.

study showed, Scopus also performed much better than WoS or MEDLINE in retrieving the drug literature.

Since the differences in the performance of the databases followed the same patterns and were independent of the nature of the drug used in the keyword searches, it can be expected that the databases would show similar performance when they are searched for literature on other drugs. Based on the results from this study, the best option for comprehensive retrieval of the drug literature would be to use both Scopus and WoS, as these databases complement each other well with respect to the journal coverage. If an institution has to make a decision to choose between Scopus and WoS, Scopus would be a better choice for this kind of literature. Since MEDLINE has found significantly fewer documents than the other two databases, it should be used only when these two databases are not available.

## REFERENCES

- Anders, M. E., and D. P. Evans. 2010. Comparison of *PubMed* and Google Scholar literature searches. *Respiratory Care* 55 (5):578–83.
- Bandyopadhyay, A. 2010. Examining biological abstracts on two platforms: What do end users need to know? *Science & Technology Libraries* 29 (1):34–52.
- Bianchi, S. 2002. *PubMed*: For more than medicine, this is one of the world's greatest databases. *Issues in Science & Technology Librarianship* 34 (Spring). <http://www.istl.org/02-spring/databases3.html>

- Callaghan, J. T., R. F. Bergstrom, L. R. Ptak, and C. M. Beasley. 1999. Olanzapine - Pharmacokinetic and pharmacodynamic profile. *Clinical Pharmacokinetics* 37 (3):177–93.
- Davidson, M. H., and J. G. Robinson. 2006. Lipid-lowering effects of statins: A comparative review. *Expert Opinion on Pharmacotherapy* 7 (13):1701–14.
- Falagas, M. E., E. I. Pitsouni, G. A. Malietzis, and G. Pappas. 2008. Comparison of *PubMed*, *Scopus*, *Web of Science*, and *Google Scholar*: Strengths and weaknesses. *FASEB Journal* 22 (2):338–42.
- Fingerman, S. 2006. *Web of Science* and *Scopus*: Current features and capabilities. *Issues in Science and Technology Librarianship* 48 (Fall). <http://www.istl.org/06-fall/electronic2.html>
- Gavel, Y., and L. Iselid. 2008. *Web of Science* and *Scopus*: A journal title overlap study. *Online Information Review* 32 (1):8–21.
- Goodman, D., and L. Deis. 2007. Update on *Scopus* and *Web of Science*. *Charleston Advisor* 8 (3):15–18.
- Haldeman, M., B. Vieira, F. Winer, and L. J. S. Knutsen. 2005. Exploration tools for drug discovery and beyond: Applying *SciFinder* to interdisciplinary research. *Current Drug Discovery Technologies* 2 (2):69–74.
- Jacso, P. 2005. As we may search—Comparison of major features of the *Web of Science*, *Scopus*, and *Google Scholar* citation-based and citation-enhanced databases. *Current Science* 89 (9):1537–47.
- Pfizer. 2010. *Pfizer for Professionals—LIPITOR 20102010*. <https://www.pfizerpro.com/sites/ppro/Pages/products/lipitor.aspx>
- Salisbury, L. 2009. *Web of Science* and *Scopus*: A comparative review of content and searching capabilities. *Charleston Advisor* 11 (1):5–18.
- Shultz, M. 2007. Comparing test searches in *PubMed* and *Google Scholar*. *Journal of the Medical Library Association* 95 (4):442–45.
- Suarez-Almazor, M. E., E. Belseck, J. Homik, M. Dorgan, and C. Ramos-Remus. 2000. Identifying clinical trials in the medical literature with electronic databases: *MEDLINE* alone is not enough. *Controlled Clinical Trials* 21 (5):476–87.
- Thompson, D. F., and N. T. Williams. 2007. Tracking the growth of drug therapy literature using *PubMed*. *Drug Information Journal* 41 (4):449–55.
- Weiner, S. A. 2009. Tale of two databases: The history of federally funded information systems for education and medicine. *Government Information Quarterly* 26 (3):450–58.