Science publishing in veterinary medicine and present challenges

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With rapid advancement of knowledge, the areas of interest and questions asked by scientists are changing. But also the scene of science communication has changed in the last fifty years as never before: from bound journals in libraries to online open access articles, from reprint request system to direct contact to authors via e-mails available in databases, from printed ISI Current Contents to Web of Science with its multiple products, to several hundred science databases worldwide. But also the publisher, once financed from subscriptions and sold journal copies, and proud to have good articles, has gradually changed to a huge enterprise, and is now charging large amounts of money for publishing articles and even charging substantial sums to those who are interested in having them. And of course, the "publish or perish" threat has become a nightmare to scientists worlwide (1).

These changes apply also to veterinary medicine, a small field of science but unique in its connections to other areas such as agriculture, medicine, genetics and more (2, 3). We compared the two Czech veterinary peer-reviewed journals Acta veterinaria Brno (AVB, founded 1922 as a university publication forum) and Veterinární Medicína (VM, founded 1953 by the Czech Academy of Agricultural Sciences). Both were originally designed for publishing domestic contributions to science, AVB from the university research and VM from other state-supported research institutions. AVB began to publish all articles in English in 1969, VM in 2001. We explored the developments in our publishing scene.

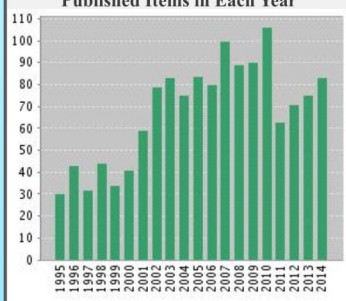
WEB OF SCIENCE JOURNAL ANALYSIS

Acta veterinaria Brno
FROM 1995 TO 2014

Citation Report: 1 361
(from All Databases)
You searched for: **PUBLICATION NAME:** (acta vet brno) *AND* **YEAR PUBLISHED:** (1995-2014)
...More

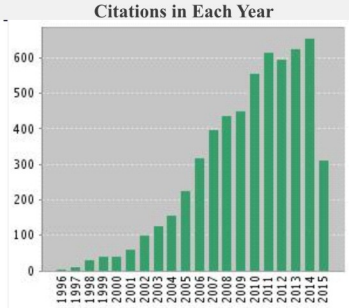
This report reflects citations to source items indexed within All Databases.

Published Items in Each Year



The latest 20 years are displayed.

Citations in Each Year



The latest 20 years are displayed.

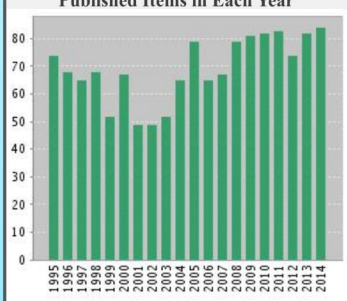
Results found:1361
Sum of the Times Cited: 5766
Sum of Times Cited without self-citations: 4950
Citing Articles: 4704
Citing Articles without self-citations: 4261
Average Citations per Item: 4.24
h-index: 26

Veterinarni Medicina
FROM 1995 TO 2014

Citation Report: 1 385
(from All Databases)
You searched for: **PUBLICATION NAME:** (Veterinarní Medicina) *AND* **YEAR PUBLISHED:** (1995-2014) **...More**

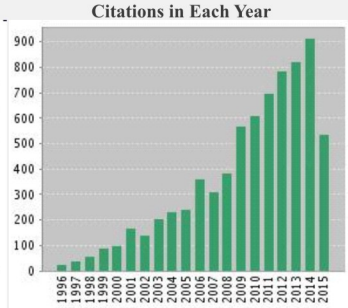
This report reflects citations to source items indexed within All Databases.

Published Items in Each Year



The latest 20 years are displayed.

Citations in Each Year



The latest 20 years are displayed.

Results found:1385
Sum of the Times Cited: 7314
Sum of Times Cited without self-citations: 6255
Citing Articles: 5784
Citing Articles without self-citations: 5374
Average Citations per Item: 5.28
h-index: 30

Numbers of published papers (domestic/foreign by first author)

	1980	1990	2000	2010
AVB	20/2	17/1	41/18	81/44 (+Suppl. 18/0)
VM	83/0	94/3	67/27	82/57

Rejections as a source of information (VM 2014 rejections 33.8% so far)

2014	Turkey	Iran	Egypt	S. Korea	Poland	India	Other 21 countries
420 submitted 142 rejected	31	26	14	9	8	7	47

The reasons for rejection were as follows: ignoring the Instructions for Authors (immediate rejection), lack of novelty, missing hypothesis, trivial problem, incorrect experimental design, no controls, missing statistical evaluation, results not supporting hypothesis, poor discussion and interpretation of results, references (missing or inaccurate), misspelled names of cited authors, poor English, many typos, faulty diacritics and spacing, and three cases of academic misconduct (plagiarism).

These one-year illustrative numbers reflect a long-time trend in rejections in both journals. Based on this experience we have the following recommendations for authors, their institutions and veterinary editors:

1. **Organize courses and workshops on science, statistics, scientific writing for all scientists. Invite experts and use resources of the European Association of Science Editors (EASE), Committee on Publications Ethics (COPE), Equator Network, Editage, INASP including AuthorAid, COST, Research4Life and others.**
2. **Organize training workshops on peer review.**
3. **Use all chances for international cooperation, send young scientists to state-of-the-art laboratories worldwide.**
4. **Ask the librarians at your institution to teach young scientists how to efficiently search the literature.**
5. **Editors should require that the authors know and use the Reporting Guidelines for publication of research as available in Equator Network, e.g. CONSORT, TREND, STROBE, REFLECT, ARRIVE (4).**
6. **Editors should also educate their authors, e.g. by providing online Bulletins for Authors with links to the above organizations, presenting examples and mistakes from manuscripts submitted, and developing own essays on science and publishing.**
7. **Editors of veterinary journals should cooperate (for example within IAVE, the International Association of Veterinary Editors) and share information on problematic manuscripts.**

PROBLEMS DIFFICULT TO DETECT

- **Insufficient responsibility of department heads/mentors**
- poor projects
- inadequate qualification of researchers
- non-justified co-authorship
- repeated publication of slightly modified results
- repeated submissions of manuscripts rejected in other journals

We strongly believe in importance of quality research for university education and application of scientific approach in all fields of human activities. Publication in international peer reviewed journals is important but may not be the only tool for an independent assessment of personal integrity and qualification of scientists.

In summary, there is no doubt that in countries entering the global research arena there are many challenges in veterinary medicine and it is of paramount importance to have the most competent and productive people in decision-making positions for research projects. Their visions of what needs to be explored can form the basis for top research at their institutions and thus reduce the waste of resources and time to a minimum (5).

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