

Czech Medical Literature Citation Index

Marie Votípková – Jana Hercová – Eva Weichetová

National Medical Library, Prague

Milan Špála

Charles University, 1st Faculty of Medicine, Prague

Czech Republic

Introduction

Czech citation index is the principal result of the research project „Information Characteristics of the Development of Medical Science and Research“ supported by the Internal Grant Agency of Ministry of Health of the Czech Republic.

Definitions of important terms

Citation – a document (A) mentions or refers to another document (B)

Citation index - an alphabetic list of entries cited in references from footnotes or bibliographies of a source article arranged by first author

Cited journal – a science journal cited in Czech citation index database. The journal is not necessarily a source journal covered in citation index.

Starting points

- Inspiration by Science Citation Index (Eugene Garfield 1963)
- Web of Science - a Czech consortial licence available since 2000
- A computerized registrative National Medical Bibliography (Bibliographia medica čechoslovaca - BMČ) maintained since 1977

Method of processing

Structure of the citation index derives from the structure of National Medical Bibliography database (BMČ), it uses the same software and it is a part of its current technological process.

Three journal titles have been selected as models:

1. Vnitřní lékařství (Internal Medicine) - two complete volumes (1999,2000)
2. Folia biologica 2000
3. Bratislavské lékařské listy (Bratislava Medical Papers) 2000.

A demoverison contains 15 362 bibliographic records

Database structure

Subbase 1 – Citation index (CI)

- **Citing records** – source records of the articles in selected journals which have been processed in the National Medical Bibliography
- **Cited records** – records of cited literature (many of them are the records processed in the National Medical Bibliography)
- **Linking data elements** – there are two types of them: record identifiers (added as manual work) and linkage between citing entry and cited entry (derived automatically by the system).

Database structure

Subbase 2 – Citation index factors (CIF)

- **Records of Czech and Slovak medical journals** exported from OPAC
- **Statistic data on citation behavior** of authors who publish in Czech and Slovak medical journals – number of articles, number of citations, impact factor, immediacy index

Calculation of impact factor (IF) and immediate index (IMI)

Both factors are calculated the same way as in Journal Citation Reports by ISI :

$$\text{IF} = \frac{\text{total number of articles that were published by a given journal in the years (X-1)+(X-2)}}{\text{number of citations to that journal in the year X}}$$

$$\text{IMI} = \frac{\text{number of published articles published in the year X}}{\text{number of citations in the year X}}$$

Pitfalls of the data processing

- Huge amount of input data
- Surprising variety of citation rules application in bibliographic citations published in selected journals
- Difficulties in searching and removing of duplicate entries

- Creation of linking data elements
- Need of searching and adding important missing data elements in citations
- Time consuming final edition and supervision of all entries

Searching options of CI

- Which articles of an author were cited?
- Find the relevant articles in which were the articles of an author cited.
- Who cited the author in the year 1999?
- Was the author cited in the year 1999 in any of the selected journal?

Example 1

Which articles of the author Widimský have been cited?

The screenshot displays the 'Citační rejstřík' application window. The main area shows a list of citations with columns for 'rele' and 'Autoři'. A search dialog box 'Formulace dotazu' is open, showing a search query: 'AND Autoři widimský AND Druh citujících dokumentů časopis'. The search results show 'Nalezeno: 50'. The taskbar at the bottom shows the Start button, a taskbar with icons for 'uvod-CR1 - Microsoft Word' and 'Citační rejstřík', and the system tray with the time '10:28'.

Example 2

Folia biologica journal listing impact factors (IF) and immediacy index(IMI)

The screenshot shows the 'Citační rejstřík' (Citation Index) application window. The window title is 'CR Citační rejstřík'. Below the title bar is a menu bar with options: 'Databáze', 'Dotaz', 'Úpravy', 'Zobrazit', 'Export', 'Tisk', 'Nastavení', and 'Nápověda'. A toolbar contains various navigation and printing icons, along with a search field containing 'Text' and a dropdown menu set to '100'. The main area is divided into two panels. The left panel is a table with two columns: 'rele' and 'Název časopisu'. The right panel displays detailed information for the selected journal, 'Folia biologica'. At the bottom, a status bar shows '1426' and '9./38', and a taskbar at the very bottom shows the Windows Start button, a taskbar with 'uvod-CR1 - Microsoft Word', and the 'Citační rejstřík' application icon. The system clock in the bottom right corner shows '11:33'.

| rele | Název časopisu |
|------|---|
| 1 | FOLIA BIOLOGICA Journal of Cellular and Molecular Biology |
| 1 | FOLIA BIOLOGICA Journal of Cellular and Molecular Biology |
| 1 | FOLIA BIOLOGICA Journal of Cellular and Molecular Biology |
| 1 | FOLIA BIOLOGICA Journal of Cellular and Molecular Biology |
| 1 | FOLIA BIOLOGICA Journal of Cellular and Molecular Biology |
| 1 | FOLIA BIOLOGICA Journal of Cellular and Molecular Biology |
| 1 | FOLIA BIOLOGICA Journal of Cellular and Molecular Biology |
| 1 | FOLIA BIOLOGICA Journal of Cellular and Molecular Biology |
| 1 | FOLIA BIOLOGICA Journal of Cellular and Molecular Biology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA MICROBIOLOGICA International Journal for General Microbiology |
| 1 | FOLIA PARASITOLOGICA |
| 1 | FOLIA PARASITOLOGICA |
| 1 | FOLIA PARASITOLOGICA |
| 1 | FOLIA PARASITOLOGICA |
| 1 | FOLIA PARASITOLOGICA |

Nakladatel
Institute of Molecular Genetics, Prague

Signatura nevázaná
89

Signatura vázaná
A 970

Rok vydání
2000

Periodicita
Vychází 6x ročně

Zkratka časopisu
Folia biol.
Folia-Biol-(Praha)

Obor
biologie

MDT
574/578

WWW
www.img.cas.cz

Počet článků
45

Celková citovanost
5

Citovanost
2000: 5

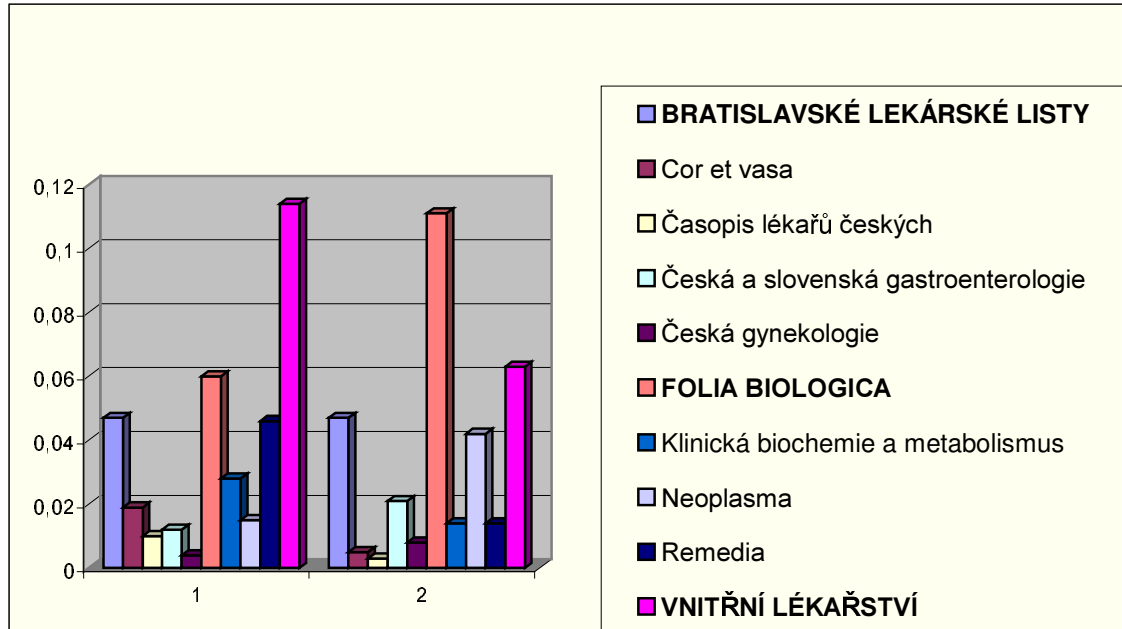
Impact factor [%]
60

Immediacy factor [%]
111

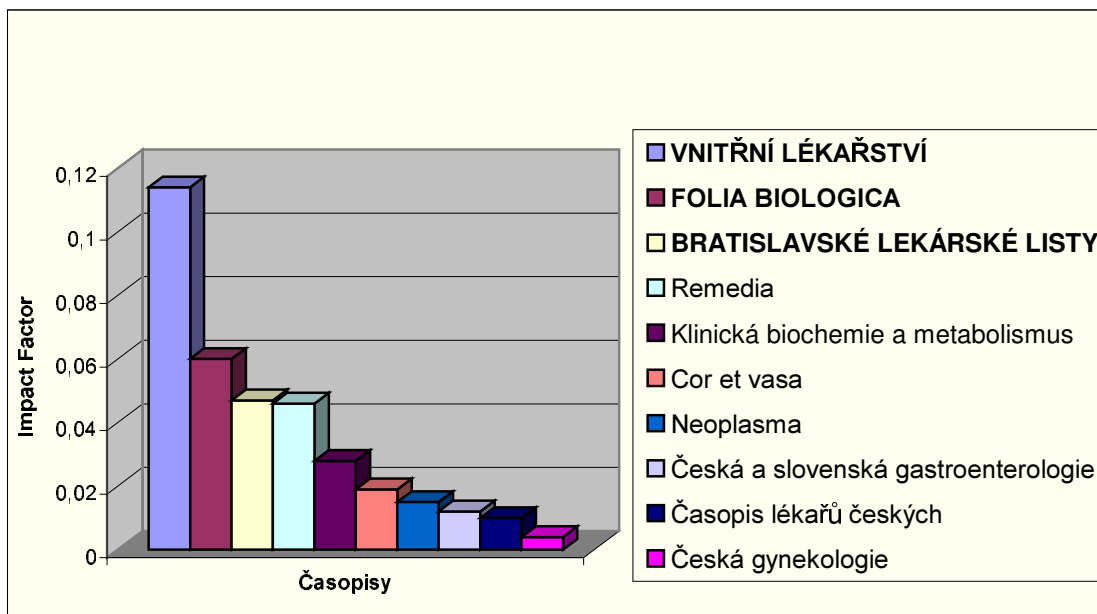
1426 9./38 0 Citační rejstřík - Faktory

Start uvod-CR1 - Microsoft Word CR Citační rejstřík 11:33

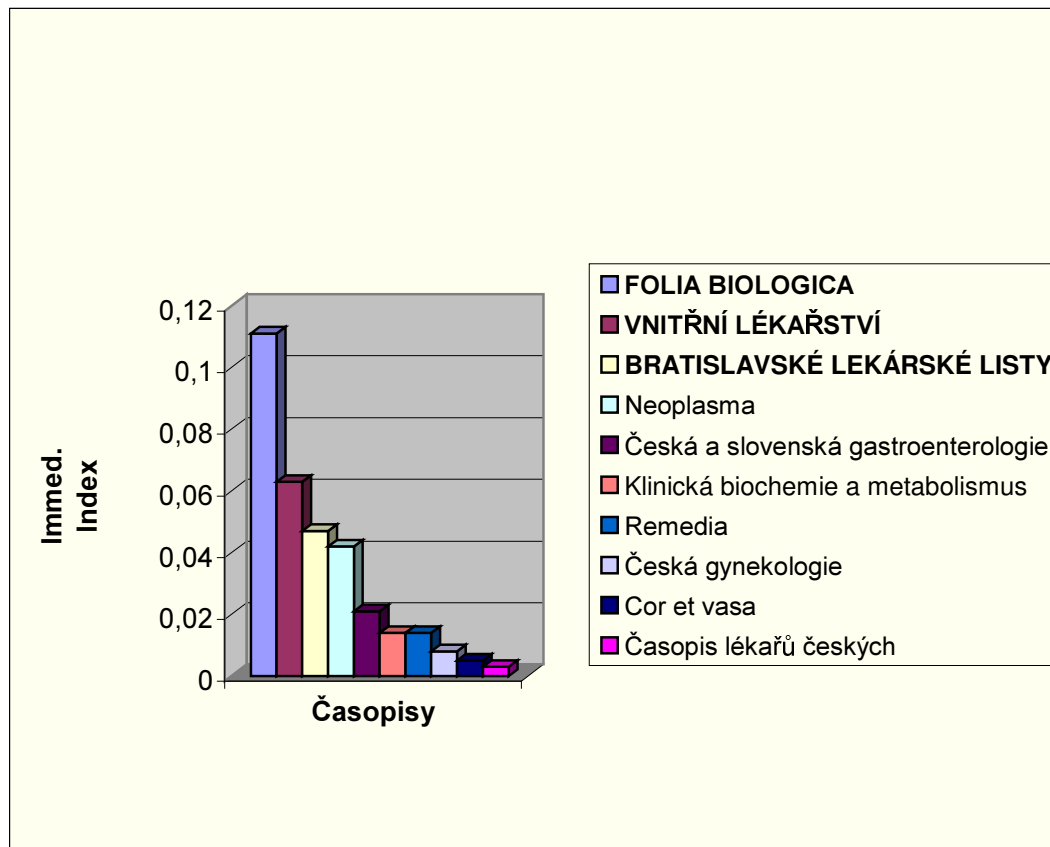
Graph 1- **Impact factor and Immediacy Index** from the database „Czech Citation Index – Factors“ according model journals for 10 selected journals processed in BMČ – listed alphabetically according the journal title



Graph 2 - **Impact Factor** from the database „Citation Index – Factors“ according model journals for 10 selected journals processed in BMČ



Graph 3 - **Immediacy Index** from the database „Citation Index – Factors“ according to the model journals for 10 selected journals processed in BMČ



Conclusions and recommendations

- Utilization of Vancouver Group recommendations (Uniform Requirements for Manuscript Submitted to Biomedical Journals) only when citing
- Utilize the format XML in input data processing which enable quicker and easier maintenance of the database CI
- Merging of database of National Medical Bibliography (BMČ) and Czech Medical Literature Citation Index database
- Compatibility with or Linkage to principal databases of the Council for Science and Research (Central Register of Research and Development Projects supported

by state administration and Database for Evaluation of Accomplished Results and their Reflection in Publication Activities).

- Adoption of unified requirements for submitting manuscripts in cooperation with editors of Czech medical journals
- Definition of scientometric outputs of the database CI

Contact addresses

- PhDr. Marie Votípková, Head of Bibliographic and Cataloguing Department, National Medical Library, Prague
tel.: 00420 2 9633 5929, e-mail: votipkov@nlk.anet.cz

Mgr. Jana Hercová, Head of Search Department, National Medical Library, Prague
tel.: 00420 2 9633 5918, e-mail: hercova@nlk.anet.cz

- Doc. MUDr. Milan Špála, Search Department, Institute of Scientific Information, 1st Faculty of Medicine, Charles University, Prague
tel.: 00420 2 2496 5670, e-mail: milan.spala@lf1.cuni.cz