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| Systematic Review\* Automation Tool Journal Club  (\*and other synthesis types, too!) | |
| Date: | 25 June 2021 |
| Present: | Anna Mae Scott (Bond University), Paul Glasziou (Bond University), Justin Clark (Bond University), Tari Turner (Monash University), Catalin Tufanaru (Macquarie University), Did Surian (Macquarie University) |
| Tool reviewed: | Citationchaser  <https://estech.shinyapps.io/citationchaser/> |
| Reference: | Haddaway, N. R., Grainger, M. J., Gray, C. T. 2021. citationchaser: An R package and Shiny app for forward and backward citations chasing in academic searching. doi: [10.5281/zenodo.4543513](https://doi.org/10.5281/zenodo.4543513) |
| Cost? | Free |
| Online or desktop? | Online-based |
| Tool used for the following review stage(s): | Stage of review: Searching: forward and backward citation |
| Tool description from the SR Toolbox: | citation chaser is an R package (https://github.com/nealhaddaway/citationchaser) which functions to automate this process by making use of the Lens.org API. An input article list can be used to return a list of all referenced records, and/or all citing records in the Lens.org database (consisting of PubMed, PubMed Central, CrossRef, Microsoft Academic Graph and CORE; 'https://www.lens.org'). |
| Reason for reviewing the tool: | Backward citation searching (citing, i.e. search through the reference lists of included studies) is required by the MECIR Standard C30 (Cochrane). Forward citation searching (cited by, i.e. which subsequent studies cited the study we included in the review) is not officially required but also commonly done.  Backward and/or forward citation search is currently done using Scopus or Web of Science, but the processes are a bit tedious. This may be a smoother alternative. |
| How the tool works: | 1. Need DOI’s or PMIDs or Titles for all the papers you want to use (i.e. same as you would with Scopus or Web of Science) – I used DOIs 2. Input these into a text box 3. Backward citation chasing: click on the References tab, click "Search for all referenced articles in Lens.org". Download this ris file. 4. Forward citation chasing: click on the "Citations" tab and click "Search for all citing articles in Lens.org". Download this ris file. |
| How the tool was tested: | We tested citationchaser on 2 studies we had previously included in a systematic review:  *1. Hooton et al, 2018, Effect of increased daily water intake in premenopausal women with recurrent UTIs (JAMA Int Med), DOI:*[*10.1001/jamainternmed.2018.4204*](https://doi.org/10.1001/jamainternmed.2018.4204)  *2. Ferrara et al, 2009, Cranberry juice for the prevention of recurrent urinary tract infections: A randomized controlled trial in children (Scan J Urol Nephrol), DOI:*[*10.3109/00365590902936698*](https://doi.org/10.3109/00365590902936698) |
| Test results: | *1. Hooton et al, 2018, Effect of increased daily water intake in premenopausal women with recurrent UTIs (JAMA Int Med), DOI:*[*10.1001/jamainternmed.2018.4204*](https://doi.org/10.1001/jamainternmed.2018.4204)  Reference list in the text: 42 references  CitationChaser ref list: 47 (including 4 NA/empty refs)    Cited by (as per Scopus): 61 references  Cited by (as per WoS): 55 references  Cited by (as per GoogleScholar): 111 references  CitationChaser forward: 115 references  *2. Ferrara et al, 2009, Cranberry juice for the prevention of recurrent urinary tract infections: A randomized controlled trial in children (Scan J Urol Nephrol), DOI:*[*10.3109/00365590902936698*](https://doi.org/10.3109/00365590902936698)  Reference list in the text: 32 references CitationChaser ref list: 34 references  Cited by (as per Scopus): 57 references  Cited by (as per WoS): 43 references  Cited by (as per GoogleScholar): 124 references  CitationChaser forward: 69 references |
| Discussion points: | **General discussion:**   * The tool is very simple to use, and has a very clean, intuitive interface * The tool includes abstracts (where it can find them) which is helpful * Pulls up a list of articles you uploaded so you can check if everything is there – great! * Time from hitting search to generating the RIS file is instantaneous * Manual insertion of titles or DOIs one at a time is time-consuming but no different than Web of Science or Scopus * You will get completely disconnected from a server after a period of idleness (not sure what the timeout period is) * The process did hang up: I input the Hooton ref, did backward citation, got coffee, at that point wanted to do the forward citation – the system would not let me, I had to reload the article first * The tool does not deduplicate references (can e.g. use the deduplication function in endnote) * The ultimate dream would be to be able to do the forward/backward in one click: uploading a single endnote file, which returns both all the forwards and all the backwards references (although there may be value to keeping those 2 steps separate) |