

BIBLIOMETRIC ANALYSIS: RCR & iCite

BACKGROUND

- Relative Citation Ratio (RCR) is an article level measure of scientific influence, developed by OPA
- RCR can be used as an alternative to other measures such as Journal Impact Factor and H-Index
- Answers questions like "How many citations per year compared to peer articles in the same field?"
- *iCite* is a tool to access a dashboard of bibliometrics (including RCR) for papers associated with a portfolio

METHODS

- An RCR value is calculated for each individual publication in PubMed
- The RCR value is citations per year received by an article, normalized by field
- Calculation of RCR uses an article's co-citation network to represent the field of science
- An RCR of 1 is equal to the NIH median, 2 indicates twice as many citations per year, 0.5 shows half as many
- RCR is calculated for papers from 1995-present
- Papers published in the most recent year (some of which are only a few months old) have not had enough time to accrue a meaningful citation count

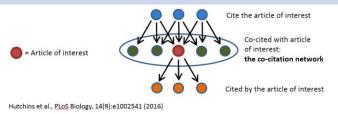


Figure 1. Co-Citation network: Representing an article's field, this changes over time as more papers cite the article of interest

iCite WEB APPLICATION

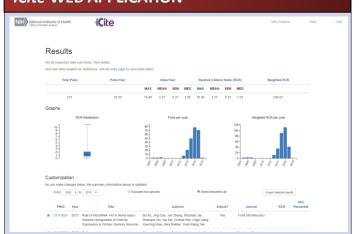


Figure 2. *iCite* results screen. Providing charts and bibliometrics for a portfolio of publications

iCite FEATURES

- Export search results to *iCite* direct from *iSearch*.
- Upload a list of PMIDs direct to iCite or search PubMed from within iCite
- Results show publication information, citation data and RCR values (Mean, Median, Max and Sum)
- Charts show RCR distribution and publications per year
- Compare one of more groups of publications, e.g., by activity code, or grants within a portfolio
- Filter results within *iCite* and identify high RCR publications
 - Note: It is also possible to filter results in iSearch to identify high RCR papers
- Export results and download charts and tables
- Internal NIH iCite (allows the download of up to 50,000 articles): http://icite-beta.od.nih.gov/
- Publicly available iCite (1,000 article download limit): https://icite.od.nih.gov

EXAMPLE: AXON GUIDANCE NIH vs NON-NIH

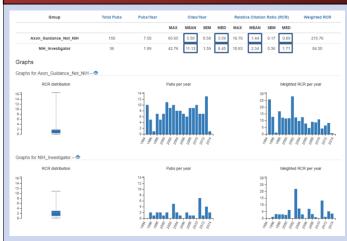


Figure 3. NIH funded vs non-NIH funded Axon Guidance research. The *iCite* group analysis feature shows that NIH funded Axon Guidance research is more influential than non-NIH funded papers

FURTHER INFORMATION

- Detailed methodology in *PLoS Biology* paper: http://journals.plos.org/plosbiology/article?id=10.1 371/journal.pbio.1002541
- For instructions on how to use iCite, see the iCite help screens: http://icite-beta.od.nih.gov/help
- For details of *iCite* and RCR training go to the OPA training website: https://dpcpsi.nih.gov/eo/intranet/opa/training
 - Email: OPA-Training@mail.nih.gov