We set out to explore two large samples of science press releases to gain further insights on their format's characteristics. Later citations and altmetrics (Lemke, 2020), further warranting a precise look at this communication like for instance social media, news, or policy documents, so far press releases have been an almost ignored albeit promising source of data (Boorman & Hassan, 2019). Also, previous studies have shown a strong association between a journal article receiving promotion in a press release and its later citations and altmetrics (Lemke, 2020), further warranting a precise look at this communication format's characteristics. We set out to explore two large samples of science press releases to gain further insights on their contents, creators, and role in the communication of research.

### Dataset & Methods

Our data consists of two samples of press releases published over one year between April 2016 and March 2017:

- 26,358 press releases from EurekAlert!
- 1,856 press releases from IDW-Online

![Number of words in press releases](Image)

Two randomly chosen subsamples of 100 press releases each were used for content analysis by two independent raters.

### Content Analysis — Press Release Texts

From each dataset, 100 random press releases were examined for mentions of...

- featured studies' 'Methods',...
- the findings' 'immediate practical implications',...
- their limitations...
- other studies, researchers or institutions not directly involved in the featured study (References),...
- or if they did not mention any specific study at all (No Research).

### Content Analysis — Releasing Institutions

Inter-rater reliability as Cohen's kappa $k = 0.89$ with two raters.

### Conclusion & Future Work

- Press releases on both EurekAlert! and IDW-Online are dominated by life sciences, followed by physical sciences; other subjects are rare
- They frequently describe featured studies' methodologies and often also practical implications, descriptions of limitations or references to other research are less typical
- Structurally, press releases seem to be a comparatively homogeneous format of external science communication, e.g. compared to news articles
- Regarding the institutions submitting press releases, our analysis suggests substantial differences between both platforms: while universities account for large shares of the submissions to both portals, EurekAlert! seems to be shaped more by publishers and journals, while IDW-Online features many contributions from non-university research institutes
- In future work, we will apply machine learning to automatically classify larger samples of the collected press releases, as well as combine the datasets described here to datasets of other formats of external science communication, e.g. news articles, to analyze links between different communication channels

### References

- de Vrieze, J. (2018). EurekAlert! has spoiled science news. Here's how we can fix it. Presented at the 14th Workshop on Informetrics and Scientometrics Research.

### Acknowledgements

We wish to thank the German Federal Ministry of Education and Research for funding our research project MeWiKo (grant number DIP20708A); EurekAlert! and IDW-Online for granting us access to their press release data; as well as Julian Salmann for his help in the manual coding.

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**An Exploration of Scientific Press Releases in the Context of Altmetrics**

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ZBW – Leibniz Information Centre for Economics

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**Introduction**

Press releases are published by organizations to bring attention to achievements they have reached. In the scientific domain, for example research institutions, funders, and academic publishers make use of press releases to advertise newly published papers and particularly promising scientific results.

For altmetrics research, which analyzes the presence of scientific objects in various public domains like for instance social media, news, or policy documents, so far press releases have been an almost ignored albeit promising source of data (Boorman & Hassan, 2019). Also, previous studies have shown a strong association between a journal article receiving promotion in a press release and its later citations and altmetrics (Lemke, 2020), further warranting a precise look at this communication format's characteristics.

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**Subjects**

Disciplines assigned to Scopus subjects of 10,483 journal articles promoted in the press releases.

Frequent occurrences: Life Sciences (13.95%), Health Sciences (12.79%), Medicine (12.59%), Biochemistry (9.27%), Genetics and Molecular Biology (9.21%), Physical Sciences (7.55%), Agricultural and Biological Sciences (5.20%).

Disciplines based on Scopus subjects of 18,483 journal articles promoted in the press releases. Frequent occurrences: Life Sciences (13.95%), Health Sciences (12.79%), Medicine (12.59%), Biochemistry (9.27%), Genetics and Molecular Biology (9.21%), Physical Sciences (7.55%), Agricultural and Biological Sciences (5.20%).

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**Topics**

- EurekAlert!
- IDW-Online
- Research and Development
- Use of EurekAlert!
- Impact of EurekAlert!

![Number of words in press releases](Image)

The 50 most frequent word stems in the titles of press releases. The Porter Stemming Algorithm was used.

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**EurekAlert! & IDW-Online**

Portals for publication of science news and press releases.

- founded in 1996 by the American Association for the Advancement of Sciences
- 14,000 registered journalists from 90+ countries (de Vrieze, 2018)
- founded in 1995 by a coalition of press officers from German universities
- 8,000+ registered journalists (likely predominantly German-speaking)

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**Dataset & Methods**

Our data consists of two samples of press releases published over one year between April 2016 and March 2017:

- 26,358 press releases from EurekAlert!
- 1,856 press releases from IDW-Online

average length of press release: 755 words

average length of press release: 724 words

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**Acknowledgements**

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