

Editor's comment

Spin doctors



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In the past couple of days headlines such as, 'Grey hair could become a thing of the past; Getting to the roots of grey hair' have hit the international and local Internet news sites. Now go to eurekaalert.org, a web site used by science and health journalists, and you will see a press release from the *FASEB Journal* (published by the Federation of American Societies for Experimental Biology). To quote: 'Hair dye manufacturers are on notice: The cure for gray hair is coming. That's right, the need to cover up one of the classic signs of aging with chemical pigments will be a thing of the past thanks to a team of European researchers.' From eurekaalert.org you can go to www.fasebj.org, where you will find a Research Communication titled 'Basic evidence for epidermal H₂O₂/ONOO⁻-mediated oxidation/nitration in segmental vitiligo is supported by repigmentation of skin and eyelashes after reduction of epidermal H₂O₂ with topical NB-UVB-activated pseudocatalase PC-KUS.'^[1] This is basic clinical research on the distressing skin condition vitiligo. Researchers have found that a compound called PC-KUS (a modified pseudocatalase – whatever that is) can work against the 'massive oxidative stress via accumulation of hydrogen peroxide in the hair follicle' that causes grey hair. A quick jump from basic research on vitiligo to a wonder-drug that can 'cure' grey hair.

This example may be relatively trivial – except of course that we don't know if this will actually deliver what the news channels are promising,

what the side-effects are, or even if, in fact, the compound will consistently do what the initial research has shown it to be capable of doing. In the journal *PLOS Medicine*, however, there is an article looking at misrepresentation of randomised controlled trials (RCTs) in press releases and news coverage.^[2] As Amélie Yavchitz and her colleagues point out, the mass media play an important role in disseminating the results of medical research about new drugs, and the latest clinical studies. Journalists source material from press releases – few science and health journalists are actually scientifically trained and so they rely on the veracity of the information in these press releases to inform their public. Yavchitz *et al.* say that in an ideal world, journal articles, press releases and news stories would accurately reflect the results of health research. However, their research shows that the findings of RCTs are sometimes distorted, not only in the press releases, but also in the peer-reviewed journals themselves, by 'spin' – reporting that emphasises the beneficial effects of the experimental new treatment. The study cites cases where journal articles may interpret non-statistically significant differences as showing the equivalence of two treatments, even though the results actually show a lack of evidence for the superiority of either treatment. This can lead to unrealistic patient (and doctor) expectations about new treatments when translated into clinical practice. The research was done on 70 press releases indexed in EurekaAlert! over a 4-month period. Nearly half the press releases

and article abstract conclusions contained 'spin'. Importantly, 'spin' in the press releases was associated with 'spin' in the article abstracts. Factors that were associated with this overestimation of treatment benefits included publication in a specialised journal and having 'spin' in the press release.

In the example that I started with, the original article does not contain any such 'spin', but then this is a small non-clinical study. It has been seized on by the lay press because people don't want grey hair. However, in other cases this misinterpretation can be serious – unrealistic expectations about treatment for metastatic solid tumours is a good example. These are published, peer-reviewed studies. Removing 'spin' should happen at source and is the responsibility of those of us who are involved in both the review and the editing process.

1. Schallreuter KU, Salem MAEL, Holtz S, Panske A. 2013. Basic evidence for epidermal H₂O₂/ONOO⁻-mediated oxidation/nitration in segmental vitiligo is supported by repigmentation of skin and eyelashes after reduction of epidermal H₂O₂ with topical NB-UVB-activated pseudocatalase PC-KUS. *FASEB J* fj.12-226779; published ahead of print April 29, 2013. [<http://dx.doi.org/10.1096/fj.12-226779>].
2. Yavchitz A, Boutron I, Bafeta A, et al. 2012. Misrepresentation of randomized controlled trials in press releases and news coverage: A cohort study. *PLoS Med* 9(9):e1001308. [<http://dx.doi.org/10.1371/journal.pmed.1001308>].

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