## Science, business, and patients

As soon as science began to require investment, it has been financed by business. In biomedicine it is most commonly the pharmaceutical business. Currently, it is not possible to perform research in the field of medicine without having strong financial support. Thanks to funding there are new technologies, drugs and biotechnological products that can be developed. These new inventions and products are the result of direct input into research by pharmaceutical companies or independent supporting researchers. This financial support has its downsides. It is understandable that the investor expects their financing of scientific research to result in future growth and income [1]. This is the most important cause of falsifying scientific reality and involves an imbalance between publications that present positive and negative results. The promotion of positive thinking in science has its match in editorial policy. Many times, authors who obtain negative results abandon the opportunity to publish their research. There are several reasons for this state of affairs. One of them is the reluctance or even pressure from the investor not to publish negative results. The author, on the other hand, is under pressure to publish the work, settle with investors, and maintain his or her position in a given research organization, university, or hospital. Authors wishing to publish negative results are also not helped by scientific journals that are set to print articles that mainly present positive results. Journal editors fear that articles presenting negative results will have a low index of citations. There are only a few journals in the world that deal with publishing negative results in medicine.

This means that scientists and doctors are reluctant to write papers with negative results, based on the assumption that they have no chance of publication and thus see preparing these manuscripts as a waste of time [2].

Negative results remain important in science and education and most of all they are also important for the future health of patients. Negative results are necessary in the preparation of large key studies, such as meta-analysis or systematic reviews. Without the inclusion and consideration of negative results, these studies represent a false picture of reality.

Responsibility for the quality of science belongs not only to the authors of publications, but also to the editors of scientific journals and industrial investors. Authors should feel supported by editors and be able to count on the publication of their well-documented negative results including investor information and conflict of interest. Additionally, investors should not discourage authors to publish negative results.

Only this type of policy will bring the greatest benefit to our patients. Most importantly, this can potentially reduce unnecessary therapies and avoid severe side effects and complications of treatments. We should all work together on improving the quality of science; authors, editors and investors alike!



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## References

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