

MORE IMPACT

by reaching out to wider audience

Background

- Number of academic papers per year has come to its peak of nearly 4M in 2018, nearly triple from 20 years ago, yet impact remain unknown ([source](#))
- In 2018, Times Higher Education developed a new global university ranking that aimed to measure institutions' success in delivering the United Nations' Sustainable Development Goals ([source](#))
- Challenge faced by researchers is to reach out to wider audience with a whole new writing style and skill
- Academic journal publishers are encouraging researchers to provide Plain Language Summary and Graphical Abstract in their future publishing

What is Plain Language Summary (PLS)?

“A plain language summary is a brief outline of a research project... They are helpful in making information about research more open, transparent and accessible. Plain language summaries are not an attempt to ‘dumb down’ scientific information. It is important to be able to speak or write about research in a way that potential funders, supporters, policy makers, consumers and the community can understand.”

McKenzie A. Consumer and Community Participation Fact Sheet M11: Plain Language Summaries (2011)

What is Graphical Abstract?

“A Graphical Abstract is a single, concise, pictorial and visual summary of the main findings of the article... which captures the content of the article for readers at a single glance”

Elsevier, <https://www.elsevier.com/authors/journal-authors/graphical-abstract>



Case study of
Research Visibility
by ies Research Consulting

Example of PLS vs. Abstract of

Tseng, H. H., Yeh, W. C., Tu, Y. C., Yang, B. F., Lai, Y. T., & Lee, H. K., et al. (2018). Proteomic profiling of *Ganoderma tsugae* ethanol extract-induced adipogenesis displaying browning features. *Febs Letters*, 592(10), 1643-1666. doi:10.1002/1873-3468.13061

How does *Ganoderma tsugae* ethanol extract (GTEE) help anti-obesity effect?

What is it about?

This study shows that for the first time GTEE promotes metabolic flexibility and plasticity, by displaying Uncoupling Protein 1 (UCP1)-positive browning features in the white adipocytes. The study highlights the physiological effects and the molecular events during the adipogenesis triggered by GTEE through a reported adaptive mechanism of intracellular mitochondria remodelling and chemical energy redox modifications.

Why is it important?

It was an evidence for the hypothesis of GTEE will stimulate adipocyte browning and it reveals that the *Ganoderma* can act as an external stimulus to promote intracellular metabolism converting white adipocytes into brown-like adipocytes.

Perspectives

The result will shed new light on the strategy of preventing obesity in health care and medical use. It also provides additional scientific basis for the origins of "vital energy" regulated by *Ganoderma* and its association with metabolic and energy homeostasis

Abstract

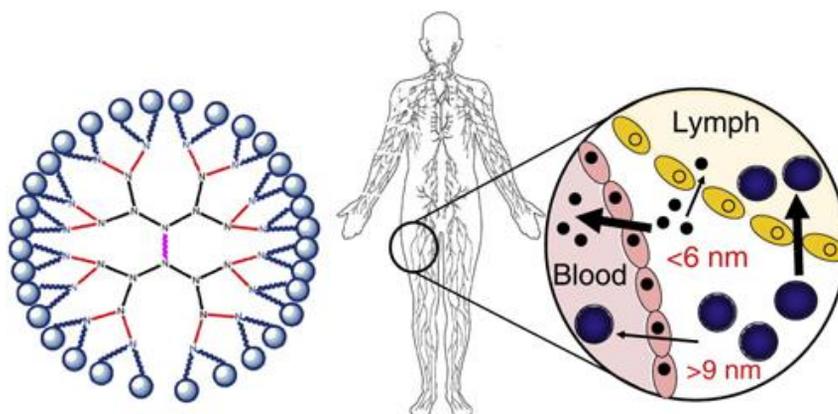
Ganoderma is classified as a top grade traditional Chinese medicine for promoting human health by regulating 'vital energy'. Its potency towards metabolism and energy homeostasis, particularly, metabolic adaptations of adipocytes, needs to be re-evaluated through an evidence-based study. Here, the triterpenoid-rich *Ganoderma tsugae* ethanol extract (GTEE) was found to contribute towards adipogenesis accompanied with elevated intracellular lipid metabolic flux. Additionally, proteomic profiling revealed GTEE-upregulated mitochondrial remodeling and chemical energy redox modifications, which display UCP1-positive browning fat-selective features and a NADH-mediated adaptive mechanism. GTEE-treated mice with diet-induced obesity also resulted in the amelioration of white adipocyte hypertrophy and the appearance of UCP1-positive browning adipocytes. Our novel findings unravel that GTEE could promote intracellular metabolic flexibility and plasticity followed by the induction of adipocyte browning.

Research suggest that creating a plain language summary and sharing it actively leads to 23% increase in full-text downloads

Source: Erdt, M., Aung, H. H., Aw, A. S., Rappale, C., & Theng, Y. L. (2017). Analysing researchers' outreach efforts and the association with publication metrics: A case study of Kudos. *Plos One*, 12(8), e0183217-e0183217.

Example of Graphical Abstract

Kaminskas, L. M., & Porter, C. J. (2011). Targeting the lymphatics using dendritic polymers (dendrimers). *Advanced Drug Delivery Reviews*, 63(10), 890-900. doi:10.1016/j.addr.2011.05.016



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