

Retraction

Retracted: Biomedical Implications of Heavy Metals Induced Imbalances in Redox Systems

BioMed Research International

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BioMed Research International has retracted the article titled “Biomedical Implications of Heavy Metals Induced Imbalances in Redox Systems” [1]. The article was found to contain a substantial amount of material, without citation, from previously published articles, including the following sources:

- (i) Danyal Ibrahim, Blake Froberg, Andrea Wolf, Daniel E. Rusyniak. “Heavy Metal Poisoning: Clinical Presentations and Pathophysiology”, *Clinics in Laboratory Medicine*, 2006. 10.1016/j.cll.2006.02.003. [2]
- (ii) Robert A. Goyer and Thomas W. Clarkson, “Toxic Effects of Metals,” in *casarett & doull's toxicology the basic science of poisons*, 6th ed, Curtis D. Klaassen. https://www.biologicaldiversity.org/campaigns/get_the_lead_out/pdfs/health/Goyer_1996.pdf. [3]
- (iii) “Systems Biology of Free Radicals and Antioxidants”, Ismail Laher, Springer Nature, 2014. 10.1007/978-3-642-30018-9. [4]
- (iv) Wikipedia contributors, “Mercury poisoning,” Wikipedia, The Free Encyclopedia, https://en.wikipedia.org/w/index.php?title=Mercury_poisoning&oldid=919871578 (accessed April 11, 2019). [5]
- (v) Jörg B. Schulz Allen I. Arieff, “Metabolic and Toxic Encephalopathies” in *Neurological Disorders* 2nd ed, Thomas Brandt, Louis R. Caplan, Johannes Dichgans, Christoph Diener Christopher Kennard, 2003. 10.1016/B978-012125831-3/50267-7. [6]

References

- [1] B. Sharma, S. Singh, and N. J. Siddiqi, “Biomedical Implications of Heavy Metals Induced Imbalances in Redox Systems,” *BioMed Research International*, vol. 2014, Article ID 640754, 26 pages, 2014.
- [2] D. Ibrahim, B. Froberg, A. Wolf, and D. E. Rusyniak, “Heavy Metal Poisoning: Clinical Presentations and Pathophysiology,” *Clinics in Laboratory Medicine*, vol. 26, no. 1, pp. 67–97, 2006.
- [3] R. A. Goyer and T. W. Clarkson, “Toxic Effects of Metals,” *casarett & doull's toxicology the basic science of poisons* 6th edition, https://www.biologicaldiversity.org/campaigns/get_the_lead_out/pdfs/health/Goyer_1996.pdf.
- [4] I. Laher, Ed., *Systems Biology of Free Radicals and Antioxidants*, Springer Nature, 2014.
- [5] Wikipedia contributors, *Mercury poisoning* Wikipedia, The Free Encyclopedia April 2019, https://en.wikipedia.org/w/index.php?title=Mercury_poisoning&oldid=919871578.
- [6] J. B. Schulz and A. I. Arieff, “Metabolic and Toxic Encephalopathies,” in *Neurological Disorders*, T. Brandt, L. R. Caplan, J. Dichgans, C. Diener, and C. Kennard, Eds., .