Kesa Sai Prasanth Kumar – R11786744 Fall 2022

Ethics in Engineering Practice & Research (ENGR – 5392 – D01)

Write a short essay (300-500 words) giving your expectations of ethical researchers. How often do you believe that cases of research fraud or plagiarism occur? Have you ever witnessed research fraud? Cite at least one case of research fraud that has been in the news in the last 10 years.

The frequency with which scientists create and falsify data, or conduct other types of scientific misconduct, is debatable. Many studies have questioned scientists explicitly if they have committed or know of a collaborator who has perpetrated research misconduct, but the outcomes have been difficult to assess and interpret. To unify conclusions, the amount of participants who recall at least one case of misconduct was computed for each issue, and the assessment was restricted to behaviours that affect science expertise: fabrication, falsification, "cooking" of data, and more.

So according to meta-regression, self-report surveys, surveys including the terms "falsification" or "fabrication," and postal surveys resulted in lower percentages of misbehaviour. When these criteria were taken into account, medical/pharmacological researchers noted misbehaviour more often than others. Because of the sensitive nature of the question posed in these surveys, as well as other constraints, it looks probable that this is a conservative estimate of the real incidence of unethical conduct.

In terms of witnessing research fraud, I have never actually observed any.

Bharat B. Aggarwal is an Indian American biochemist and former professor at the University of Texas MD Anderson Cancer Centre Department of Clinical Immunology, Bio Immunotherapy, and Experimental Therapeutics. His studies have focused on cytokines, the role of inflammation in cancer, and the anti-cancer properties of spices and herbs, notably curcumin. 29 papers have been withdrawn, 10 have been expressed concern over, and 17 have been amended. He retired at the end of 2015, although his departure was not made public until February of the following year.

After the US Department of Health and Human Services' Office of Research Integrity told MD Anderson that whistle-blowers had discovered evidence of image manipulation in 65 published articles, the university launched an investigation into Aggarwal's research. Corrections and retractions to Aggarwal's articles; no such lawsuit was ever filed. The journal Biochemical Pharmacology removed seven of Aggarwal's research publications, six of which he was senior or first author on, in February 2016 because "the data integrity has become doubtful." Two of Aggarwal's publications were withdrawn in 2016 following an examination by MD Anderson Cancer Centre. By April 2018, 19 of Aggarwal's publications have been withdrawn from 7 scientific journals [1].

[1] "Scientific misconduct," 2015.

This is the research fraud that has made headlines in the recent decade.