

Case #5: The literature review

Jane has to write a literature review for her scientific writing class. She has chosen to write about the bioaccumulation of toxic metals in wild versus farmed salmon. She has found several articles and has just started writing. Here's a sample from the third paragraph of her paper:

With the increasing demand for wild-caught salmon, the call to educate consumers is sounding louder than ever. It has long been known that fish and other seafood are highly susceptible to contamination by both organic and inorganic toxins. Yet, consumers may not realize that the wild-caught salmon they perceive as "healthier" are often *more* contaminated than their farmed counterparts. In particular, cobalt, cadmium, and copper are each significantly higher in wild salmon than in farmed salmon (Foran et al. 2004).

Compared to the original article (below), has Jane plagiarized?



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Short Communication

A SURVEY OF METALS IN TISSUES OF FARMED ATLANTIC AND WILD PACIFIC SALMON

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Abstract—Contamination of fish tissues with organic and inorganic contaminants has been a pervasive environmental and public health problem. The present study reports the concentrations of nine metals in tissues of farmed Atlantic salmon (*Salmo salar*) and two species of wild-caught salmon (chum [*Oncorhynchus keta*] and coho [*O. kisutch*]) analyzed as part of a global survey of contaminants in these fish. Of the nine metals, organic arsenic was significantly higher in farmed than in wild salmon, whereas cobalt, copper, and cadmium were significantly higher in wild salmon. None of the contaminants exceeded federal standards or guidance levels.

Keywords—Metals Farmed salmon Wild salmon

INTRODUCTION

The occurrence of persistent and bioaccumulative chemicals in tissues of fish and other freshwater and marine organisms is an issue of global significance. In the United States, contaminants in tissues of sport-caught fish have resulted in fish consumption advisories issued by 48 of 50 states. In 2002, such advisories totaled 2,800, with the majority triggered by mercury and polychlorinated biphenyls [1–7]. Mercury contamination in tissues of commercially sold fish [8,9] has also triggered a consumption advisory by the U.S. Food and Drug Administration (U.S. FDA). As a result, the U.S. FDA has warned women and children to reduce or eliminate consumption of swordfish, tilefish, shark, and mackerel (www.cfsan.fda.gov/~dms/admehg.html). Unlike organic contaminants, however, most metals other than mercury have been monitored rarely and detected infrequently in fish tissues.

and to determine whether contaminants pose risks to the health of individuals who consume commercially sold salmon. The present study was conducted in two phases: Phase 1, in which we analyzed organic contaminants and metals in tissues of 120 farmed and 57 wild salmon, and phase 2, reported elsewhere [13], in which we performed a health-based analysis of organic contaminants in tissues of more than 700 samples of farmed and wild salmon.

Here, we report the results of metals analysis in farmed Atlantic and wild Pacific salmon conducted during phase 1 of this study. We also provide a comparison of contaminant concentrations with federal regulatory or guidance levels to determine whether metal concentrations in salmon tissue pose a risk to the health of individuals who consume commercially sold salmon.

MATERIALS AND METHODS