

Referees Report: JAMPS Ms_ 24382 .A Comparative Study of the Ameliorative Effects of
4 Skimmed Milk and Tuna Fish in the Dietary; Management of Osteoporotic Female Rats.

Comments and Criticisms in Red; Suggestions in Blue.

Summary.

This is a reasonably well prepared comparative rat experiment to test the effect of skim milk and Tuna fish powder supplements added to diets in Dexamethasone Osteoporosis Induced [DOPI] female Wistar lab-rats. However it misses the writing-up mark, due to lack of style and some simple fundamental omissions, to being acceptable in this format for reasons stated below.

The writing is not always explicitly clear. Example See line 13-14 below.

The discussion is verbose and without figures not easy to follow. Much of this cd be placed in legends below illustrative Bar-graph figures.

Although 5 rats were taken to test the successful onset of OP, the experimental group omits a positive control within the group subjected to the inducing variable. An extra group shd have been included. Namely group 6 DOPI, fed the same basal diet as the initial healthy control rats on a basal diet. This would eliminate in comparison any unknown natural rebound effects in the DOPI animals. This comparison is missing, and consequently the deductions and conclusions of the experimental group are not –“ water-tight”. Can the reported experiment say for sure, that a normal diet on DOPI rats would not allow reversal back to a non-significant outcome, when compared to the initial healthy Controls?

Was the 2mg dexamethasone dosing stopped during the period when the animals were fed the Dried Milk and Tuna Fish Supplements; this is not explicitly stated.

Line 74-75 and Line 78. What kind of Tuna Fish was used? Line 74 says Canned tuna Fish. Canned fish is usually in brine and has other ingredients. Line 78 says fresh tuna fish including bone was cooked. How were the same fed powdered equivalents determined? Was it by volume or weight, or by percentage of per Kg of diet? [4.4% of amount per Kg diet for maintenance. Raised on 13.3% for net Protein per Kg during growth phase. Ref: Nutrient Requirements of Lab animals. Ntl Acad Si Wshngton DC) as used for each? Table 1 refers to Titus Fish powder. Was the fish powder used prepared as reported by the authors themselves, or does the preparation method referred to, report the Titus processing? Is Titus fish provision a commercially processed fish-powder? This needs clarification.

The writing style can be tightened up. E.G. Lines 13-14 and 113-116. See below.

Presentation: Tables 4-8: Figures for clarity, as Bar-graphs with T-bars to show $\pm$ SD's, are preferable and clearer compared to Tables with numerals. The word analysis, which cd be shortened, will be

facilitated against a series of shaded figures showing bar-graphs. This will facilitate the discussion comments.

Referees decision: This article should not be rejected, but subject to major revision may be reconsidered for publication.

Specific Comments:

Line 13-14 This is not clear. Group feeding of DOPI's is confused. This may be interpreted as both skim milk and Tuna fish simultaneously. Suggest ...Grp 1 (Non-DOPI) Control; group 2 DOPI ...5% skim milk powder ; grp 3 DOPI ... 10%skim milk; Grp 4 DOPI... 5% Tuna Fish Powder; Grp 5... 10% Tuna Fish powder.

Line 25-27: Conclusion: In conclusion, administration of diet supplemented with skimmed milk was more effective in the dietary management of osteoporosis disease than diet supplemented with Tuna fish. Extrapolation to all osteoporosis disease is spurious. Suggest: Conclusion: Administration of diet supplemented with 10% skimmed milk is more effective in the dietary management of dexamethasone induced osteoporosis in female rats than when supplemented with 5% or 10% powdered Tuna fish as a supplemental source of calcium.

Line 38. Patients requiring

Line 82: Age of rats must be stated to eliminate age bias: Suggest: Age**in weeks: range **-** $\pm$ days.

Line 113-116: 3 3.3.1 Bone Marker: The serum osteocalcin concentration was determined according to the method described by [18].The serum parathyroid hormone (PTH) level was evaluated according using the method described by [19].The serum estradiol E2 was evaluated according to the method described by [20].Suggest: 3 3.3.1 Bone Marker: Serum osteocalcin concentrations[18], parathyroid hormone (PTH) levels [19], and estradiol E2 titres [19] were determined according previously described methods.[18-20]

Lone 130-135: Rat growth assay: Suggest a graph with an explanatory legend is indicated here.

Line 293. Skim milk conc 2100mg/100g). Plse check. This seems very low against old reports of amounts in Cows Milk. Mean 3009mg/100g. Extreme range 2850-3480mg/100g [Ref: Shahani & Somer. J Dairy Sci, 1951; 34, 1010. And Geigy Scientific Tables.)

Line 410: Change Conclusion to [Concluding Remarks](#);

Line 413 - 416: The findings of this study showed that skimmed milk and Tuna fish were effective in relieving symptoms associated with osteoporosis. However 10% skimmed milk dietary supplementation was found to be more therapeutically effective compared with the other three methods. [To eliminate false extrapolation to other species \(notably Man as a mammal\), as symptoms are terms used in human clinical medicine, derived from verbal complaints, and signs from special investigations which may not match the assays used here..](#) Suggest: [These findings show that skimmed milk and Tuna fish are effective in positively moderate metabolic dysfunctions associated with osteoporosis in DOPI rats. 10% skimmed milk dietary supplementation is more therapeutically effective compared with the other three methods. This may have implications for humans, which indicates for more research into this important field of medicine.](#)

References: Mostly excellent choices, current, and numerically specific.

[Ref 7,8,15.](#) No numerical citation references.