

TWO POLYPHENOL-RICH BRAZILIAN FRUIT EXTRACTS PROTECT FROM DIET-INDUCED OBESITY AND HEPATIC STEATOSIS IN MICE

Cíntia Reis Ballard¹; Elisvânia Freitas dos Santos²; Marie-Julie Dubois³; Geneviève Pilon³; Cinthia Baú Betim Cazarin¹; Mário Roberto Maróstica Jr^{1*}; Andre Marette³

¹ Department of Food and Nutrition, School of Food Engineering, University of Campinas, Campinas, 80 Monteiro Lobato, 13083-862, São Paulo, Brazil: cintia.reis.ballard@gmail.com; cbetim@unicamp.br; mario@fea.unicamp.br

² School of Pharmaceutical Sciences, Food and Nutrition, Federal University of Mato Grosso do Sul, Campo Grande, S/N Costa e Silva, 79070-900, Mato Grosso do Sul, Brazil: elisvania@gmail.com

³ Quebec Heart and Lung Institute, Laval Hospital, Laval University, Quebec City, 2725 Sainte Foy, G1V 4G5, Quebec, Canada: Marie-Julie.Dubois@criucpq.ulaval.ca; Genevieve.Pilon@criucpq.ulaval.ca; Andre.Marette@criucpq.ulaval.ca

*Corresponding author: Department of Food and Nutrition, School of Food Engineering, University of Campinas, Campinas, Monteiro Lobato 80, 13083-862, São Paulo, Brazil. Email: mario@fea.unicamp.br

ELECTRONIC SUPPLEMENTARY INFORMATION

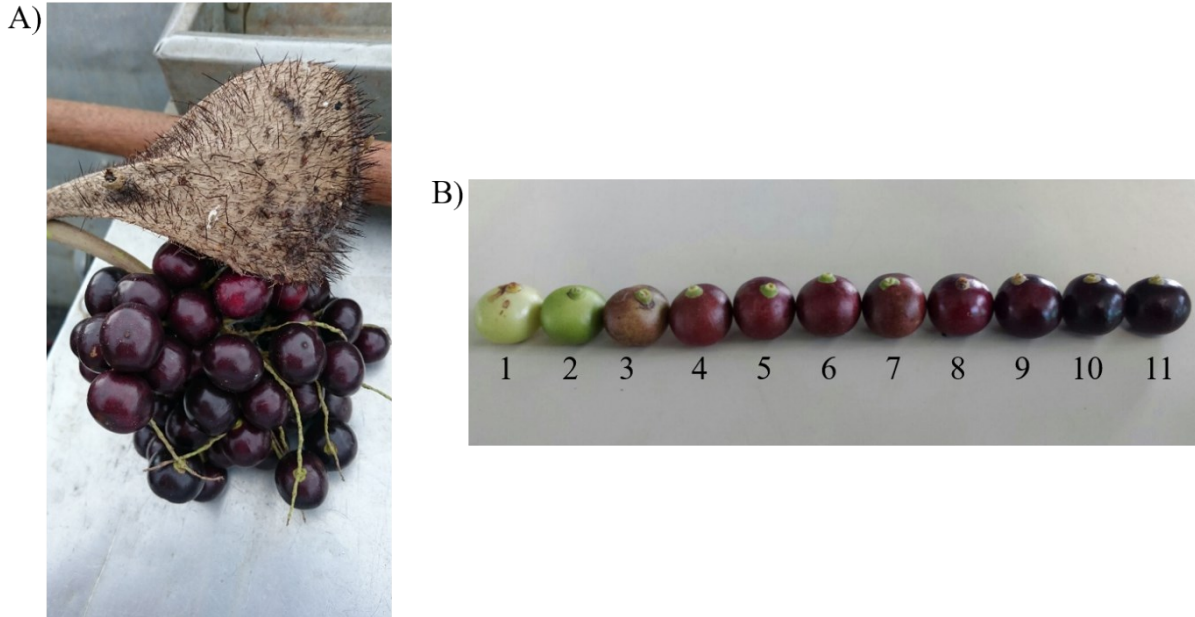


Fig. S1. A) Tucum-do-Pantanal (*Bactris setosa* Mart), B) Stages of fruit ripening (11 used in extract). Photograph by C. R. Ballard. Personal archive images of authors.



Fig. S2. Taruma-do-Cerrado (*Vitex cymosa* Bertero ex Spreng) in the stages of fruit ripening (ripe -3). Photograph by C. E. Timothy Paine. This work is licensed under the Creative Commons Attribution-Non Commercial 4.0 International License.

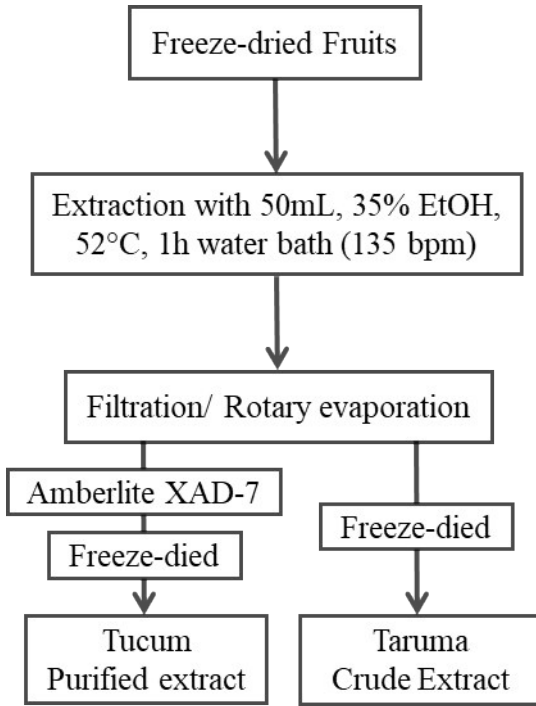


Figure S3. Flow chart of extract procedures

Table S1. Composition of experimental diets.

| | LF* | | HF** | |
|---------------------------------------|-------|--------|--------|-------|
| | gm% | kcal% | gm% | kcal% |
| Protein | 19.2 | 20 | 24 | 20 |
| Carbohydrate | 67.3 | 70 | 41 | 35 |
| Fat | 4.3 | 10 | 24 | 45 |
| Total | | 100 | | 100 |
| kcal/gm | 3.85 | | 4.73 | |
| Ingredients | gm | kcal | gm | kcal |
| Casein, 30 Mesh | 200 | 800 | 200 | 800 |
| L-Cystine | 3 | 12 | 3 | 12 |
| Corn Starch | 452.2 | 1808.8 | 72.8 | 291 |
| Maltodextrin 10 | 75 | 300 | 100 | 400 |
| Sucrose | 172.8 | 691.2 | 172.8 | 691.2 |
| Cellulose, BW200 | 50 | 0 | 50 | 0 |
| Soybean Oil | 25 | 225 | 25 | 225 |
| Lard | 20 | 180 | 177.5 | 1598 |
| Mineral Mix S10026 | 10 | 0 | 10 | 0 |
| DiCalcium Phosphate | 13 | 0 | 13 | 0 |
| Calcium Carbonate | 5.5 | 0 | 5.5 | 0 |
| Potassium Citrate, 1 H ₂ O | 16.5 | 0 | 16.5 | 0 |
| Vitamin Mix V10001 | 10 | 40 | 10 | 40 |
| Choline Bitartrate | 2 | 0 | 2 | 0 |
| FD&C Yellow Dye #5 | 0.04 | 0 | - | - |
| FD&C Red Dye #40 | 0.01 | 0 | 0.05 | 0 |
| Total | 1055 | 4057 | 858.15 | 4057 |

*Research Diets #D12450H with 10% kcal% fat, LF, Low Fat.

**Research Diets #D12451 with 45% kcal fat, HFHS, High Fat

Table S2. Primer sequences

| Gene | Forward (5' - 3') | Reverse (5' - 3') |
|-------------|--------------------------|--------------------------|
| <i>Zo-1</i> | ACCCGAAACTGATGCTGTGGATAG | AAATGGCCGGGCAGAACTTGTGTA |
| <i>Ocln</i> | TTTGGCTGCTCTTGGGTCTGTAT | ATGTCCGGCCGATGCTCTC |
| <i>Actb</i> | CTCTAGACTTCGAGCAGGAG | AGAGTACTTGCGCTCAGGAG |