

# Sex Differences in the Bitterness Perception of an Aromatic Myrtle Bitter-Liqueur and Bitter Compounds

Antonella Rosa<sup>1,\*</sup>, Ilenia Pinna<sup>1</sup>, Alessandra Piras<sup>2</sup>, Silvia Porcedda<sup>2</sup> and Carla Masala<sup>1</sup>

<sup>1</sup> Department of Biomedical Sciences, University of Cagliari, Cittadella Universitaria, SS 554, Km 4.5, 09042 Monserrato, Cagliari, Italy; anrosa@unica.it (A.R.); ilenia.pinna.1994@gmail.com (I.P.); cmasala@unica.it (C.M.)

<sup>2</sup> Department of Chemical and Geological Sciences, University of Cagliari, Cittadella Universitaria, SS 554, Km 4.5, 09042, Monserrato, Italy; apiras@unica.it (A.P.); porcedda@unica.it (S.P.)

\* Correspondence: anrosa@unica.it; Tel.: 0039 0706754124

## Table of Contents

Table S1: Demographic and clinical features of total subjects, men, and women enrolled for Mirtamaro sensory assessment.

Figure S1: Mean values  $\pm$  standard deviation (SD) of bitter (quinine) taste scores measured in men and women separated into three different age-groups: 18-36 years, 37-50 years, and 51-85 years.

Figure S2: Mean values  $\pm$  standard deviation (SD) of sweet, salty, and sour taste scores measured in women with a body weight  $\leq 65$  kg and  $> 65$  kg.

Figure S3: Values  $\pm$  standard deviation (SD) of sweet, salty, and sour taste scores measured for total subjects, men and women enrolled for Mirtamaro sensory assessment.

Figure S4: Mean values  $\pm$  standard deviation (SD) of quinine and PROP bitter taste scores, Mirtamaro odor intensity (OI) and taste intensity (TI) measured in women with a body weight  $\leq 65$  kg and  $> 65$  kg.

## Citation:

<https://doi.org/10.3390/xxxxx>

Academic Editor(s):

Received: date

Accepted: date

Published: date

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

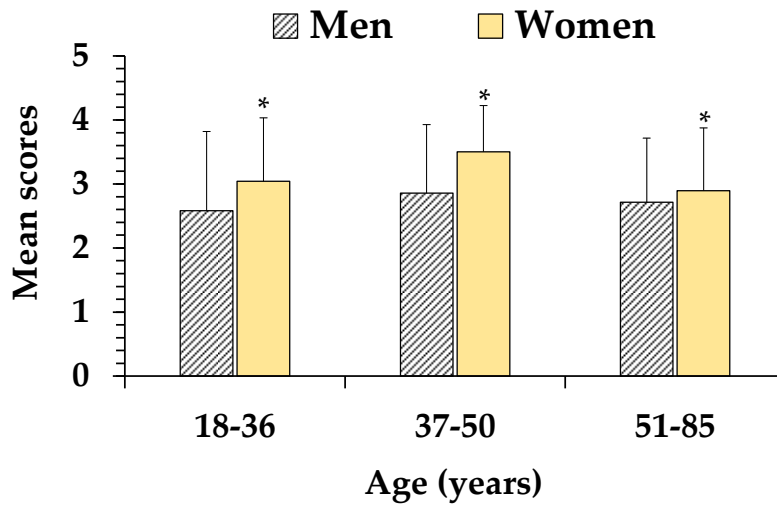


**Copyright:** © 2023 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

**Table S1.** Demographic and clinical features of total subjects, men, and women enrolled for Mirtamaro sensory assessment.

Parameters	Total subjects	Men	Women
	( <i>n</i> = 40)	( <i>n</i> = 14)	( <i>n</i> = 26)
Mean age	48.9 ± 19.8	39.2 ± 22.1	48.6 ± 18.4
Weight (kg)	64.8 ± 16.1	78.8 ± 12.2	64.2 ± 15.8**
Height (m)	1.6 ± 0.1	1.7 ± 0.1	1.6 ± 0.1
BMI	25.8 ± 5.3	26.9 ± 4.6	25.3 ± 5.6
OThr	8.5 ± 5.4	8.7 ± 5.4	8.4 ± 5.4
ODi	11.4 ± 2.5	11.2 ± 2.0	11.5 ± 2.7
OId	13.1 ± 2.0	12.2 ± 2.0	13.5 ± 1.9
TDI score	32.9 ± 6.4	32.2 ± 7.0	33.3 ± 8.4

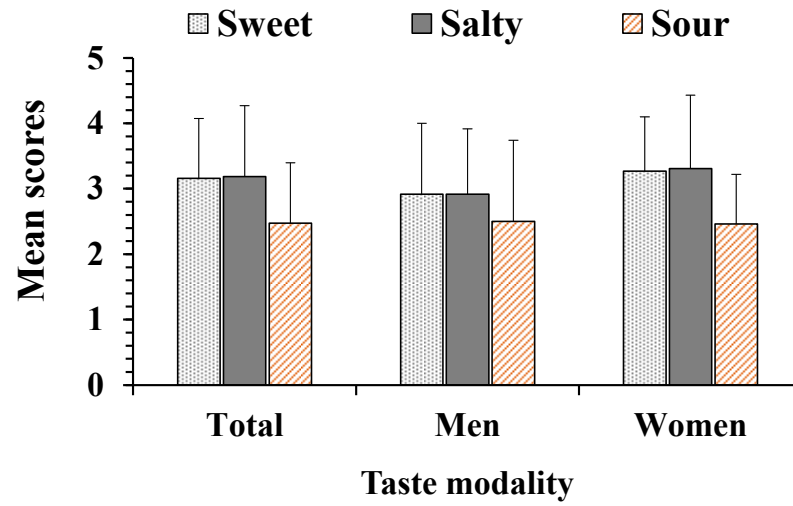
Legend: W: women; M: men; BMI = body mass index; OThr = odor threshold; ODi = odor discrimination; OId = odor identification; TDI score = threshold, discrimination, and identification score. \*\* =  $p < 0.01$  for men *versus* women (Student's unpaired t-test with Welch's correction).



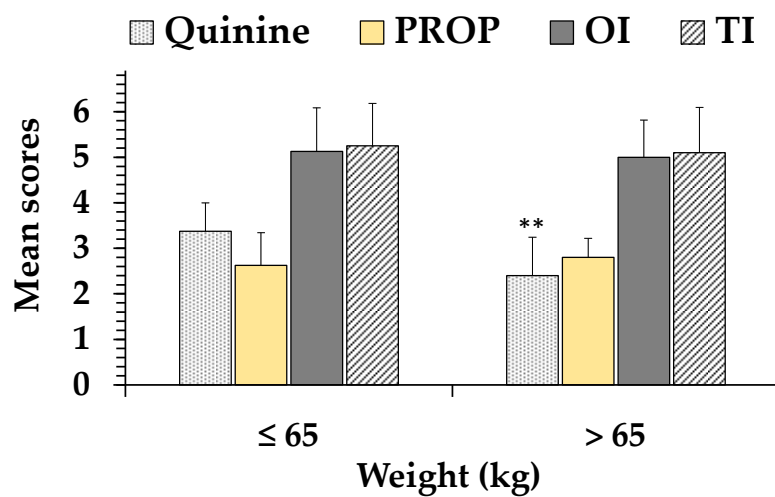
**Figure S1.** Mean values  $\pm$  standard deviation (SD) of bitter (quinine) taste scores measured in men ( $n = 78$ ) and women ( $n = 153$ ) separated into three different age-groups: 18-36 years ( $n = 50$  for men and  $n = 91$  for women), 37-50 years ( $n = 10$  for men and  $n = 24$  for women), and 51-85 years ( $n = 18$  for men and  $n = 38$  for women). \* =  $p < 0.05$  (Student's unpaired t-test with Welch's correction) for men *versus* women.



**Figure S2.** Mean values  $\pm$  standard deviation (SD) of sweet, salty, and sour taste scores measured in women ( $n = 153$ ) with a body weight  $\leq 65$  kg ( $n = 122$ ) and  $> 65$  kg ( $n = 31$ ). \*\*\* =  $p < 0.001$  (Student's unpaired t-test with Welch's correction) between subjects with a body weight  $> 65$  kg *versus* those with a body weight  $\leq 65$  kg.



**Figure S3.** Mean values  $\pm$  standard deviation (SD) of sweet, salty, and sour taste scores measured in total subjects (Total,  $n = 40$ ), men ( $n = 14$ ), and women ( $n = 26$ ) enrolled for Mirtamaro sensory assessment.



**Figure S4.** Mean values  $\pm$  standard deviation (SD) of quinine and PROP bitter taste scores, Mirtamaro odor intensity (OI) and taste intensity (TI) measured in women ( $n = 26$ ) with a body weight  $\leq 65$  kg ( $n = 16$ ) and  $> 65$  kg ( $n = 10$ ). \*\* =  $p < 0.01$  (Student's unpaired t-test with Welch's correction) between subjects with a body weight  $> 65$  kg *versus* those with a body weight  $\leq 65$  kg.