#### IFF2017-P5-S3

# Chemical composition of the scent from living flowers of *Temnadenia odorifera* (Vell.) J. F. Morales (Apocynaceae)

Rafael F. Silva<sup>§#</sup>, Cristiana Koschnitzke<sup>‡</sup>, Claudia M. Rezende<sup>§</sup>, Humberto R. Bizzo<sup>†#</sup>

<sup>§</sup>Laboratory for Aroma Analysis, Federal University of Rio de Janeiro - Rio de Janeiro, Brazil
<sup>‡</sup>Botany Department, National Museum, Federal University of Rio de Janeiro - Rio de Janeiro, Brazil
<sup>#</sup>Natural Products Research Institute, Federal University of Rio de Janeiro - Rio de Janeiro, Brazil
<sup>†</sup>Embrapa Food Technology - Av. das Américas, 29501 Rio de Janeiro, Brazil - humberto.bizzo@embrapa.br

*Temnadenia odorifera* is an endemic species from Brazil and occurs in almost all Brazilian states with coastal areas,<sup>1</sup> dominated by sand dune environments and covered by shrubby and herbaceous plants, known as "restingas". Restinga areas belong to Atlantic Rainforest biome, which is one of the most important biodiversity hotspots of the world. Although *T. odorifera* has a sweet and very pleasant fragrance (somewhat rose-like aroma in character), the volatiles of its flowers have never been studied. Therefore, the aim of this work was to study the chemical composition of the natural odor of living flowers of *T. odorifera*. The floral odor of *T. odorifera* in anthesis (*n*=6) was collected using solid phase microextraction and dynamic headspace *in vivo* with adsorption on Porapak Q® (3 mg), followed by elution with 60  $\mu$ L of hexane and GC-FID and GC-MS analysis.<sup>2</sup> The quantification of the volatiles was performed by means of internal standardization and correction using a response factor. Altogether, 22 compounds were identified in the fragrance composition of *T. odorifera*. The floral odor main compounds were benzaldehyde, benzyl alcohol, cinnamyl alcohol and 2-phenylethanol, the latter being responsible for more than 70% of the volatile composition.

**ACKNOWLEDGMENT:** Embrapa, FAPERJ, CNPq and CAPES are acknowledged for financial support.

#### LITERATURE CITED

- (1) *Temnadenia*. Flora do Brasil 2020 em construção. Jardim Botânico do Rio de Janeiro. URL: (<u>http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB4874</u>) (December 6th, 2016).
- (2) Kaiser, R. Scents from Rain Forests. Chimia. **2000**, *54*, 346-363.







#### Sponsored by:





Organized by

Facultad de Ciencias-Universidad Nacional de Colombia-Sede Bogotá

# DECANO: JAIME AGUIRRE CEBALLOS

## VICEDECANO ACADEMICO: GUIOVANNY GARAVITO

VICEDECANO DE INVESTIGACION Y EXTENSION: ALVARO MARIÑO

SECRETARIO DE FACULTAD: HELBER DE JESUS BARBOSA

**COORDINADORA DE EXTENSION: CAROLINA CHEWGIN** 

### PROFESIONALES DE APOYO: ALEJANDRO LEYTON, TATIANA MARIN, FREDY DUQUE, ANA CAROLINA MARTÍNEZ

# ASISTENTE ADMINISTRATIVO: JORGE ENRIQUE CRUZ

uniasege\_fcbog@unal.edu.co

Co-sponsored by Agricultural and Food Chemistry Division (American Chemical Society)



# THE FIRST INTERNATIONAL FLAVOR AND FRAGRANCE CONFERENCE

### EDITED BY

Michael Qian, Oregon State University

Gary Reineccius, University of Minnesota

Alyson Mitchell, UC Davis

Robert McGorring, Oregon State University

Coralia Osorio Roa, Universidad Nacional de Colombia-Sede Bogotá