

## Oral presentation

### ***Rhus* species and chronic disease**

Letitia M. McCune<sup>a</sup>

<sup>a</sup>Department of Nutritional Sciences, University of Arizona, Tucson, AZ 85721-0038

**Introduction.** *Rhus* species are used throughout the world for basketry, tanning, food and medicine. The combination of these uses, found repeatedly in different cultures, could signal to pharmacognosists properties associated with health benefits.

**Objectives.** To identify common links between data achieved on *Rhus hirta* of North America and knowledge associated with other *Rhus* species.

**Methods.** In conjunction with data on antioxidant activity, symptom use and habitat a review of the literature from anthropological, pharmaceutical and nutritional sources on *Rhus* species was conducted.

**Results.** *Rhus hirta* has been found to have high antioxidant activity (DPPH free radical assay IC<sub>50</sub> 3.73 +/- 0.07, xanthine oxidase inhibition 44.49 +/- 1.23% and AAPH peroxy radical assay 31.49 +/- 2.81 % inhibition), to be used for over 6 symptoms associated with diabetes mellitus and to be found in habitats rich in stresses associated with antioxidant activity (higher UV, drought, poor soils). Other species (including *R. glabra*, *R. chinensis* and *R. coriaria*) are used similarly by diverse cultures, have high polyphenolic contents and activity in assays associated with chronic disease (including inflammation and AIDS).

**Conclusion.** Recent research on *Rhus* species illustrates how the combination of anthropologic and pharmaceutical knowledge can be used to highlight the importance of the cultural uses of a genus for food and medicine. Future directions should evaluate the chemical links between these species.

Keywords: diabetes, antioxidants, sumac

#### Selected References

1. Letitia M. McCune and Timothy Johns. 2003. Symptom-specific antioxidant activity of boreal diabetes treatments. *Pharmaceutical Biology*. 41(5): 362-370.
2. Letitia M. McCune and Timothy Johns. 2002. Antioxidant activity in medicinal plants associated with the symptoms of diabetes mellitus used by the Indigenous Peoples of the North American boreal forest. *Journal of Ethnopharmacology*. 82: 197-205.

Presenting Author: Letitia M. McCune, [letitiamccune@msn.com](mailto:letitiamccune@msn.com)