

## Poster

### Consumption of green leafy vegetables to prevent cataract in rural India.

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**Introduction.** Research on the contribution of local plant foods to health is needed to demonstrate the usefulness of biodiversity. Green leafy vegetables (GLV) produce an assortment of compounds that have proven to be beneficial to eye health including the xanthophylls lutein and zeaxanthin, known to have a preventive effect on cataract development. Alternatively, strategies to increase dietary diversity have shown positive results in improving health. However, the effects of a diversified input of GLV on eye health remain elusive. In India where cataract incidence is high and occurs early in life, identifying strategies to help reduce or delay the burden of cataract is of primary importance.

**Objectives.** In order to promote the value of biodiversity to eye health, we propose to conduct an ethnobotanical study on the use and diversity of GLV including their analysis for carotenoid contents and a demonstration of GLV contribution to preventing cataract in rural India.

**Methods.** The area of Madanapalle, Chittoor District, Andhra Pradesh, will be extensively studied with regard to the various local uses, beliefs and perceptions regarding wild and cultivated GLV. Xanthophyll contents of selected GLV will be analyzed by HPLC. To evaluate the contribution of GLV to the prevention of age-related cataract and to establish conditions for comprehensive studies on this relationship, we propose to conduct a pilot case-control study where GLV consumption will be compared in individuals presenting a cataract (case) or not (control) using a food-frequency questionnaire.

**Results.** Expected results will lead to the ethnobotanical documentation of local GLV, the generation of needed data on carotenoids contents of Indian GLV and the demonstration of their importance to eye health.

**Conclusion.** In promoting local solutions to age-related diseases, we aim to valorize traditional knowledge and sustainable biodiversity of wild and cultivated GLV. More generally, this project is anticipated to contribute to the achievement of the health, biodiversity and nutrition goals set by CBD together with Bioversity International (formerly IPGRI) and FAO.

Keywords: Xanthophylls, Carotenoid, HPLC, Food survey, Biodiversity

#### Selected References

1. Convention on Biological Diversity, UNEP/CBD/COP/8/23\* (JAN, 2006).

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