

hyperinsulinemia and inflammatory environment to the dysregulation of both sphingolipids and ether-phospholipids.

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P120-F | *Moringa oleífera*, a sustainable alternative: a review on their nutritional and medicinal potential

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Background: *Moringa oleífera* (MO) is a plant with high nutritional and medicinal value, which could prevent and treat human diseases. Native from India, it is now widely distributed throughout tropical and subtropical world regions. Several experimental studies indicate that its leaves have high nutritional components such as vitamins, minerals and amino acids. This narrative review focuses on its possible nutritional and therapeutical potential as a sustainable alternative.

Material and methods: This search was conducted using “*moringa oleífera*” as a key word within the article title. Other varieties of *moringa* were excluded.

Results: Several *in vitro* experiments and animal studies show the potential benefits of MO for human health. Its leaves, pods and seeds contain a large variety of essential phytochemicals (tannins, sterols, saponins, terpenoids, phenolics and flavonoids). The dried MO leaves have a high nutritional value, contributing by 100 g of product: 329 Kcal; protein 29.4 g; fat: 5.2 g; carbohydrates: 41.2 g; fiber: 12.5 g; and vitamins B1: 2.02 mg; B2: 21.3 mg, vitamin C: 15.8 mg; and Vit E; 10.8 mg; calcium: 2185 mg; magnesium; 448 mg; potassium 1236 mg; iron: 25.6 mg. The MO multiple biological activities (antiproliferation, hepatoprotective, anti-inflammatory, antinociceptive, antiatherosclerotic, oxidative DNA damage protective, antiperoxidative, cardioprotective and antimicrobial) are attributed to the presence of functional bioactive compounds (phenolic acids, flavonoids, alkaloids, phytosterols, natural sugars, organic acids).

Conclusions: This review provides an overview on the nutritional values and medicinal properties for commercial and pharmacological use of MO. However, to date the number of clinical trials in humans is scarce. Thus, the

level of evidence is low. Further clinical studies are needed to confirm or refute the pharmacological and beneficial effects of MO. Moreover, its safety on human health has to be assessed to ensure its adequacy as a therapeutical tool for chronic or long-term diseases treatment.

P121-F | Maternal polyunsaturated fatty acids dietary supplementation improves obstetrical outcome

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Background: Gestational obesity has high prevalence in the modern era, causing adverse obstetrical outcome. We aim to highlight the benefits of dietary supplementation using polyunsaturated fatty acids on obstetrical prognosis in an experimental model.

Materials and methods: We studied the consequences of gestational obesity fetal prognosis on an animal model using 20 obese female Wistar rats. Obesity was caused by high-fat diet administered by gavage in the rats, after which they were beared. The pregnant rats were separated during gestation into a group receiving polyunsaturated fatty acids (PUFA) and another one that continued the fat diet throughout pregnancy.

Results: Obese Wistar rats were followed throughout gestation and sacrificed at term with their pups. We analyzed the secretion of adipokines from maternal blood (leptin and adiponectin), lipid peroxidation levels by malonyl-dialdehyde (MDA) and antioxidation level by glutathione (GSH) from placental, fetal liver and pancreas homogenates and maternal blood. Decreased levels of adiponectin and increased of leptin concurred with tissue lipid peroxidation measured by elevated MDA and low levels of GSH. Organs histology showed dysplastic epithelial and cells, accumulation of inflammatory cells and congested vessels with thrombosis and glycogen deposits in the fat group. The descendants of the obese mothers throughout were studied and found that they weighed significantly less at birth and were more susceptible to metabolic and infectious diseases compared to the ones from the group that received PUFA supplementation. These pups were more prone to accelerate aging and chronic diseases.

Conclusions: Our study showed a beneficial effect of PUFA supplementation during gestation in obese Wistar rats. The improved obstetrical and fetal outcome in these