

rat/day or CPA at 2 mg/100 g body weight of rat/day was administered for 28 days. Spermiological, androgenic and oxidative stress sensors, LD50 and ED50/100 g body weight values were measured. RESULTS: Treatment of individual, "Contracept-TM" or CPA resulted significant decrease in the count of spermatogonia A (36.36%–49.09%), pre-leptotene spermatocyte (19.11%–55.30%), mid-pachytene spermatocyte (28.65%–47.28%) and step 7 spermatid (29.65%–51.59%). Activities of testicular Delta(5), 3beta (21.25%–48.02%), 17beta-hydroxysteroid dehydrogenases (29.75%–55.08%), catalase (19.06%–43.29%) and peroxidase (30.76%–62.82%), levels of testosterone (28.15%–63.44%), testicular cholesterol (19.61%–49.33%), conjugated diene (29.69%–84.99%) and thiobarbituric acid reactive substances (41.25%–86.73%) were elevated compare to the control. The ED50 and LD50 values were 40 mg and 5.8 g (*T. chebula*), 48 mg and 6.3 g (*M. bulbisiana*), 40 mg and 6.0 g ("Contracept-TM"), respectively. DISCUSSION AND CONCLUSION: The said spermiological and androgenic sensors' levels were decreased significantly by "Contracept-TM" than its constitutional individual plant extract and it may be comparable to standard anti-testicular drug like CPA. So, it may be concluded that above polyherbal formulation is potent for inducing hypo-testicular activity.

Gupta, A. et al. (2017). "Ethyl acetate fraction of *Eclipta alba*: A potential phytopharmaceutical targeting adipocyte differentiation." *Biomed Pharmacother* 96:572–583.

Natural products have always fascinated mankind for their miraculous properties. *Eclipta alba* (*E. alba*), a medicinal herb has long been used in traditional medicine for curing several pathologies. It has been shown to have anti-diabetic effect as well as hepato-protective activity. Here, in order to address metabolic derangements, the study was designed to evaluate the efficacy of *E. alba* and its fractions in adipogenesis inhibition and dyslipidemia. Of the crude extract and fractions screened, ethyl acetate fraction of *E. alba* inhibited adipocyte differentiation in 3T3-L1 pre-adipocytes and hMSC derived adipocytes. It inhibited mitotic clonal expansion and caused cell cycle arrest in G1 and S phase as suggested by western blot analysis and flow cytometry. It was also shown to have lipolytic effects. Oral administration of ethyl acetate fraction of *E. alba* to hamsters unveiled its anti-adipogenic as well as anti-dyslipidemic activity in vivo. Mass spectrometry analysis of ethyl acetate fraction confirmed the presence of several bioactive components, projecting it as an effective phytopharmaceutical agent. In conclusion, ethyl acetate fraction of *E. alba* possesses potent anti-adipogenic as well as anti-dyslipidemic activity and could be projected as an herbal formulation towards obesity.

Kessler, C. S. et al. (2015). "Ayurvedic interventions for osteoarthritis: A systematic review and meta-analysis." *Rheumatol Int* 35(2):211–232.

Ayurveda is one of the fastest growing systems within complementary and alternative medicine. However, the evidence for its effectiveness is unsatisfactory. The aim of this work was to review and meta-analyze the effectiveness and safety of different Ayurvedic interventions in patients with osteoarthritis (OA). 138 electronic databases were searched through August 2013. Randomized controlled trials, randomized crossover studies, cluster-randomized trials, and non-randomized controlled clinical trials were eligible. Adults with pre-diagnosed OA were included as participants. Interventions were included as Ayurvedic if they were explicitly labeled as such. Main outcome measures were pain, physical function, and global improvement. Risk of bias was assessed