

## Immunomodulatory Potential of Ingredient of PHYTOCEE® : *Ocimum sanctum*

### OBJECTIVE

To investigate the effect of *Ocimum sanctum* on immune response in myelosuppressed Swiss albino mice.

### MATERIALS AND METHODS

Twenty-four female Swiss albino mice were sensitized with 0.5 mL of 20% of fresh SRBC suspension on day 0. The animals then were divided into four groups of six animals each. Animals in Group I received the vehicle (2% Gum acacia) and were treated as a control group. Animals in Group II received prednisolone (5 mg/Kg/b.wt.). Group III animals received *Ocimum sanctum* methanolic extract (850 mg/Kg/b.wt.) and Group IV animals received prednisolone (5 mg/Kg/b.wt.) along with *Ocimum sanctum* methanolic extract (850 mg/Kg/b.wt.), orally, for a period of 15 days. Blood sample was collected on 16th day of the experiment and haematological and immunological tests were performed.

### RESULTS

#### Effect of *Ocimum sanctum* on haematological parameters.

Parameters	Control (n = 06)	Prednisolone (n = 06)	<i>O. sanctum</i> (n = 06)	Prednisolone + <i>O. sanctum</i> (n = 06)
WBC (10E <sup>3</sup> /mm <sup>3</sup> )	3.81±0.3* <sup>a</sup> (2.82, 4.81)	2.7±0.19 <sup>a</sup> (2.1, 3.3)	7.9±1.08 <sup>b</sup> (3.26, 12.53)	5.01±0.95 <sup>a</sup> (2.58, 7.45)
RBC (10E <sup>6</sup> /mm <sup>3</sup> )	8.92±0.14* <sup>a</sup> (8.33, 9.51)	6.78±0.2 <sup>c</sup> (6.15, 7.42)	9.71±0.1 <sup>b</sup> (9.28, 10.14)	8.94±0.18 <sup>a</sup> (8.49, 9.39)
Hb (g/dl)	14.17±0.18* <sup>a</sup> (13.41, 14.93)	11.18±0.43 <sup>c</sup> (9.8, 12.55)	15.27±0.13 <sup>b</sup> (14.69, 15.84)	14.05±0.28 <sup>a</sup> (13.32, 14.78)
Lymphocytes (%)	73.07±3.78* <sup>a</sup> (56.79, 89.34)	58.65±1.72 <sup>b</sup> (53.19, 64.11)	80.13±0.66 <sup>a</sup> (77.31, 82.96)	40.54±3.33 <sup>c</sup> (31.28, 49.8)

All values are Mean±SE; 95% CIs in parentheses; p<0.01. Means bearing similar superscripts in each row do not differ significantly.

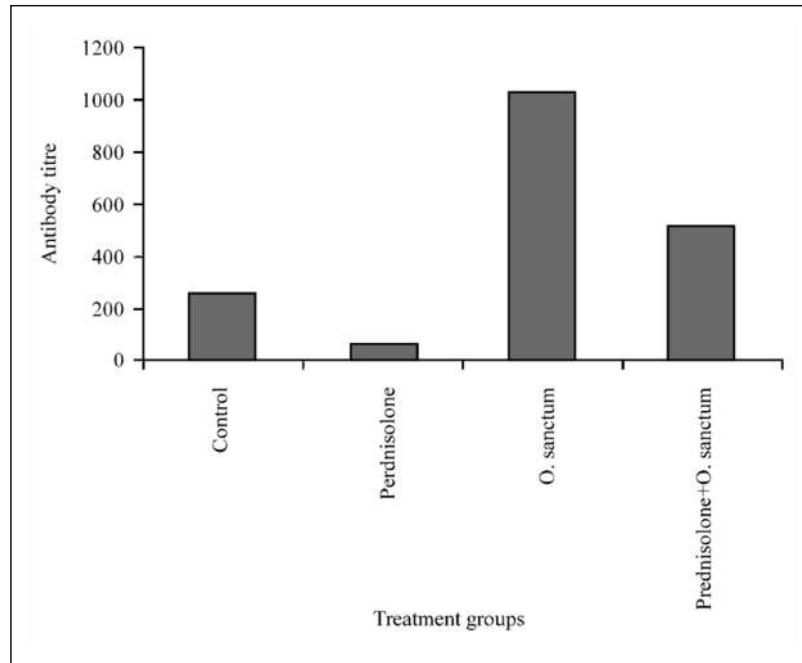


Figure. Effect of *Ocimum sanctum* on haemagglutinin antibody response

### CONCLUSIONS

Treatment with *Ocimum sanctum* showed significant increase in (I) Blood hemoglobin concentration, and (ii) SRBC antibody titer (1:1024) compared to the control group (1:256).

#### Reference:

Yamamoto H, Morino K, Mengistu L et al. Amla Enhances Mitochondrial Spare Respiratory Capacity by Increasing Mitochondrial Biogenesis and Antioxidant Systems in a Murine Skeletal Muscle Cell Line. *Oxid Med Cell Longev*. 2016;2016:1735841.