

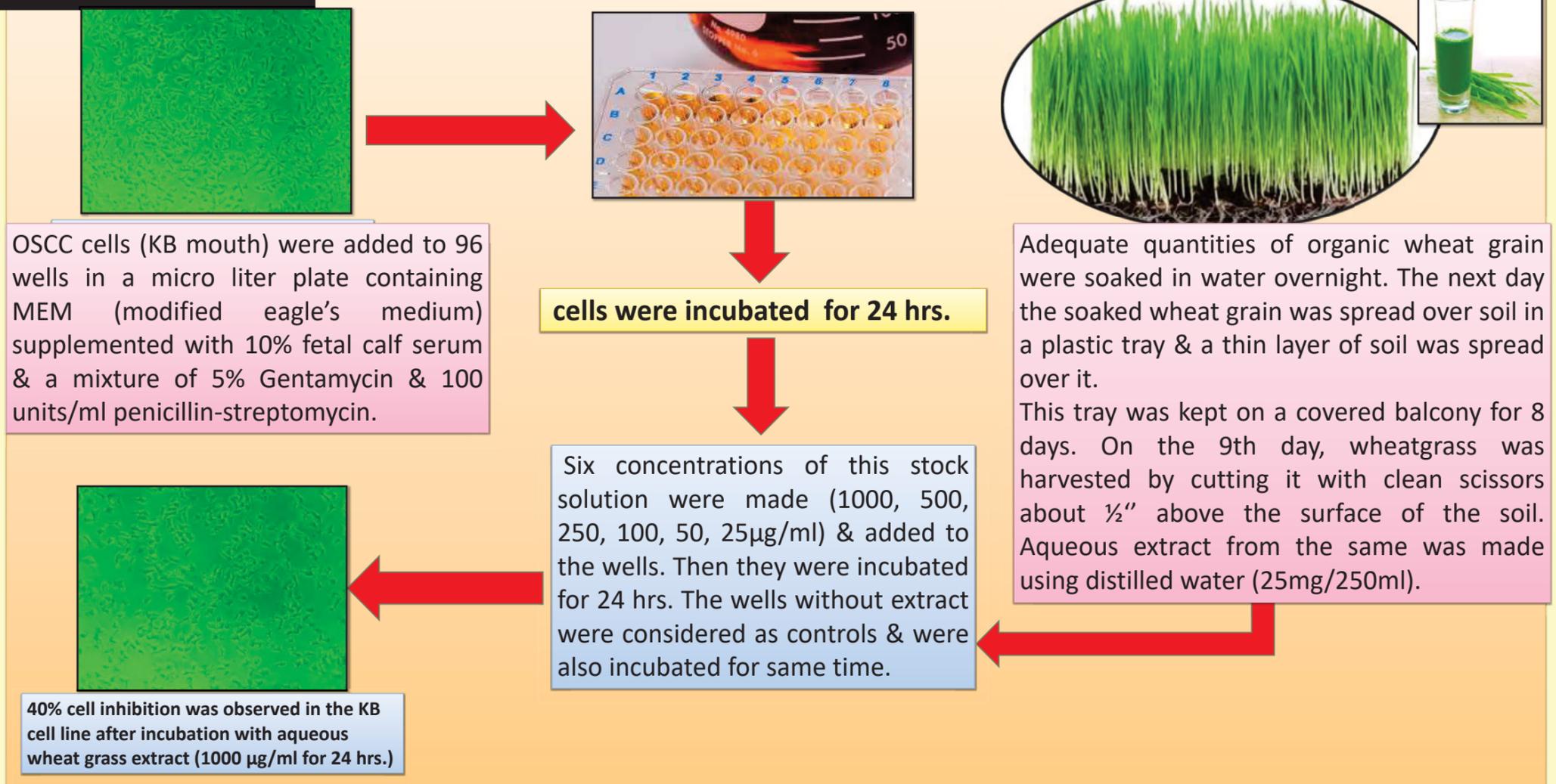
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## INTRODUCTION:

Oral squamous cell carcinoma is the sixth most common cancer worldwide & is usually managed with the help of chemotherapeutic agents that are toxic not only to tumour cells but also to normal cells in many ways & are also very expensive. Moreover these agents cannot be used for the prevention of cancer. The traditional herbal medicines which are used from ancient days in India are generally known to be free of the deleterious habits and are inexpensive but effective. One of these is wheatgrass which is the young grass of the wheat plant "Triticum aestivum Linn." from the family Poaceae (Graminae). It is also known as "green blood" because of its high chlorophyll content which is analogous to hemoglobin. This study was carried out to check the effect of wheat grass extract on oral squamous cell carcinoma (OSCC).

## METHODOLOGY:



## RESULT:

### MTT ASSAY

Test	Well 1	Well 2	Well 3	Mean	%Viability	% Inhibition
Normal control	0.372	0.377	0.368	0.372	100	0
25 µg/ml	0.314	0.314	0.314	0.314	84.4	15.6
50 µg/ml	0.290	0.280	0.285	0.285	76.6	23.4
100 µg/ml	0.285	0.274	0.280	0.280	75.1	24.6
250 µg/ml	0.262	0.282	0.262	0.272	73.3	26.0
500 µg/ml	0.261	0.267	0.262	0.264	71.0	29.0
1000 µg/ml	0.214	0.244	0.229	0.229	58.6	41.4

## DISCUSSION & CONCLUSION

### Anticancer activity:

- Enhances hemoglobin synthesis, thereby increasing O<sub>2</sub> supply to all cells, including cancer cells
- It induces mammalian phase 2 protein that protects cells against oxidant and electrophils.
- ABA (abscisic acid) in wheat extract can neutralise the effect of chronic gonadotropins, which are produced by cancer cells.
- It has antioxidant properties.
- It is alkaline (7.4) in nature.



Bioflavonoids

Chlorophyll

Vit. A, B, C, E, K & Enzymes

Minerals: Carotene, Na, Al, Cu, Fe, Zn, Ca, P, Selenium

**Conclusion:** At 1 mg/ml, cell growth inhibition was 41.4% in 24 hrs; thus, it can be stated that wheatgrass has anticancer properties.

## REFERENCES

- 1) Joshi P., Dutta S., nair S. Head and neck cancers in developing countries. Rambam Maimonides Med J. 2014; 5(2):8-14.
- 2) Ravindran J., Prasad S., Aggrawal B. B. Curcumin and cancer cells: how many ways can curry kill tumor cells selectively?. The AAPS journal.2009;2(III):492-510.
- 3)Pdalia S., Darbu S., Raheja I., Gupta A., Dhamijiya M. Multitude potential of wheatgrass juice (green blood): an overview. Chronicles of young scientist 2010;1(2):23-8.
- 4)Shivpuje P., Ammanangi R., Bhatt K., Katti S. Effect of ocimum sanctum on oral cancer cell line: an in vitro study. The journal of contemporary dental practice. 2015;16(2):709-14.
- 5) Chawal P., et al. Wheatgrass: A review onarmacognosy and pharmacological aspects. 2015;6(2):80-85.
- 6) Singh N., Verma p., Panday B. R. The therapeutic potential of organic triticum aestivum Linn(Wheatgrass) in prevention and treatment of chronic disease: An overview. IJSDR 2012; 4(1):10-14.