

SUMMARY

The aim of this study was to develop and improved procedure for identification of chromosome and to evaluate the potential of flow cytometry for chromosome of (*Triticum aestivum*) hexaploid wheat using image processing as well as numerical and histographic analysis. A most recent technique CIS produced by (El-daly and Tolba,2009) has been applied in this study.

The result can be summarized as follow:

- 1- All chromosomes of hexaploid were enhanced and enlarged without losing resolution. Which showed more details and structures.
- 2- All chromosomes have been-colored i.e. Changing of monochrome RBG image into multicolor, multicolor RBG related to structure so we can see details in shape and structure which in turn is huge step towards examination.
- 3- All chromosomes have been represented by -Histographic presentation: for the structure which in technology known as (EDEX) this is micro prob x-ray analysis common use in metrology. The most recent update technology string to apply this technology in biological filed.
- 4- Numerical analysis: for enlarged image which gives the accuracy down to pico size structure (size RNA, DNA) is 200 pico; it mean that it can be seen in the details of structure and band in reality as real image not as sampling or diagrammatical or simulation application field .This means that we are able to pen point any location in DNA change so we can end use any improvement in the molecule of DNA to improve quality whatever it is (mass; production; in resistance of any disease and genetic engendering).

The present tool can be used as a diagnostic tool for chromosomal identification of any other wheat species.