

AUTOMATED FISH SPOTS COUNTING IN INTERPHASE NUCLEI



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We present a system architecture for the automatic acquisition and processing of microscopic images to support the fluorescent *in situ* hybridization (FISH) procedures apply in cytogenetics.

The aim of the automation is to analyse big amount of cells as in prenatal diagnosis (trisomy detection) or in minimal residual disease (trisomy/monosomy or rearrangement detection). The first application developed in the system is to detect and count the number of hybridization spots in the interphase nuclei.

Following this, two important requirements are highlighted:

- a) the system throughput should be superior or at least equal compared with human experts (speed and error rate), and
- b) the system should be implemented with reasonable price technology. System has been developed based on VSB architecture which allows parallel image acquisition and analysis, saving 40% time. The main components are Ergolux microscope, Xillix camera, and SUN Sparc 4/370 processor.

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