Video Article

Phase Contrast and Differential Interference Contrast (DIC) Microscopy

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Abstract

Phase-contrast microscopy is often used to produce contrast for transparent, non light-absorbing, biological specimens. The technique was discovered by Zernike, in 1942, who received the Nobel prize for his achievement. DIC microscopy, introduced in the late 1960s, has been popular in biomedical research because it highlights edges of specimen structural detail, provides high-resolution optical sections of thick specimens including tissue cells, eggs, and embryos and does not suffer from the phase halos typical of phase-contrast images. This protocol highlights the principles and practical applications of these microscopy techniques.

Video Link

The video component of this article can be found at <https://www.jove.com/video/844/>

Protocol

The complete text protocol for this experimental approach is available in [Current Protocols in Cell Biology](#).

Disclosures

The authors have nothing to disclose.

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