Video Article
Phase Contrast and Differential Interference Contrast (DIC) Microscopy

Victoria Centonze Frohlich

1Core Optical Imaging Facility, University of Texas Health Science Center at San Antonio (UTHSCSA)

URL: https://www.jove.com/video/844
DOI: doi:10.3791/844

Keywords: Basic protocols, Issue 18, Current Protocols Wiley, Microscopy, Phase Contrast, Difference Interference Contrast

Date Published: 8/6/2008

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.

Acknowledgements
Several video clips demonstrating phase contrast and DIC microscopy were taken from another video-article, entitled Layers of Symbiosis. JoVE graciously acknowledges this contribution made by the Leadbetter lab.