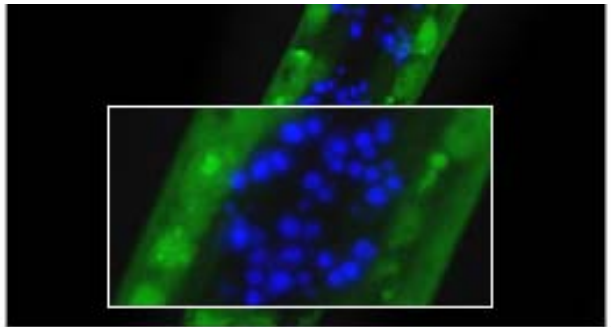
Optical Sectioning with ApoTome.2 System

Among the most critical artefacts to consider in widefield fluorescence microscopy arises from the fact that regardless of the focal point, illumination from the objective produces fluorescence throughout the entire specimen volume.

Imaging of thick specimens in fluorescence microscopy is then compromised by signal originating from regions above and below the focal plane. The result is that sharp image information from focal plane is overlaid with blurred image information arising from distant area, reducing contrast and resolution in the axial (z) dimension. Furthermore, three-dimensional (3D) reconstruction of the specimen is not possible under these conditions.

Aside from using confocal techniques, optical sections can also be obtained in widefield fluorescence microscopy using **structured illumination**, as implemented in **ApoTome.2** attachment.



Advanced Fluorescence Microscopy Workshop: Optical sectioning with ApoTome.2

30th October 2012

Venue :**Bilik Mesyuarat Fakulti** Dewan Anuar Mahmud, FakultiSains&Teknologi, UKM Bangi

Time : **8.30am to 12.00pm**

Presenter : **Ms Rageshwary**

Jointly organised by:

Centre for Insect Systematics
UniversitiKebangsaan Malaysia
43600 UKM Bangi, Selangor D.E
Malaysia

and

Carl Zeiss Sdn Bhd
(www.zeiss.com.my)

ApoTome.2 at Work

***Drosophila* neurons, blue: DAPI, green: GFP; Plan-APOCHROMAT 20x/0.8.**

Marta Koch, Molecular and Developmental Genetics, University of Leuven, Belgium

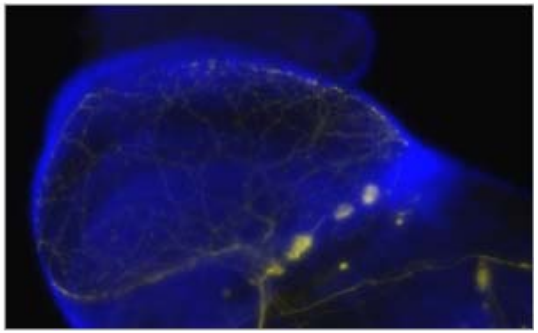


Figure A. Conventional fluorescence

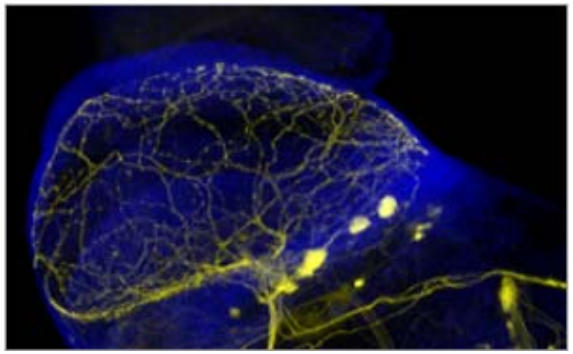


Figure B. Optical section from ApoTome.2

Centre for Insect Systematics
Faculty of Science and Technology, Universiti Kebangsaan Malaysia

Programmes

Seminar & Demonstration

0830: Registration

0900: Carl Zeiss Introduction

0910: Optical sectioning with ApoTome

1000: Demo (session 1)**

1100: Demo (session 2)**

1200: Lunch

1400: Demo (session 3)**

1500: Demo (session 4)**

**Demo at Image Analyzer Room, Level 2, Biology Building, FST.

Participants who are keen to utilise the system are encouraged to register with CikAdibahAhamad. System will be available for the next 1 week.

Come join us! To experience a personalised demonstration

Please confirm your attendance by filling the details below:

Prof/Dr/Mr/Ms _____

University / Company/ Institution _____

Address: _____

_____

_____

Tel: _____

Fax: _____

Email: _____

Please email or fax your reply to:
(Registration 25th October 2012 closed on)

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