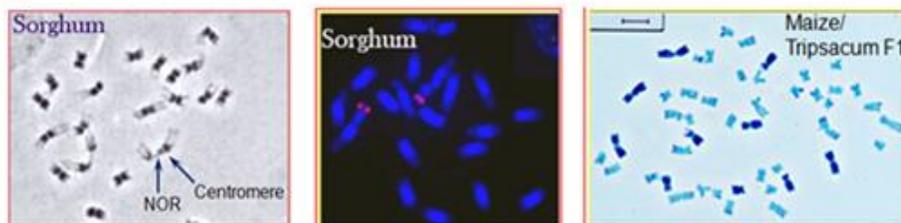


Plant Chromosome Preparation & FISH Workshop

October 10 -13, 2012

Nurul Islam-Faridi, PhD
Southern Research Station, USDA Forest Service



Venue:
207 Hamblin Hall
Department of Biology
West Virginia State University
Institute, WV 25112

Local Contacts:
Dr. Padma Nimmakayala
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Schedule

October 10, Wednesday

13:30 – 18:00
RNase Pre-treatment – Chromosome spread slides
Root collection – Greenhouse
Root tip process for enzymatic digestion (for tomorrow)

Video Demo: Metafer (MetaSystems) – Automated detection of metaphase spreads & karyotyping

October 11, Thursday

09:00 – 09:15
09:15 – 10:00
10:30 – 12:30
12:30 – 13:30
13:30 – 18:00

Welcome address by Dr.

FISH presentation and its significance in Genomics and Plant Breeding

FISH Day-1
RNase Pre-treatment (Wednesday)
Probe hybridization mixture preparation
Discussion: FISH with BAC, Transgene and genomic DNA probes

Lunch (on your own)

Prepare chromosome spread
Process root tips
Enzymatic digestion
Slide preparation
Slide Denaturation (Chromosomal DNA)
Hybridization (DNA to DNA)
Overnight incubation
Set-up for hybridization site detection (FISH Day -2)

October 12 Friday

- | | |
|---------------|--|
| 08:30 – 12:30 | FISH Day-2
Washing & Hybridization site(s) detection |
| 12:30 – 13:30 | Lunch (on your own) |
| 13:30 – 17:30 | Operation of epi-fluorescence microscope and use of MetaSystems FISH analysis software
View FISH slides, capture and process FISH images
FISH discussion – Methodology & Unforeseen problems |

October 13, Saturday

- | | |
|---------------|---|
| 08:30 – 12:00 | View FISH slides, capture and process FISH images |
| 12:00 – 13:00 | Lunch (on your own) |
| 13:00 – 17:00 | Further process FISH images – Adobe Photoshop (for publication and presentation (power point))
Question & Answer Session |

Adjourn

For additional details or have any question regarding plant chromosome spread please contact

Dr. Nurul Islam-Faridi

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Cover: Upper; Sorghum somatic (root tip) chromosome spread (left), Sorghum BAC-FISH (center) and Maize/*Tripsacum* F1 genomic *in situ* hybridization, maize (dark blue) and *Tripsacum* (light blue). Bottom: Research-Teaching microscope (left), Pine FISH with 18S-28S rDNA (red signals) and telo repeat sequence (green signals) probes.