# The Joint Institute for Food Safety and Applied Nutrition (JIFSAN)

# Microscopic Identification and Characterization of Botanicals

March 28 - April 1, 2011

### Location:

Joint Institute for Food Safety and Applied Nutrition (JIFSAN) Patapsco Building 5201 Paint Branch Ave. Suite 2134 College Park, MD 20742

## **Learning Objectives:**

At the end of this course participants will be able to understand: (1) basic optical theory; (2) value of voucher specimens; (3) diagnostic features of ground plant materials; (4) how to obtain information on botanical nomenclature, literature, botany, plant taxonomy, and plant anatomy; (5) how to write a brief monograph identifying the different cell types in a botanical sample; and (6) how to maintain and use compound light microscopes with brightfield or polarized light.

## **Course Description:**

This is an intensive five day course which includes lectures and hands-on training.

#### **Brightfield and Polarized Light**

Microscopy:

**Basic Optics** 

Purchasing a microscope Adjusting -Koeller illumination Calibrating an ocular micrometer and basic measurements

#### **Botanical Nomenclature:**

Common names Latin binomials

**Authors** 

#### **Reference Specimens:** Herbarium specimens:

Ground and chopped specimens Making a plant collection

Cataloging a collection

#### **Basic Botany:**

Plant families Plant Organs Plant tissues

#### Reference Literature:

### **Diagnostic Features of Ground Plant Material:**

Laboratory techniques

Rehydrating and clearing dried material Powdering, grinding, and chopping

#### Slide making techniques:

Tools Reagents Particle handling

Chemistry on the microscope slide

#### **Documentation of analytical results:**

Value of images Sample integrity Monographs

Instructors: George C. Ziobro, Ph.D.

Stanley Cichowicz (FDA retired)

Steven Casper, Ph.D.

Course Fee:: \$100 (Limited Space Available!)

To Register, Click Here

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