

Nanomedicine & Nanotechnology for Biomedical

Applications course

NanoTech, Dreamland

Agenda

28-30 May 2016

Objectives:

This course will address the state of the art in nanotechnologies and nanomedicine, and their ongoing applications focused on addressing the use of nanomaterials in cancer diagnosis and treatment. The course will cover also all aspect of using nanomaterials as drug carrier, gen delivery, Dental applications, cosmetics ...etc.

Content:

1. Nanotechnology for imaging, detection and therapy.
2. Fluorophores and Quantum dots.
3. Labeling and functionalization.
4. Nanomaterials as a contrast agent for MRI & Photoacoustic Tomography (PAT).
5. Nanotechnology for cancer therapy.
6. Photo thermal therapy using plasmonic materials.
7. Magnetic nanoparticles for hyperthermia.
8. Nanomaterials as a drug carrier for chemotherapeutic drugs.
9. Tumor-targeted drug delivery systems (DNA, siRNA, etc).
10. Multifunctional Nano therapeutics.
11. Nanoparticles for drug delivery of controlled release: silica, vesicles, dendrimers, solid lipids, liposomes...etc.
12. Drug encapsulation strategies.
13. Nanomaterials in cosmetics.
14. Nanomaterials as super-antiseptic and antibiotics.
15. Nano-biomaterials for tissue engineering.
16. Toxicity evolution of nanomaterials.

Saturday 28/5/2016

9:00am – 10:00am Registration & Opening
10:00am – 12:00pm Lecture: **General Introduction to Nanomaterials' preparation, Characterization, and properties.**

Dr. Mona Bakr

NanoTech Egypt for Photo Electronics

12:00am – 1:00pm Lunch

1:00pm– 3:00pm Lecture: **Nanomaterials for Biomedical imaging.**

Dr. Ahmed Nabil

National Institute of Laser Enhanced Sciences, Cairo University

Sunday 29/5/2016

10:00am – 11:00am Lecture: **Nanomaterials for drug delivery**

Dr. Ola El-Borady

Faculty of Dentistry, MSA

11:00am– 12:00pm Lecture: **Nanomaterials for drug delivery**

Dr. Raghdaa Tharwat

NanoTech Egypt for Photo Electronics

12:00 pm - 1:00 pm Lunch

1:00 pm- 2:00pm Lecture: **Nanomaterials for dental applications.**

Dr. Mohamed Taha

NanoTech Egypt for Photo Electronics

2:00 pm – 3:00 pm Practical

Dr. Mohamed Mohsen

NanoTech Egypt for Photo Electronics

Monday 30/5/2016

10:00am – 11:00am Lecture: **Nanoscopy: TEM, SEM, and other microscopic techniques.**

Dr. Aman Allah Zaki

NanoTech Egypt for Photo Electronics

11:00am – 12:00pm Practical I in TEM

12:00pm – 1:00pm Lunch

1:00pm – 2:00pm Lecture: **Histogram**

Eng. Marwa El Nabawy

2:00pm – 3:00pm Practical II in TEM