

# Research Facilities

The Azrieli Faculty of Medicine, Zefat  
Bar-Ilan University







# Research Facilities



## Scientific Equipment Center

- Microscopy Unit
- Flow cytometry Unit
- SEM Unit
- Image Analysis Unit
- Chromatography and Spectrometry Unit
- Histology Unit
- In Vivo Imaging Unit
- Gel Imaging Unit
- Molecular Biology Unit

## Genome Technology Center (GTC)

- NGS
- DNA/RNA library prep
- Bioinformatics services



## Center for Pre- Clinical Studies

- Advanced SPF rodent (mice/rats)
- Germ Free
- Pathogen Room
- Zebra Fish Room
- Frog Room

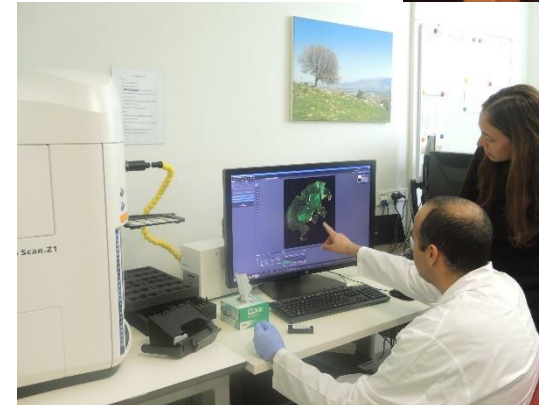




# Microscopy Unit



- **3D gSTED**  
(Laser:WLL; 5 Detectors -3HyD,2PMT; 3 Depletion lasers 592,660,775)
- **Slide Scanner**  
(up to 100 slides, auto tissue detection)
- **Laser Microdissection Microscope**  
(less than 1 micron cutting resolution)
- **Confocal/Multi-Photon Microscope**  
(multi-photon & in-vivo capabilities)
- **Live Imager/time-lapse Microscope**  
(up to 100X N.A.1.4 , CO<sub>2</sub> & temp control )
- **Apotome fluorescent Microscope**  
(high 3D deconvolved contrast)
- **Live imaging microfluidic System**  
(can be fitted on any microscope)
- **Incubated fluorescent Microscope**  
(up to X20ph N.A. 0.65, built in analysis, up to 6 plates)



## [Michael Assa, Ph.D](#)

Experimental physicist and Applied mathematician specializing in modeling, signal processing, and acoustics

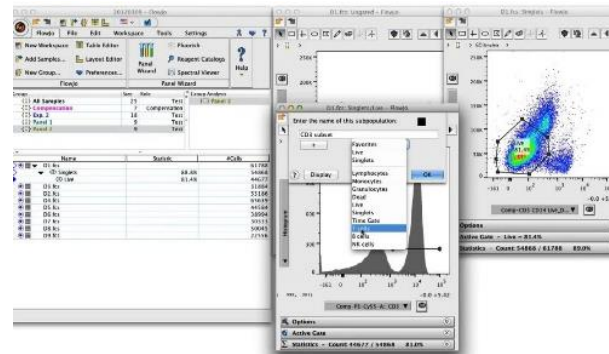




# Flow Cytometry Unit



- Moflo Astrios -Cell sorter (in biological hood)  
(4 lasers, 15 detectors, 6 way sort/up to 1536 well plate)
- Aria III -Cell sorter (in biological hood)  
(4 lasers, 17 detectors, 4 way sort)
- Gallios -Flow cytometer  
(3 lasers, 10 detectors)
- NucleoCounter- Image Cytometer
- FlowJo , Kaluza & Modfit



**Yehuda Gubbay, Ph.D**  
A molecular and cell biologist specializing in Flow cytometry and Genetic manipulation.



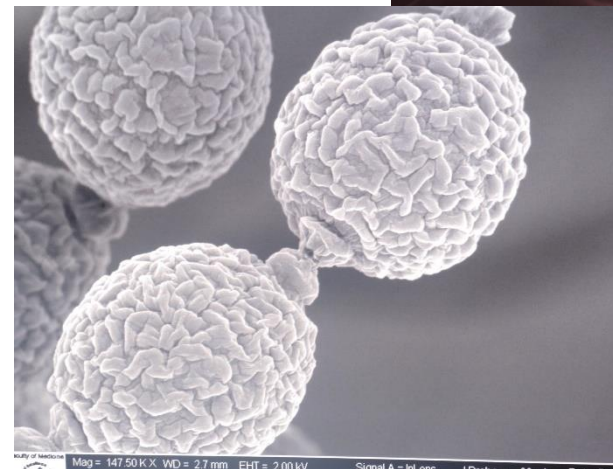
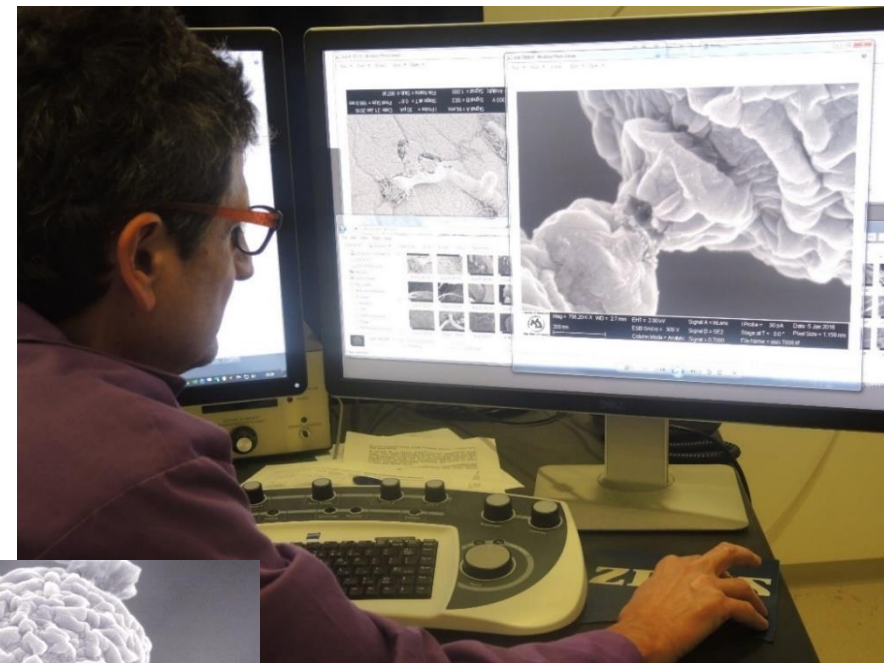




# Scanning Electron Microscopy



- Merlin™ Scanning Electron Microscope
- High quality In-house preparation of Biological samples
- High resolution sputter coater
- Cryo ultra-microtome
- Correlative epi-fluorescent and electron microscopy



## Boris Fichtman, Ph.D

A cell biologist specializing in rare genetic disorders. Leading specialist in preparation of Biological samples for scanning EM.

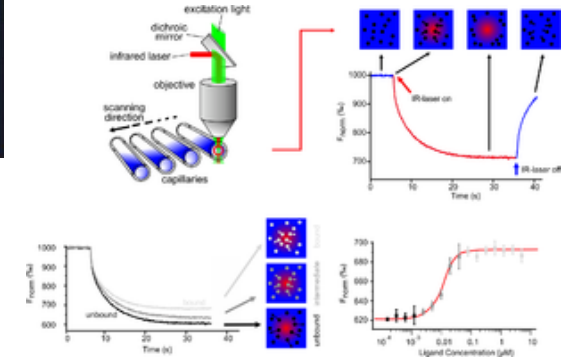
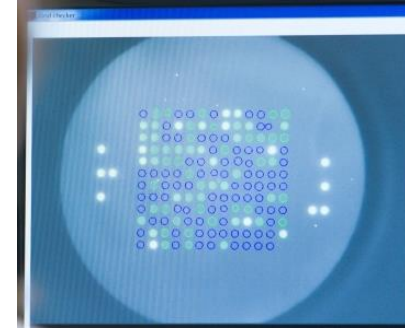




# Molecular Biology



- **MagPix**  
Multiplexing of Immunoassays
- **Octet Red**  
Kinetic screening and affinity characterization of a diverse range of biomolecules
- **Pamstation**  
Detects protein kinase activity (PTK/STK) directly in cellular and tissue lysates
- **MicroScale Thermophoresis (MST)**  
Biophysical analysis of interactions between biomolecules
- **Peaq ITC**  
Isothermal Titration Calorimeter for the label-free in solution study of biomolecular interactions
- **UV crosslinker**  
365nm/254nm/312nm
- **Plate readers**  
Absorption/fluorescence/luminescence/alpha- screen kinetics/polarization
- **RT-PCR**  
strips/96/384/arrays



**Yuval Zalthberg**  
A biotechnologist specializing in yeast fermentation processes and molecular and cellular biology.





# Scientific Equipment Center-Additional Units



## Chromatography and Spectrometry Unit

- MALDI TOF (Mass spectrometer)
- GC/MS/FID
- HPLC
- FPLC

## Gel Imaging Unit

- Chemiluminescence
- Far Red Imaging
- Fluorescent Scanner
- EtBr

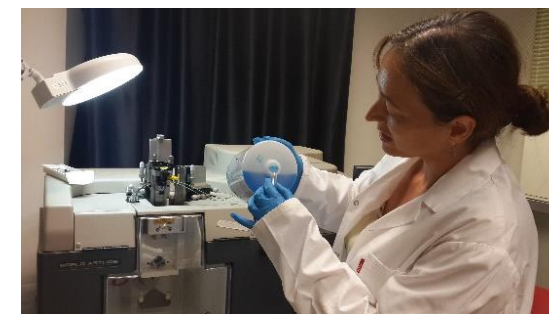
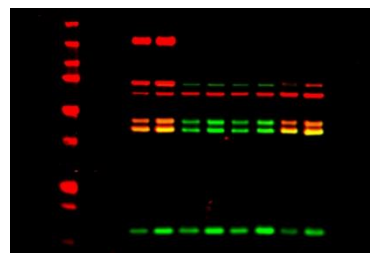
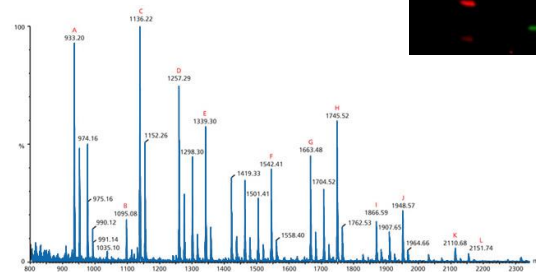


## Histology Unit

- Microtome
- Cryostat
- Vibrotome
- Paraffin embedding station

## Additional equipment

- Liquid handling system
- Cell irradiation system (up to 50 Gy/min)

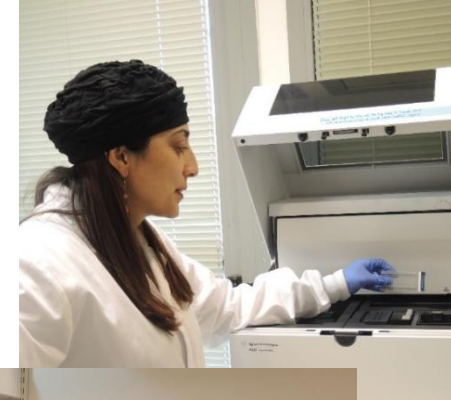


## Eyla Maoz, Ph.D

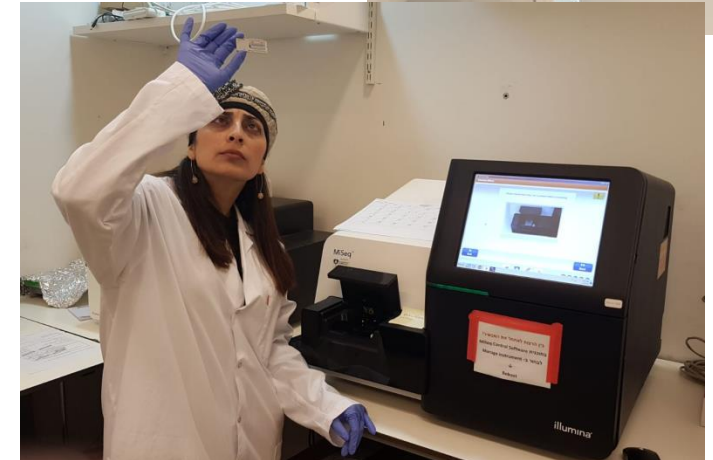
An immuno-virologist and molecular neuro-pharmacologist specializing in flow cytometry, cellular and molecular biology.



# | Genome Technology Center (GTC)



The GTC Unit offers a broad range of services for high-throughput sequencing experiments, including experimental design, library preparation, sequencing and data analysis



[Shira Perez, Ph.D](#)

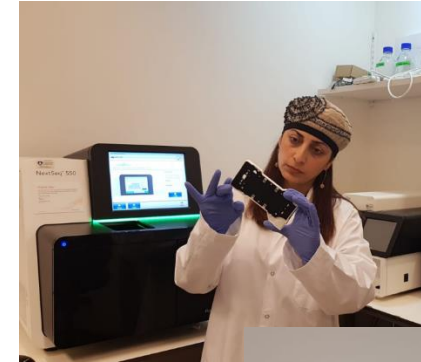
An immunologist and virologist specializing in genomics and NGS.



# Genome Technology Center (GTC)

## Equipment:

- NextSeq and MiSeq Illumina sequencers
  - NextSeq – up to 400 M reads
  - MiSeq – 1-25 M reads
- Accompanied equipment: Covaris (S220,E220), Qubit, Tapestation, Bioanalyzer
- One stop shop service from the project planning throughout the library preparation (DNA, RNA, sRNA, Exome sequencing, targeted sequencing) sequencing and the bioinformatics



### Marina Kurtz

A Biochemist and molecular biologist specializing in genomics and NGS.

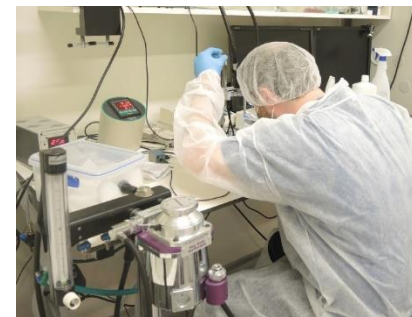


# The Center For Pre-Clinical studies The Animal Facility

הפקולטה לרפואה  
ע"ש עזריאלי  
אוניברסיטת בר-אילן



- Highly trained and dedicated staff
- Support extensive and comprehensive research services
- Support facilities include:
  - GERM FREE
  - SPF
  - Small imaging facility
  - Biohazard housing at the BSL2 and BSL3 levels
- Animal rooms are maintained at ventilation, temperature and humidity levels appropriate for the species of animal in the room



## Roey Lahav, DVM

An experienced veterinarian expert in pre-clinical animal research.



אוניברסיטת  
בר-אילן  
Bar-Ilan University





# Our Experts



## Scientific Equipment Center

- Eyla Maoz, Ph.D,  
Head
- Michael Assa, Ph.D,  
Microscopy
- Yehuda Gubbay, Ph.D,  
Flow cytometry
- Yuval Zalthberg,  
Molecular Biology
- Boris Fichtman, Ph.D,  
SEM
- Shiran Mimon,  
General Technician



## Genome Technology Center (GTC)

- Shira Peretz, Ph.D,  
Head
- Marina Kurtz,  
GTC staff



## Center For Pre- Clinical Studies (Animal Facility)

- Roey Lahav, DVM,  
Head
- Yaniv Aton,  
Germ Free
- Elad Levi,  
Conventional
- Moshe Chen,  
SPF
- Binyamin Costa,  
SPF







**Roey Lahav**, DVM  
Head of the Animal Facility  
The Azrieli Faculty of Medicine

Tel: +972-72-2644966  
[Roey.Lahav@biu.ac.il](mailto:Roey.Lahav@biu.ac.il)

**Eyla Maoz**, Ph.D  
Head of the scientific Equipment Center  
The Azrieli Faculty of Medicine

Tel: +972-72-2644936  
[Eyla.Maoz@biu.ac.il](mailto:Eyla.Maoz@biu.ac.il)

**Shira Perez**, Ph.D  
Head of the Genome Technology Center  
The Azrieli Faculty of Medicine

Tel: +972-72-2644903  
[Shira.Perez@biu.ac.il](mailto:Shira.Perez@biu.ac.il)

# נשמח לעמוד לרשותכם!

יחידות השירות

הפקולטה לרפואה ע"ש עזריאלי

אוניברסיטת בר אילן

