

Acronym/name partner

GENERAL PRESENTATION



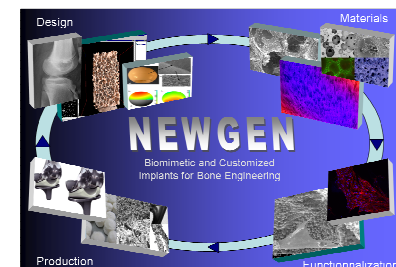
- **Complete denomination:** Laboratory of Biomechanics & Biomedical Engineering, Dept. Of Mechanical Engineering & Aeronautics, University of Patras
- **Location (city, country):** Patras, Greece
- **Director:** Assoc. Prof. D.Deligianni
- **Contact person in NEWGEN:** Prof. Yannis F. Missirlis
- **Working Group involvment:** WG4
- **Staff:** Dr. Georgios Michanetzis, Mr. Stergios Dermenoudis

- **Research topics:** biomechanics, tissue engineering, biocompatibility

- **Researchers expertises:** related to the topics above



UPAT-BEL,
Patras, 26500, GREECE



COST Action MP1301



Bioreactors

Cell culture facilities

Hemocompatibility testing equipment

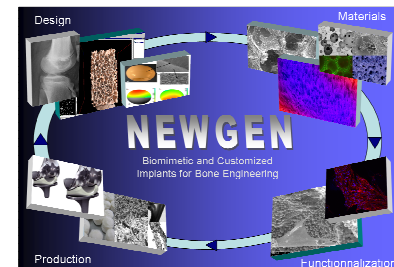
RTP-CR

Stress-strain devices (extension, compression, torsion)

AFM

Dynamic Nanoindentation

Confocal laser microscopy



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BIOMATERIALS/NEWGEN TOPICS



Macromechanics of hard/soft tissues and biopolymers



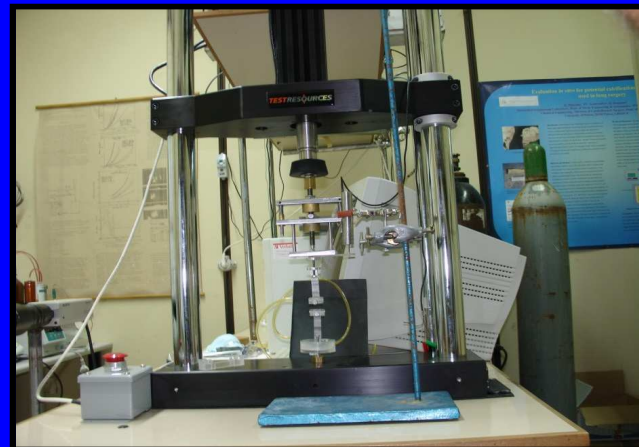
Uniaxial testing machine



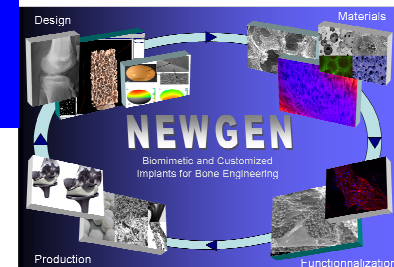
Torsion device



Minimat dynamic tester



Dynamic cyclic tester

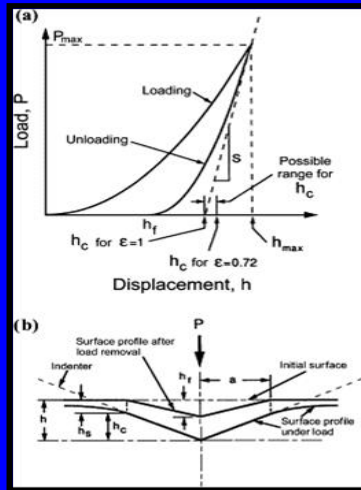


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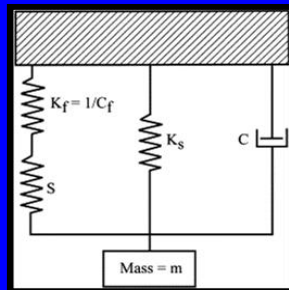
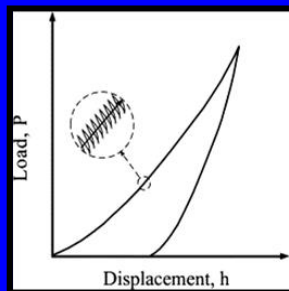
BIOMATERIALS/NEWGEN TOPICS



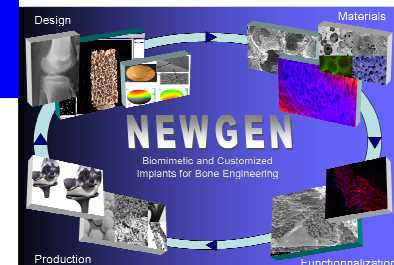
Nanoindentation: principle and setup



Quasistatic mode



Dynamic mode

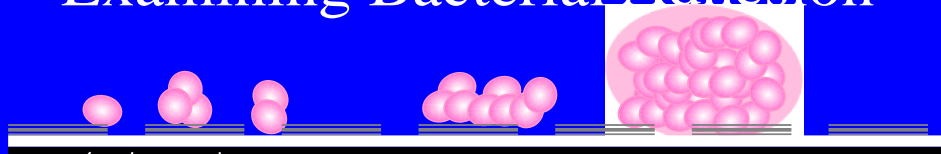


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BIOMATERIALS/NEWGEN TOPICS



Examining Bacterial Adhesion



Scanning Electron Microscopy
Central Facility

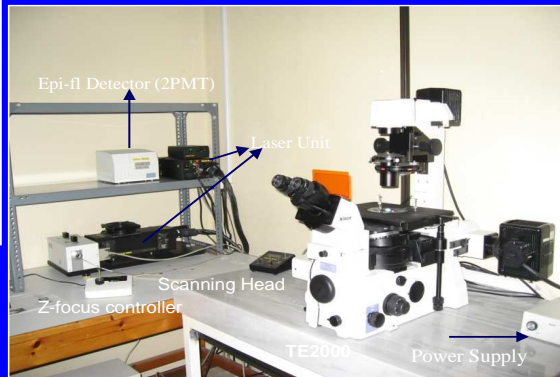
Atomic Force Microscopy

Confocal Laser Microscopy

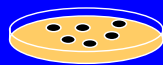
Isolation of total RNA
Planktonic/ Sessile bacteria
Microbiology Dep., School of Medicine, U. Patras

Reverse transcription-cDNA

qReal-Time PCR



Colony Forming Units:
Spectrophotometer

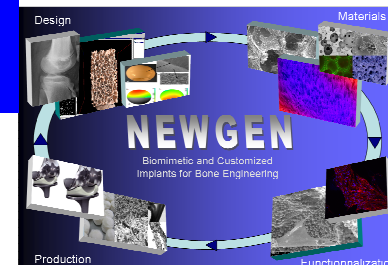


TSA agar

ica operon

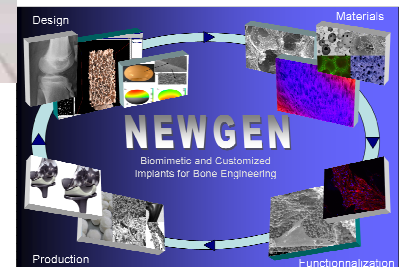
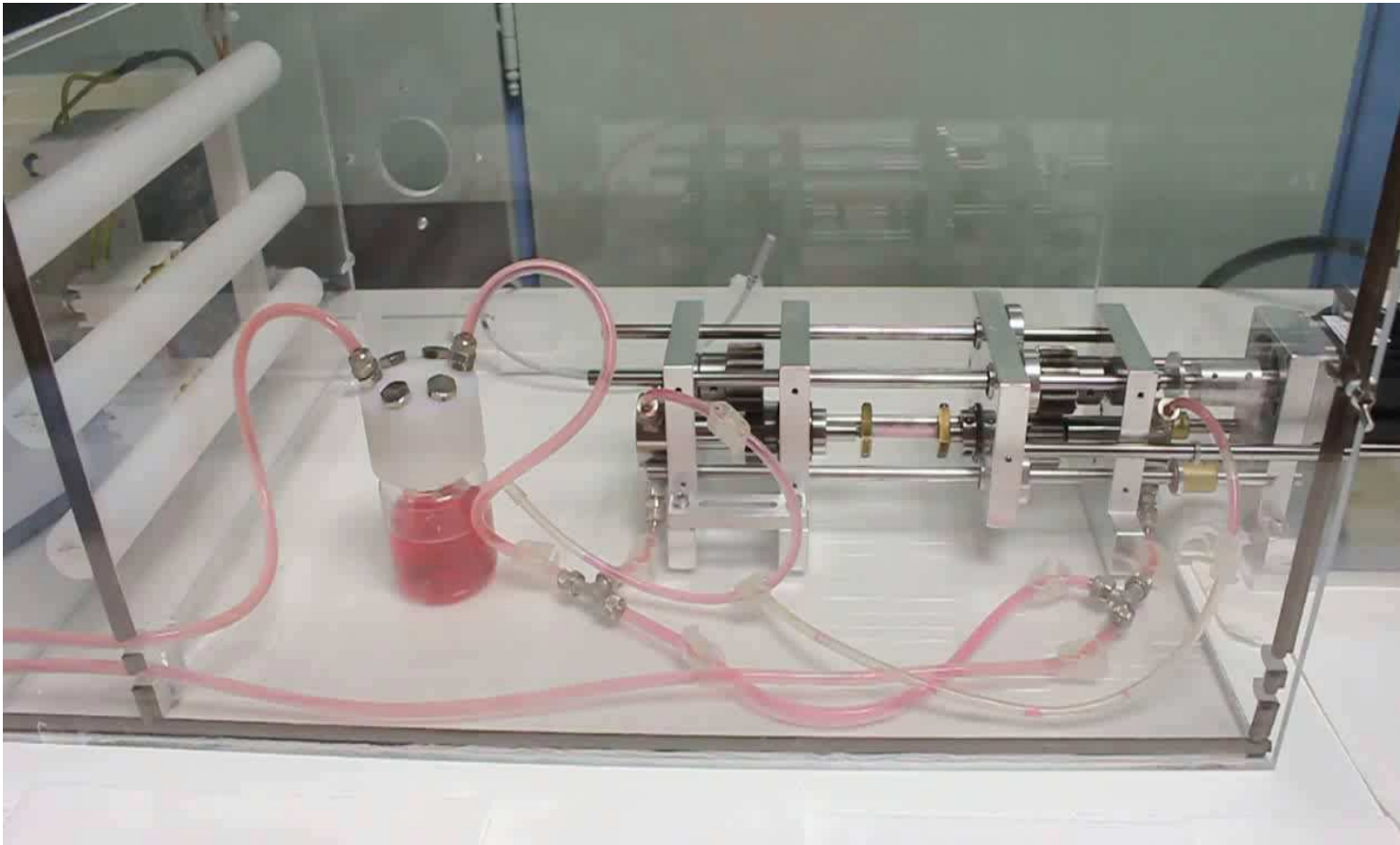


icaA *icaD* *icaB* *icaC*



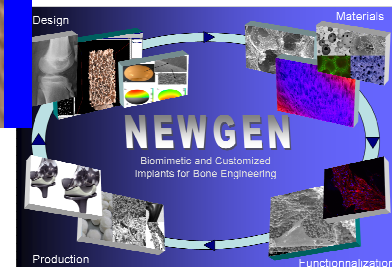
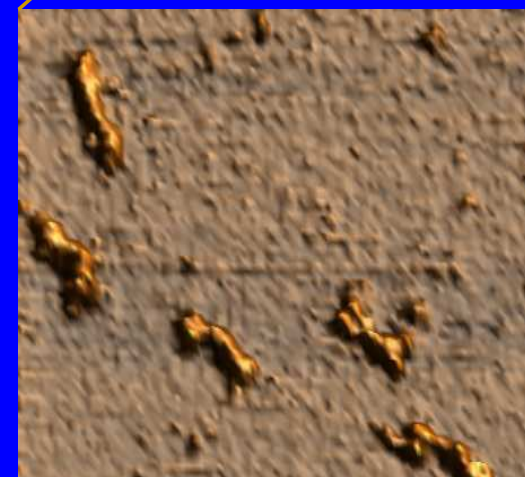
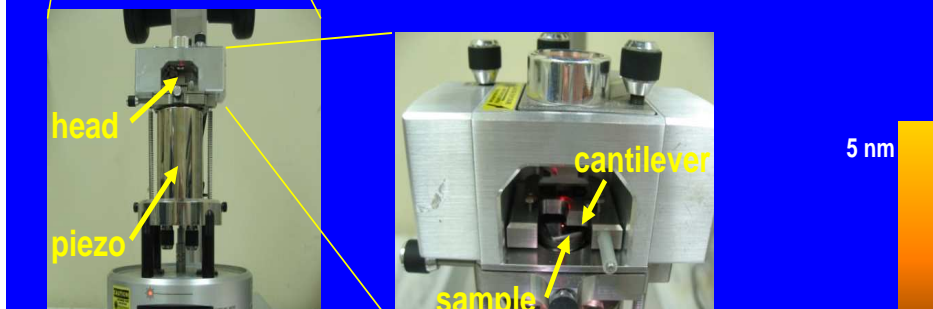
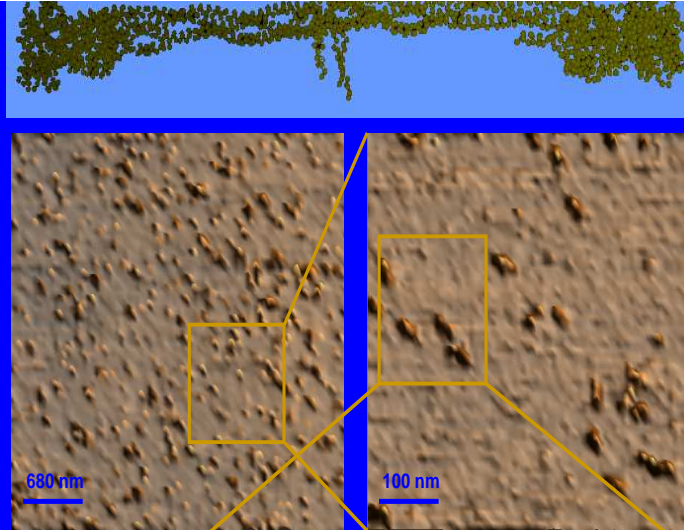
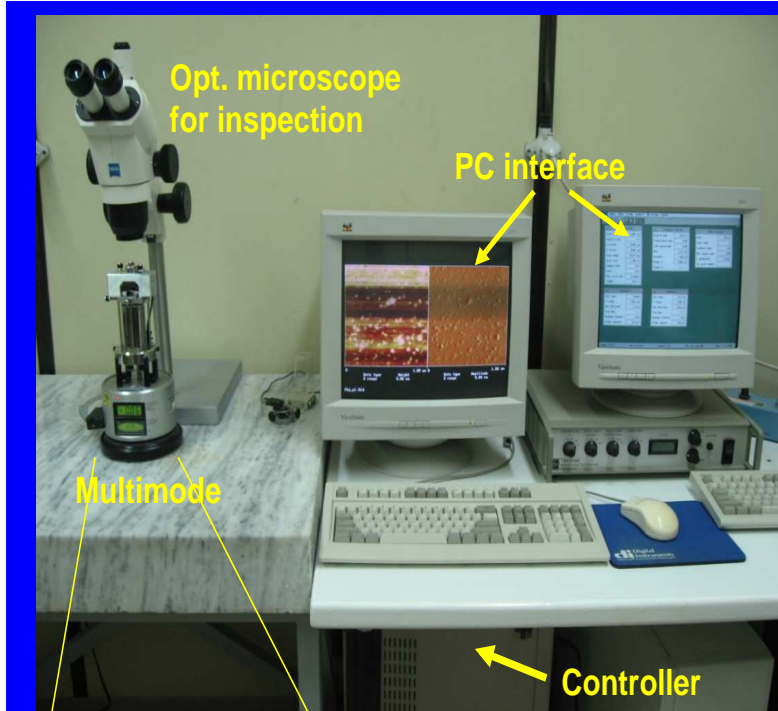
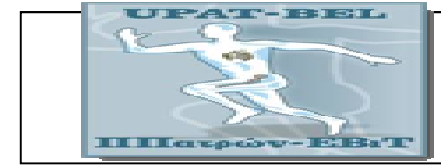
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2nd generation of our “bioreactor”



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FACILITIES



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