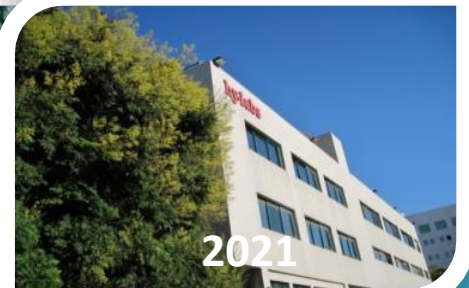


Hy Laboratories Company Presentation 2021



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Hylabs Accreditation

- ISO 9001 & 13485
- GMP – Ministry of Health
- The Israeli Laboratory Accreditation Authority (ISRAC), ISO17025
- Ministry of Health Accreditation for Cannabis & Dialysis water analysis
- FDA Registered for Analysis
- MOH recognition
- European QP
- PPIS (Plant Protection and Inspection Services) for plant pathogen testing



ISO 17025
ACCREDITED LABORATORY

הרשות הלאומית להסמכת מעבדות
Israel Laboratory Accreditation Authority



Microbiology & Molecular Biology

- Production**
- Services**
- Companies representation**
Companies representation - for
complementary products and services

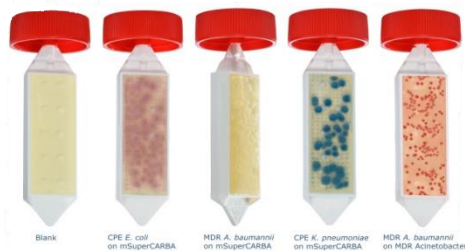
Production Facility



Our Products Portfolio



Dip slides



- Extraction kits
- Bacteriological culture medium
- Solutions (PBS, SDS, EtBr dropper, TAE and more)
- enzymes & recombinant protein
- PCR and qPCR diagnostic kits (CRE, KPC, Mycoplasma)

Hy Laboratories Service Labs Division

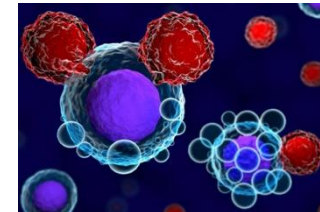
**Microbiology &
Chemistry Labs**

**Molecular & Cell
Biology Labs**

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Microbiology Services

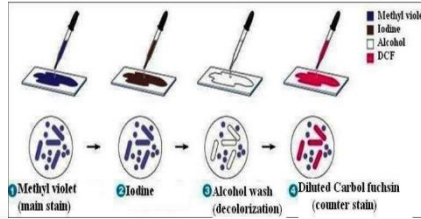
- Rapid Sterility Validation & Testing (BacT/Alert, HB&L)
- Sterilization Validation (ETO, Gamma, Autoclave, Chemical, STERRAD vint, ...)
- Bacterial & Fungal Identification (MALDI-TOF-MS)
- Mycoplasma Testing (Culture method)
- Packaging Testing (Peel, Dye, Burst, Accelerated)
- Cleaning & Disinfection Validations
- Disinfectant Efficacy
- Dialysis water microbial testing
- Clean rooms services
- Endotoxin Testing (turbidimetric, chromogenic, Gelclot)
- Environmental Monitoring (In-Site Sampling ,Microbial Bank)
- Media Fill – Kits (USP) & Test
- Cannabis Testing (Incl. RMM)



RMM - Rapid Microbiological Testing

- Gram Stain
- BacT/ALERT
- HB&L
- Mycoplasma PCR
- MALDI-TOF-MS
- Endotoxin-PTS
- Cannabis
- GRAM-Ray (Ramman)

Gram Staining technique



BacT/ALERT



MALDI-TOF-MS



Medical Cannabis
48 hours

Gram-Ray

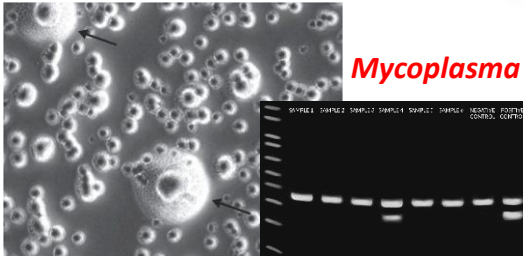


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HB&L



Mycoplasma

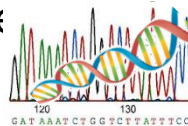


LAL



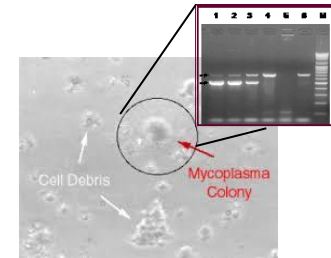
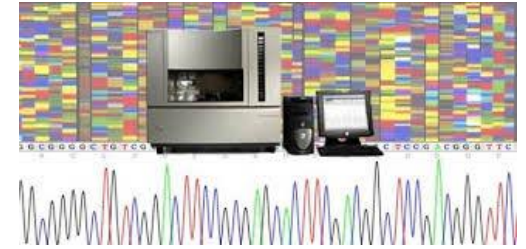
Molecular Biology Service units

- ❑ Molecular Biology Lab
- ❑ Tissue Culture Lab
- ❑ Clinical lab
- ❑ Next Generation Sequencing Lab
- ❑ Seed and Plant health Lab
- ❑ Virology Lab



MB Service Lab

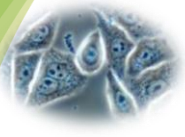
- ❑ Custom DNA sequencing (GMP)
- ❑ 16S and 28S rDNA Bacterial and Fungi identification (GMP)
- ❑ *Mycoplasma* nested-PCR detection (GMP)
- ❑ Residual DNA using real time PCR (GMP)
- ❑ Gene Copy Number using real time PCR (GMP extension)
- ❑ Gene expression using Real Time PCR (GMP extension)
- ❑ Nucleic acids extraction and manipulation
- ❑ Genotyping services and cloning



Next Generation Sequencing Service Lab

- ❑ Microbiome and Metagenomics – 16S rRNA Profiling
- ❑ Amplicon sequencing
- ❑ Small genome and de novo sequencing
- ❑ Transcriptome sequencing
- ❑ Small RNA sequencing
- ❑ Targeted DNA/RNA sequencing





Tissue Culture (TC) Service Lab



- ❑ Cell solutions and applications
- ❑ Cell Viability assays -MTT and XTT assays
- ❑ Cytotoxicity testing -according to ISO 10993
- ❑ Cell biology and Cell Manipulation services
- ❑ Transfection, overexpression and gene silencing
- ❑ Complete Cell signaling solutions (RT-PCR, NGS)



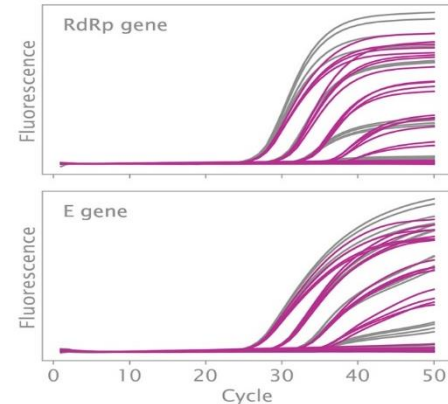
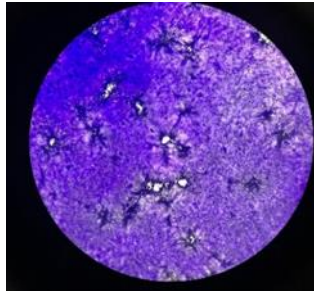
Seed and Plant Health Lab

- ❑ Identification and diagnosis of seed and plant diseases (Bacteria, Fungi, Viruses, Viroids)
 - ❑ Plant dilution assay
 - ❑ ELISA
 - ❑ PCR and qPCR
 - ❑ Bioassay
- ❑ Cannabis pathogen testing
- ❑ Assay development for emerging pathogens
- ❑ ISO17025 accreditation
- ❑ Ministry of Agriculture recognition (PPIS) for plant pathogen diagnosis



Virology Lab

- ❖ Viral quantification by TCID50 (Tissue Culture Infected Dose)
- ❖ Viral quantification by PFU analysis (Plaque formation unit)
- ❖ Viral quantification by qPCR
- ❖ Challenge testing for air filtration & medical devices, surfaces and solutions
- ❖ Cleaning and disinfection validation



Advanced Synthetic Biology Institute of Israel (ASBII)



Synthetic Biology – the Next Generation of Biology Science

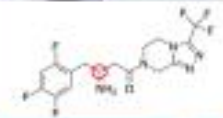
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- It is an emerging field of biology that aims at designing and building novel biological systems.
- The final goal is to be able to design biological systems in the same way engineers design electronic or mechanical systems.



What can synthetic biology achieve?

- Potential applications of synthetic biology range very widely across scientific and engineering disciplines, from medicine to energy generation. **For example, designed microorganisms might be capable of producing pharmaceutical compounds that are extremely challenging for existing methods of chemical or biological synthesis.** While several pharmaceuticals are already produced biotechnologically using genetically engineered organisms, the capacity to design complex synthesis pathways into such organisms could greatly expand the repertoire of products that can be made this way.



Impossible Burger

Sitagliptin enzymatically produced

Hyaline transparent & flexible film

ProveN fertilizer being applied to corn

Kymriah, produced by genetically modifying a patient's T cells

Calyno high-oleic oil from soy

Molecular Biology & Microbiology Represented Companies



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Main Represented Companies



IVD solutions through partnership



