

Research & Services | Antigene and antisense based therapies (Yissum)

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Eylon Yavin , HUJI, School of Pharmacy

Nucleic acid chemistry and drug delivery

Dr. Eylon Yavin <http://research.ekmd.huji.ac.il/researchers.asp?id=279>

Categories

Life Sciences

The Institute for Drug Research, School of Pharmacy, The Faculty of Medicine

Research interests include:

- Antigene and antisense based therapies
- Chemical Nucleases
- Drug delivery of peptides to mitochondria
- Novel Molecular Beacons as probes for early detection of cancer
- siRNA synthesis and delivery

Applicative side of the research capabilities include:

- Development of artificial restriction enzymes (biotechnology)
- Development of oligonucleotides as antisense/antigene or siRNA molecules for selective gene silencing (therapeutics)
- Development of oligonucleotides and oligo mimics (e.g. PNA) for diagnostics
- Development of a platform for mitochondrial targeting of peptides and drugs (drug delivery)

Unique capabilities:

- Expertise in organic and peptide synthesis
- Expertise in nucleic acid chemistry

Advantages

Our laboratory has the experience and facilities to synthesize modified oligonucleotides. These modifications include (1) the introduction of modified sugars and bases and (2) the introduction of a variety of molecules (e.g. amino acids or dyes) at the 3' and/or 5'-end of the oligonucleotide.

Research Background

Our laboratory is focused mostly in the field of nucleic acids. We have several projects that aim to develop novel approaches for achieving site-specific DNA cleavage. In addition, we are now highly interested in the field of siRNA both at the synthesis and delivery levels. Furthermore, we are

exploiting PNA molecules in order to develop novel molecular beacons as means to detect cancer at early stages of development. Finally, we are exploiting our experience in peptide chemistry in order to develop peptide conjugates that are targeted to mitochondria as means of selectively killing cancer cells.

Researcher and Research Interests

Dr. Eylon Yavin

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Research interests are in the fields of nucleic acid chemistry and drug delivery.

Available Resources

- DNA/RNA automated synthesizer
- A fully equipped organic chemistry laboratory

Laboratory Contact

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Previous experience and work with industry

Currently initiating two projects related to siRNA with Roche as well as a Magnet program on siRNA/microRNA with QBI (Quark Pharmaceuticals).

Contact for more information:

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