



Hands-on Due-Diligence For Investors

Established in 2005 by *Dr. Raphael Mayer*, **Smart Assays** is an Israeli CRO (Contract Research Organization), situated at the **Weizmann Science Park** in Israel.

Smart Assays has specific expertise and a formidable track record in the following areas:

Our Services



Assay Development



**Scientific Due
Diligence**



**Early Stage Projects'
Maturation**



Research Histology



**Elaborate Custom
Queries for
EMA/FDA**

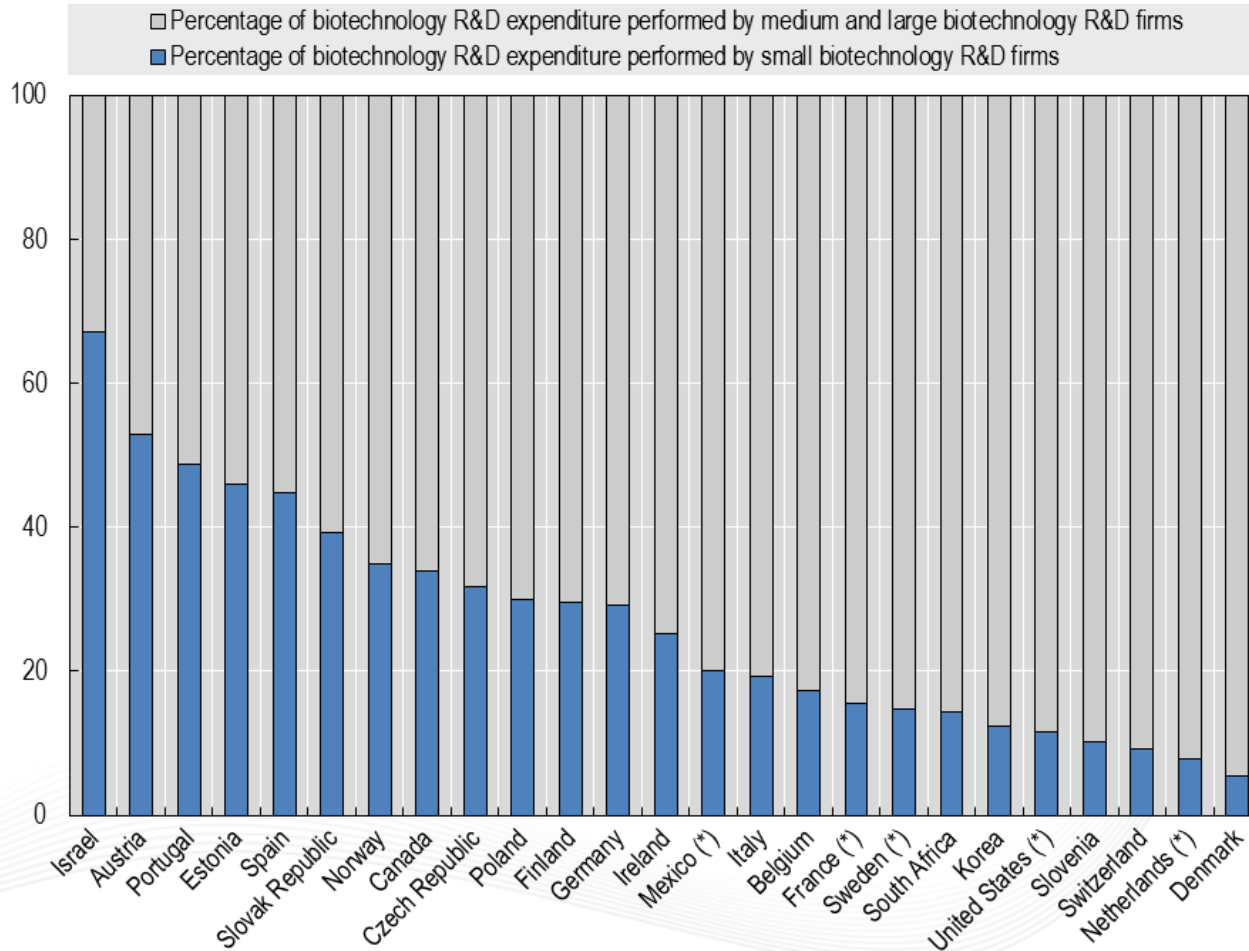
Smart Assays' Business Environment

- Israel – located in the middle-east, population: 8,238,300
- Multicultural environment
- Very little natural resources - knowledge based economy
- No. of biotech companies: 233*
- Out of which 90% of the companies with less then 50 employees*
- 45% of companies at research stage*
- Most biotech startups per capita in the world

*Data collected in 2010, published by the Israeli *Bureau of Statistics*, 2014

Smart Assays' Business Environment

Characteristics of Israeli Biotech R&D (1)



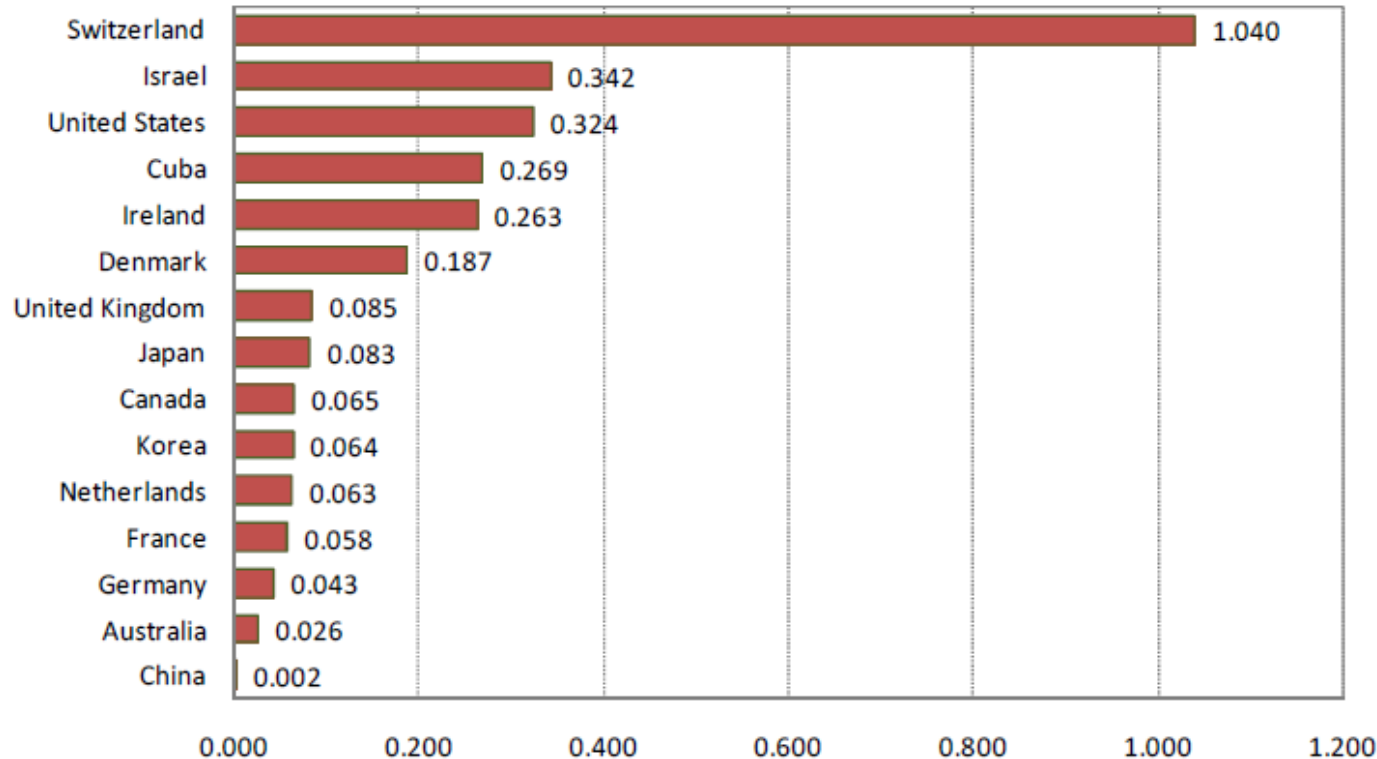
percentage
of R&D
Expenditure
by small Vs.
med./large
firms

*Biotechnology statistics 2014, OECD

Smart Assays' Business Environment

Characteristics of Israeli Biotech R&D (2)

Number of approved bio-therapies per million population (2000), Jan 1989 - Jan 2009



Track record
in approving
new bio-
therapies

*Biotechnology statistics 2009, OECD

Smart Assays' Business Environment

Characteristics of Israeli Biotech R&D (3)

Nobel Prize to Israeli (Bio)Chemists

Arieh Warshel, Chemistry, 2013:
Computational Enzymology

Michael Levitt*, Chemistry, 2013:
Computational chemistry of proteins

Dan Shechtman, Chemistry, 2011:
Crystal structures

Ada E. Yonath, Chemistry, 2009:
Structure of Ribosome (Antibiotics)

Aaron Ciechanover & Avram Hershko,
Chemistry, 2004:
Protein degradation



Smart Assays' Business Environment

Characteristics of Israeli Biotech R&D (4)

With a high percentage of small, research stage companies and a significantly high number of success stories - Israel biotechnology field acts as a **Grand Scale Incubator**, with an **endless stream of fresh ideas** ready to replace any failed projects.



Smart Assays

Smart Solutions for Investors in Early Stage Companies/Projects



Smart solutions for Early Stage

Out-of-the-box solutions aimed at rapid advancement and focused proof of concept.

Scientific evaluation and verification is a key component of any Biotech/Pharma investment, or licensing deal.

Thus decreasing investors' risks, in a time and cost efficient way, while improving that chances of a project to acquire scientific and business validity.



Research/
Invention



Smart Assays
Hands-on due diligence:

Industry standards
QA
Reproducibility

Proof of Concept



**Company
Development**



Significant Advantages for the Investor



Limited commitment – no rent, no equipment purchase, and personnel expenses, commitment is for R&D only, milestone by milestone



Better Research – Better Chances

Top rate scientific support and management saving valuable R&D time and money



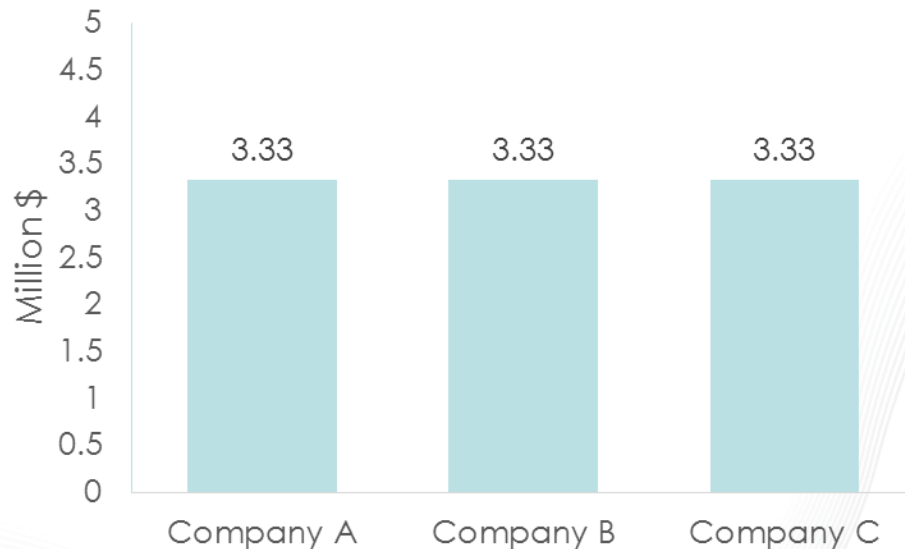
Knowledge Packed To Go

Knowhow acquired during R&D at **Smart Assays** is **client's property**. All procedures & protocols documents, comply with standard QA and reproducible.

Maximizing Use of Funds

Direct investment model

Hypothetic example: Investment of 10M \$ divided for 3 companies: a, b and c

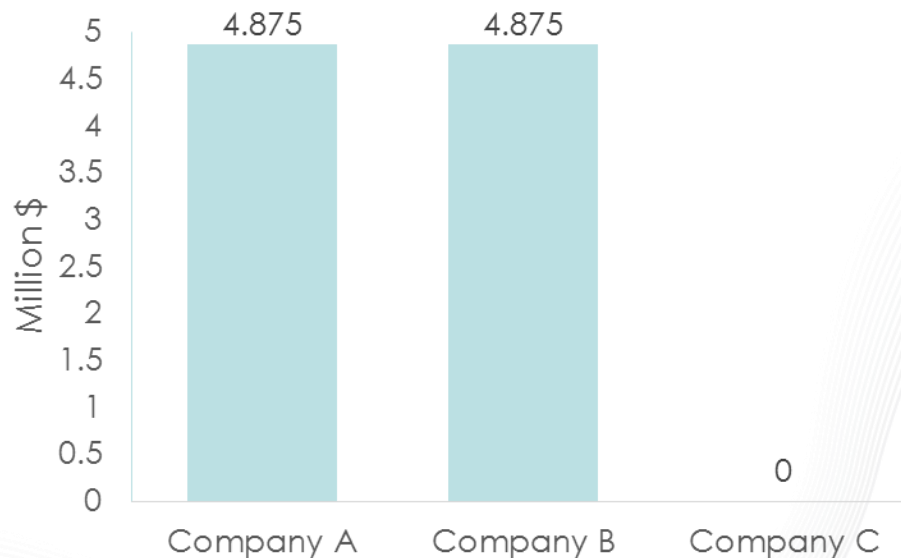


Maximizing Use of Funds

Smart Assays investment model

Hypothetic example: Same investment – 10M \$ for 3 companies

After Smart assays validation for all 3 companies (for 250,000\$)



After 6 months we find:

Company c – Did not succeed.

The rest of the investment can be divided for 2 companies only.

Prominent success stories

DRUG	TARGET/ MECHANISEM	INDICATION	DURATION OF VALIDATION (Months)
Blood Protein	Immunotherapy	Cancer	10
Small Molecules	Non-sense Mutations	Genetic Disorders	6
High Content Screen	Protein Assembly	Drug Discovery Platform	6
Peptide	Apoptosis	HIV Therapy	6

Early Stage at **Smart Assays**:

We offer

- Designing and planning work
- Providing original solutions as needed
- Experimental: Reproduction of experiments; Evaluation of drug candidates; Examination of suggested development directions and targets
- Proof-of-concept experiment will be designed and performed

Project Validation Milestones - Example

Month 1	Literature review Protocols writing and tech-transfer Writing of scientific work plan
Months 2-3	Feasibility Optimization of protocols Qualification
Months 4-5	Depending on the project: <ul style="list-style-type: none">- Full validation- Hits' validation- Screening- Development of additional assays
Month 6	SOPs and full report. Start tech transfer to client's facility.

Early Stage at **Smart Assays**

Your added value

- Independent scientific assessment
- Comprehensive assessment of a technology's potential, value and validity
- Industry work standards (internal QA)
- Design, create, document experiments
- Broad scientific support
- Working/Consultation with high level R&D experts
- Fully reproducible results
- Intellectual property obtained during due-diligence is client's propriety

Early Stage at **Smart Assays**

Full time employee (FTE) model

- Full time employee program for six months
- Tech transfer from academy
- Organization of materials by industry requirements
- Project feasibility
- Optimization and qualification of assays
- Full report and SOPs
- Tech transfer to client's facility
- All work is performed according to key milestones and go/no-go stages

Early Stage at Smart Assays

FTE- practical aspects

- Master work plan
- Weekly reports and meetings at Smart Assays
- Weekly planning
- Full and immediate transparency of experimental design and results on a “cloud”

FTE – at Smart Assays

Choosing to conduct your research with Smart Assays FTE program assures you:

- A PhD researcher
- 100% committed to conducting your R&D
- Provided with constant scientific support and management
- Works within a state-of-the-art equipped laboratory in high level QA standards
- Full documentation for reproducibility
- At the end of the project, if so agreed, your FTE researcher can transfer to your facilities for implementation or for further work on the project.



Our Services



Assay Development



**Scientific Due
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**Early Stage Projects'
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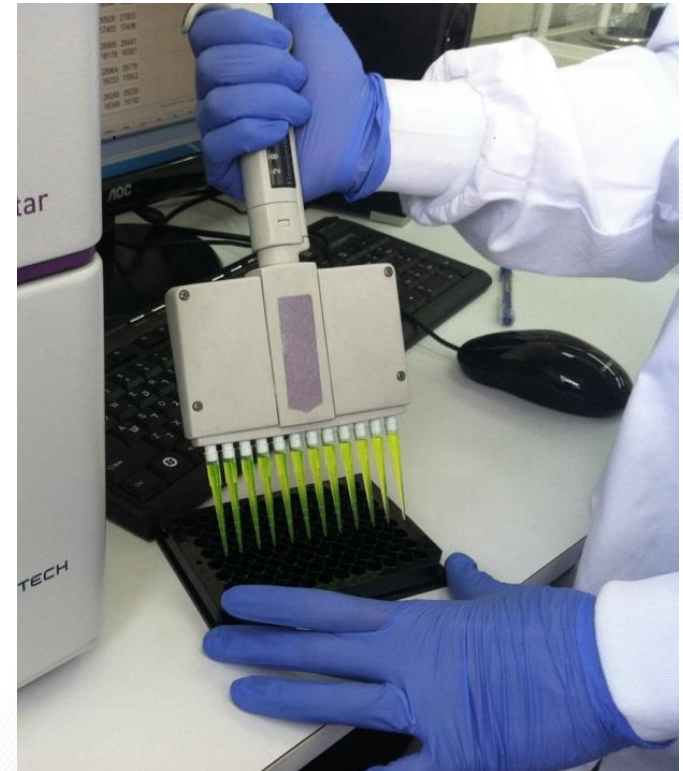
Research Histology



**Elaborate Custom
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Our Facilities

Smart Assays operates in a 350m² state-of-the-art facility, at the Weizmann Science Park, equipped with all necessary instruments and integrated QA system.



Management

Raphael Mayer, Ph.D.
Founder & CEO



Dr. Mayer is a graduate of Hebrew University & Rockefeller University, NY. Before founding **Smart Assays** Dr. Mayer was head of Assay Development Dep. At Quark Biotechnology Inc.

Author and co-author of 20 scientific publications

Alexander Faerman, Ph.D.
Head of Histopathology



Dr. Faerman is a cell biologist & histologist with 30 years of academic and industrial professional experience studying gene expression at the cellular, tissue and animal levels.

Author and co-author of more than 40 scientific publications and patents.

Some of Our Successes

For:



(TEVA) NASDAQ

Undisclosed



For:



Feasibility Study



For:



Method Development for Batch Release and a Mode of Action Research Approved by EMA



For:



Development of an A3AR Biomarker Test Kit to Predict Patients' Response to Company's Drugs



For:



Assay Development for HTS



For:



Scientific Due Diligence for Investors & Development of Methods for Characterizing a Product During Production for Batch Release



For:



Development of a New Drug Discovery Platform
Methodology which Combines Assay Development and Computational Chemistry
Resulting in a collaboration agreement with Roche



For:



Development of Methods for Protein & Antibodies Identification
In Human and Animal Serum



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