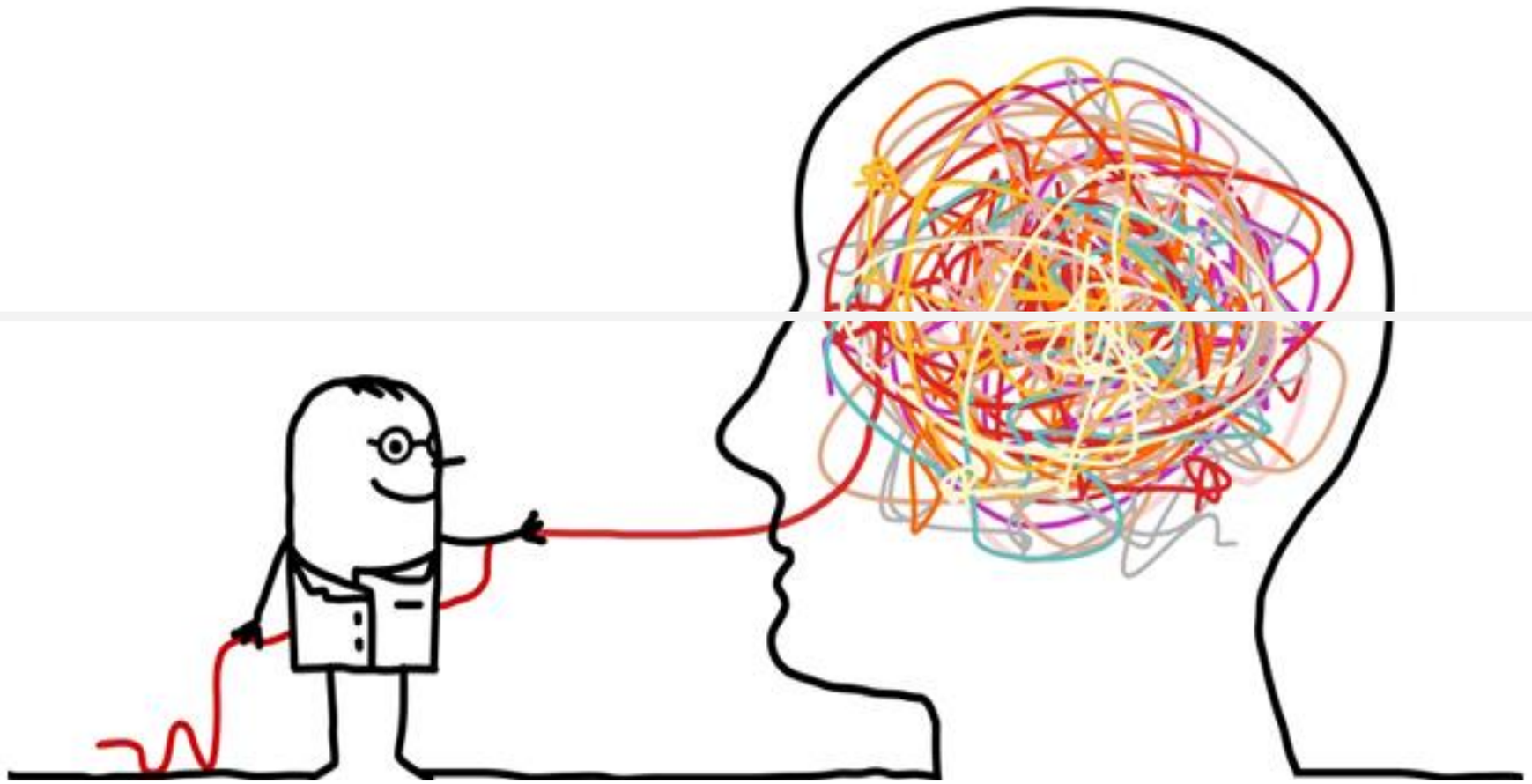
Technology Transfer Company

Designed Thinking for Innovation



Sheba Medical Center
Tel HaShomer
ISRAEL'S CITY OF HEALTH

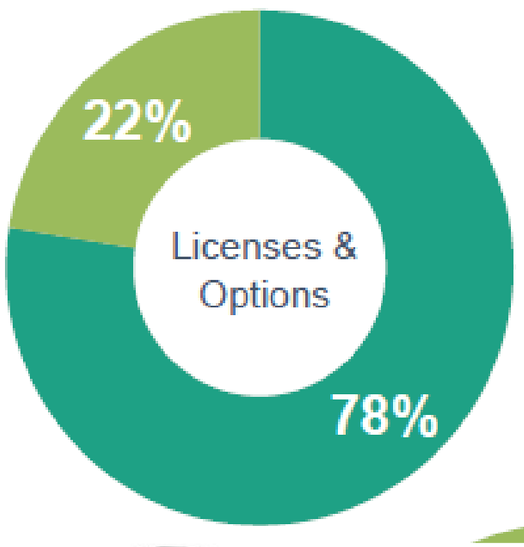
Academic & Hospital Contribution to The Industry 2018

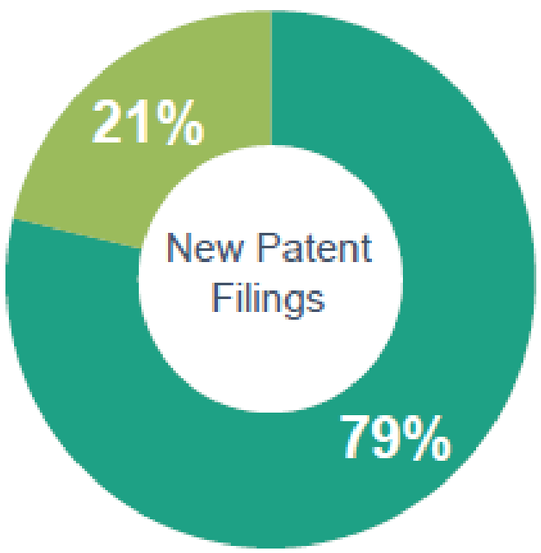
Putting Knowledge to Work – Israel TTOs 2018

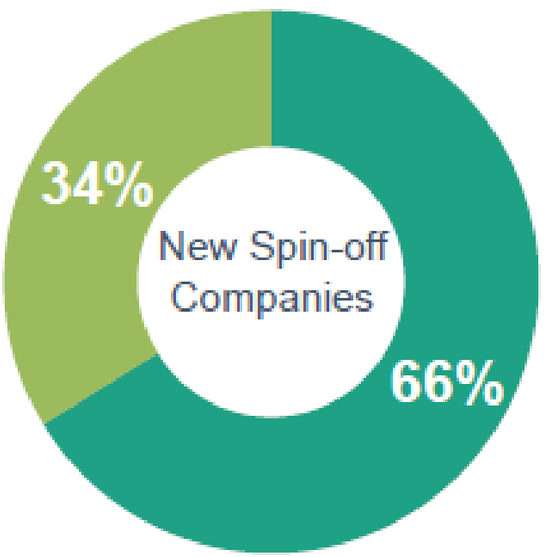
623 New patents Filed

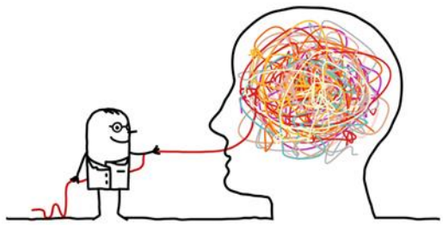
329 New Licensing & Option Agreements

74 New Spin-off Companies









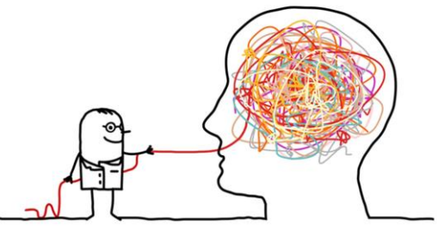
Universities &
Research Institutions

Hospitals & HMOs

Time for new Vision - BB&B
YOUR OPPORTUNITY

Research discovery related to clinical practices
Making a Difference in Treatment and Diagnosis of Human Diseases

Bedside →	Bench →	Bedside
Clinical Problem	**Team Solving Problem**	**Clinical application**
Clinical data	Tissue Bank and biological samples	Final prototype
Pathophysiology	Genomics	Clinical trials
Diseases	Transgenic	Product
Family trades	Stem Cell	
	Structural Biology	
	Imaging tools	
	Health IT and Informatics	
	Comparison with State of the art	
	Preclinical studies - animal models	
	Clinical Database	
	Basic Science - Disease Mechanism	
	Biological Depositories	



Design Thinking as a Strategy for Innovation

Design thinking is a **human centered approach** to problem solving.

Its a process built from People - **inspiration** gained by looking & listening to them.

Prototyping - **ideating** quickly to make things real.

Stories - getting things **implemented** by selling compelling narratives not "concepts".

Opportunity Assessment

Just ‘cause it looks cool doesn’t mean they will buy it…

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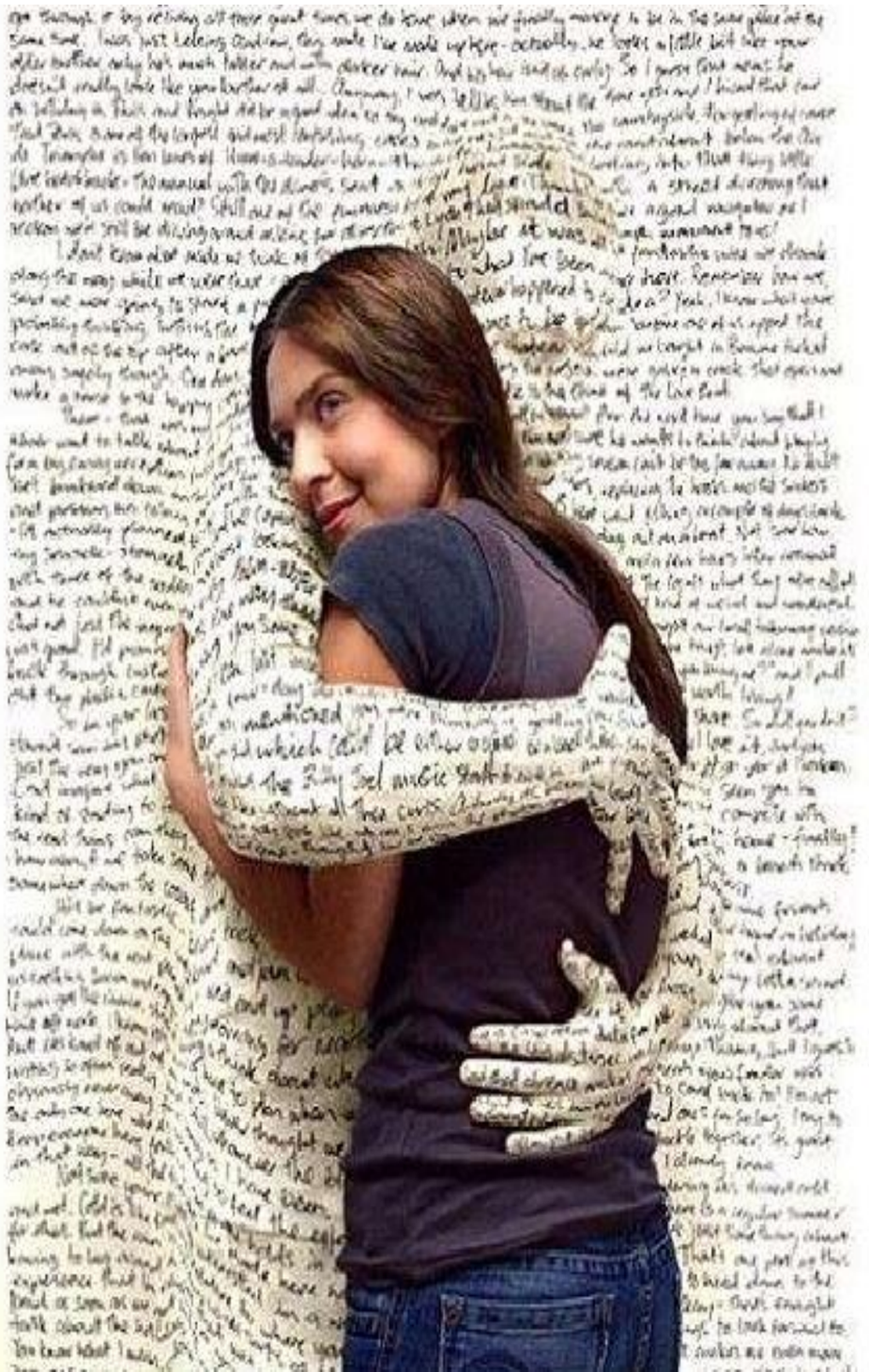
INSPIRATION

INSIGHTS

OBSERVATION

TELL STORY

EMPATHY



cultivate

empathy

Critical Thinking VS Creative Thinking

- Creative Thinking is a way of looking at problems from a fresh perspective to conceive something new and original.

- Critical thinking is the logical, sequential disciplined process of rationalizing and interpreting information to make informed judgments and/or decisions.

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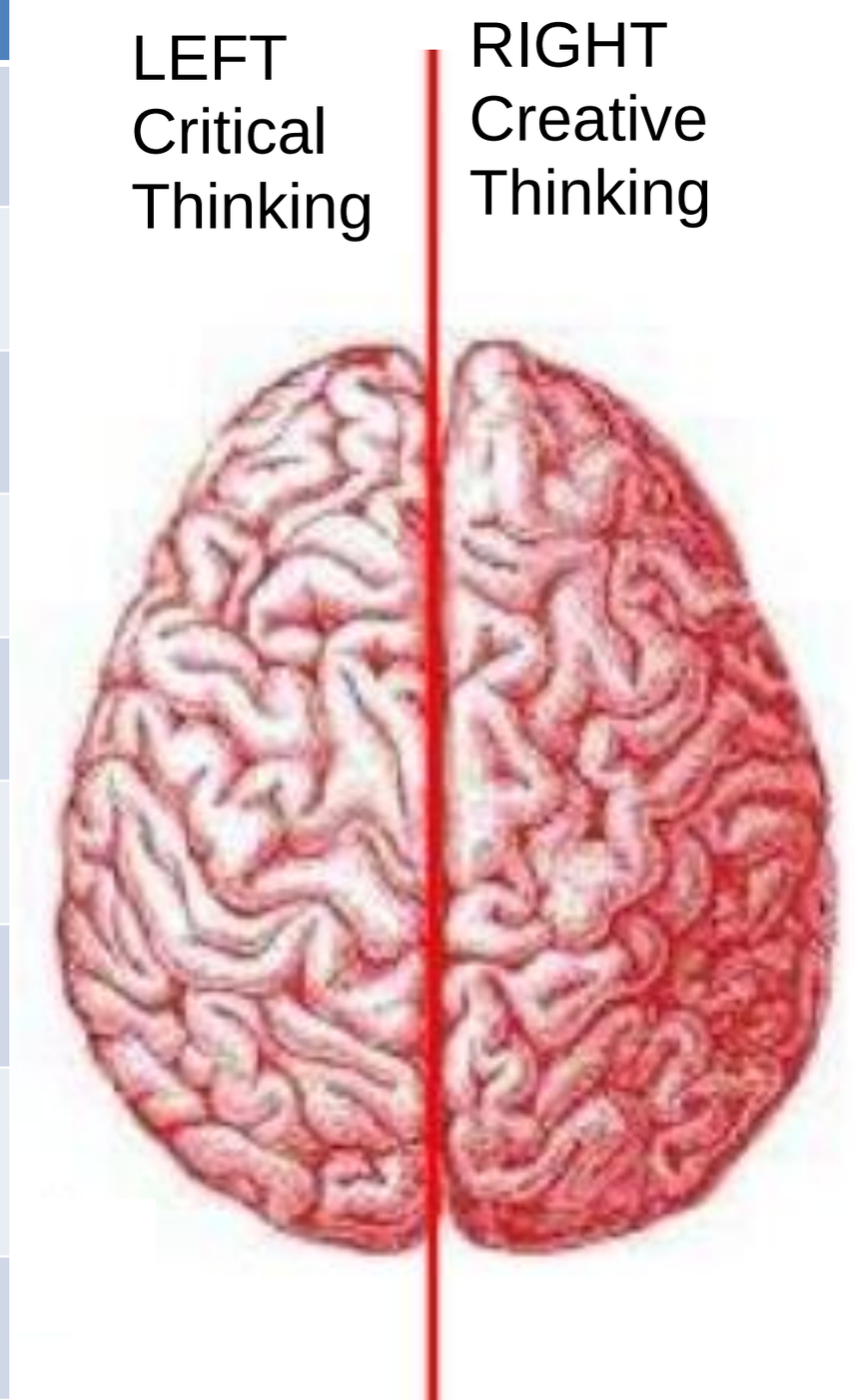
Critical Thinking VS Creative Thinking

Critical Thinking	Creative Thinking
Analytical	Generative
Logical	Intuitive
Sequential	Imaginative
Reasoning	speculative
Objective	Subjective
Vertical	Lateral
Probability	Possibility
Hypothesis testing	Hypothesis forming
Pattern User	Pattern Seeker



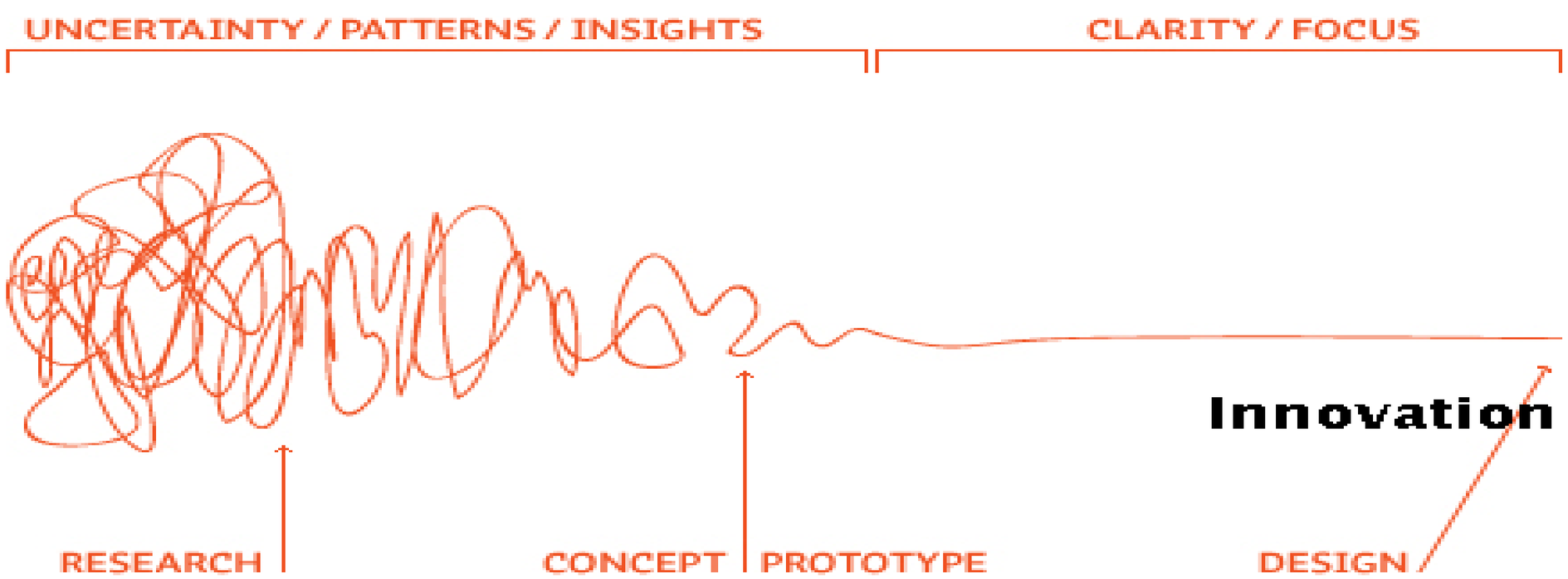
Design Thinking as a Strategy for Innovation

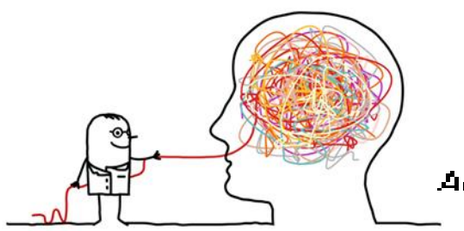
Design the way you lead, manage, create and innovate.

The design way of thinking can be applied to systems, procedures, protocols, and customer/user experiences.

The Process of generating an Idea

From Problem to Solution





Adapted from Central Office of Design

Design Thinking is Everywhere

Medical Services

Process Medical Education

Medical Devices

Diagnostic tools & Disease Management

Therapeutic compositions Drug Delivery

Health IT Telemedicine Medical Simulation

Image Process Hospital at Home

The 3 Key Ingredients Needed for A Great Biz...

Right People

Right Product

Right Market

INVENTIONS

1911

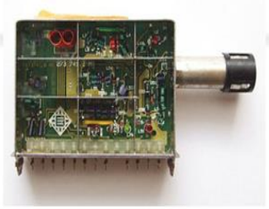
1912

1913

1914

1915

1916



1917

1918

1919

1920

1921

1981

1982

1983

1984

1985

1986

1987

1988

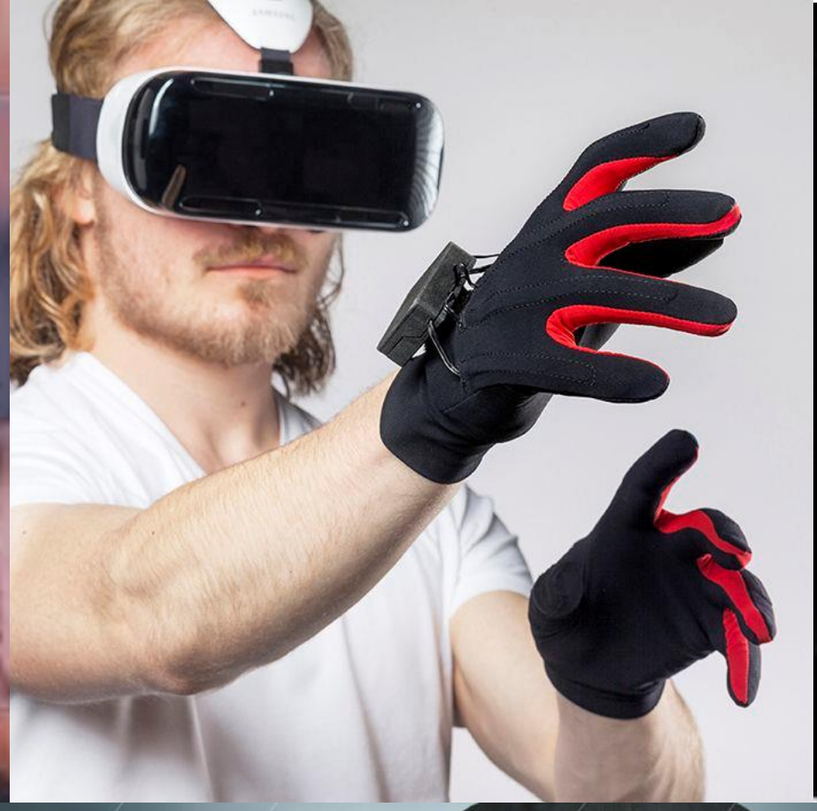
1989

1990

1991

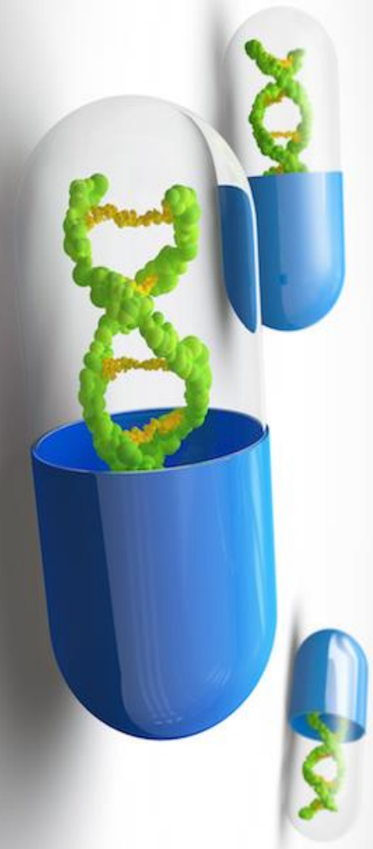

SingularDTV.com

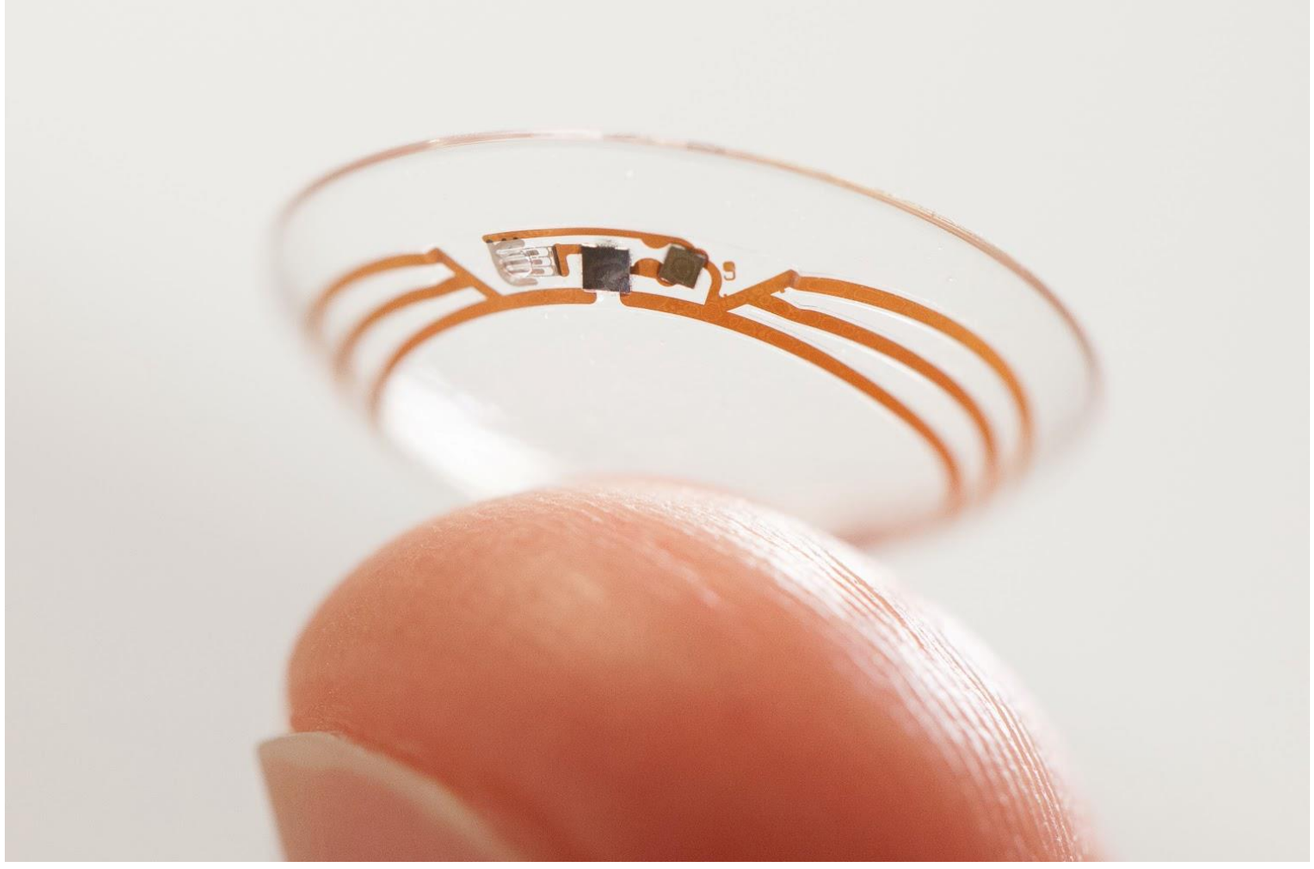

CONTROL DASHBOARD v1.5
SYNCYNG DATA TO CLOUD...
Camera
Games
Messages
Movies
Tasks
Navigation
Finances
Health
Settings
Internet

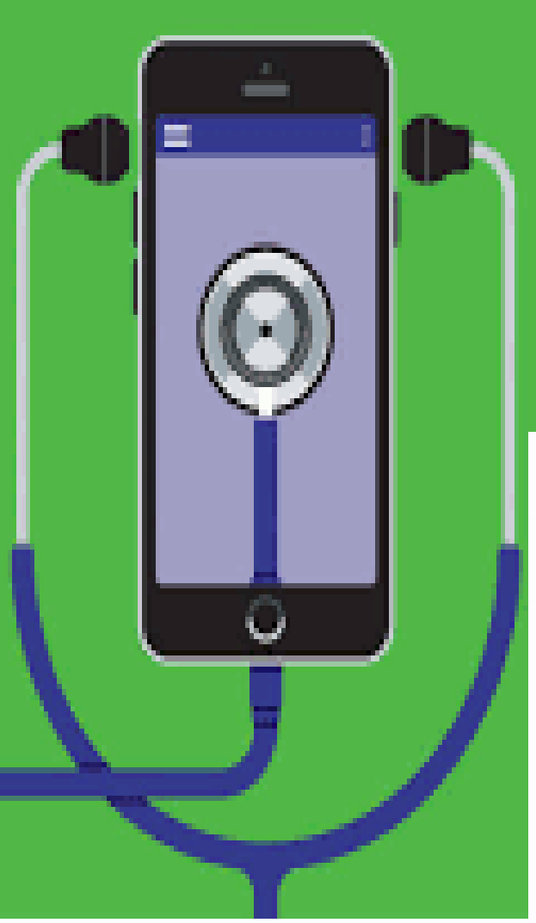


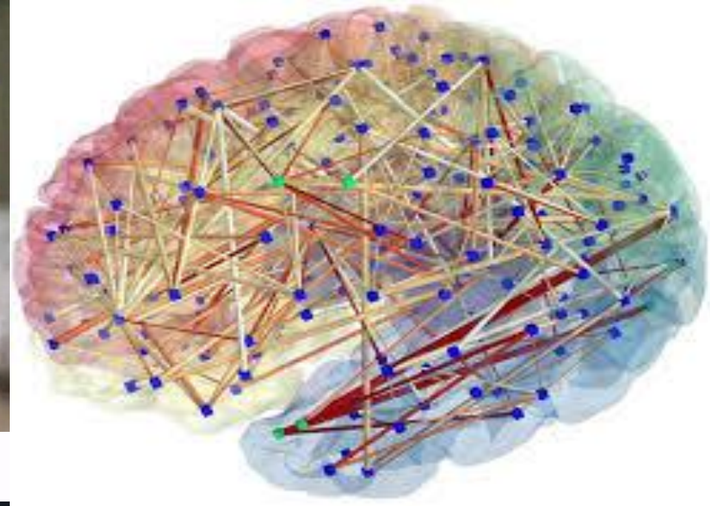

iPhone G


scan complete







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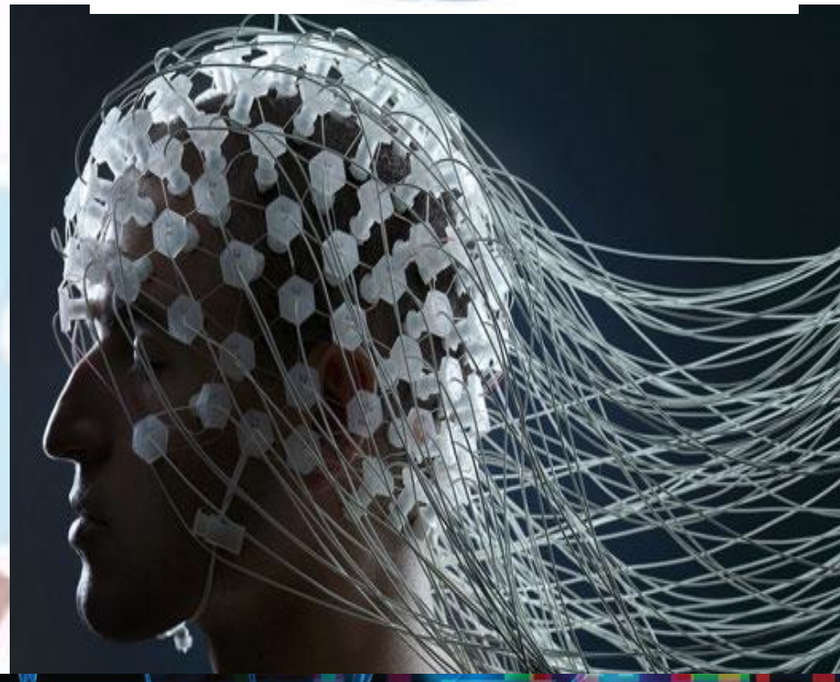

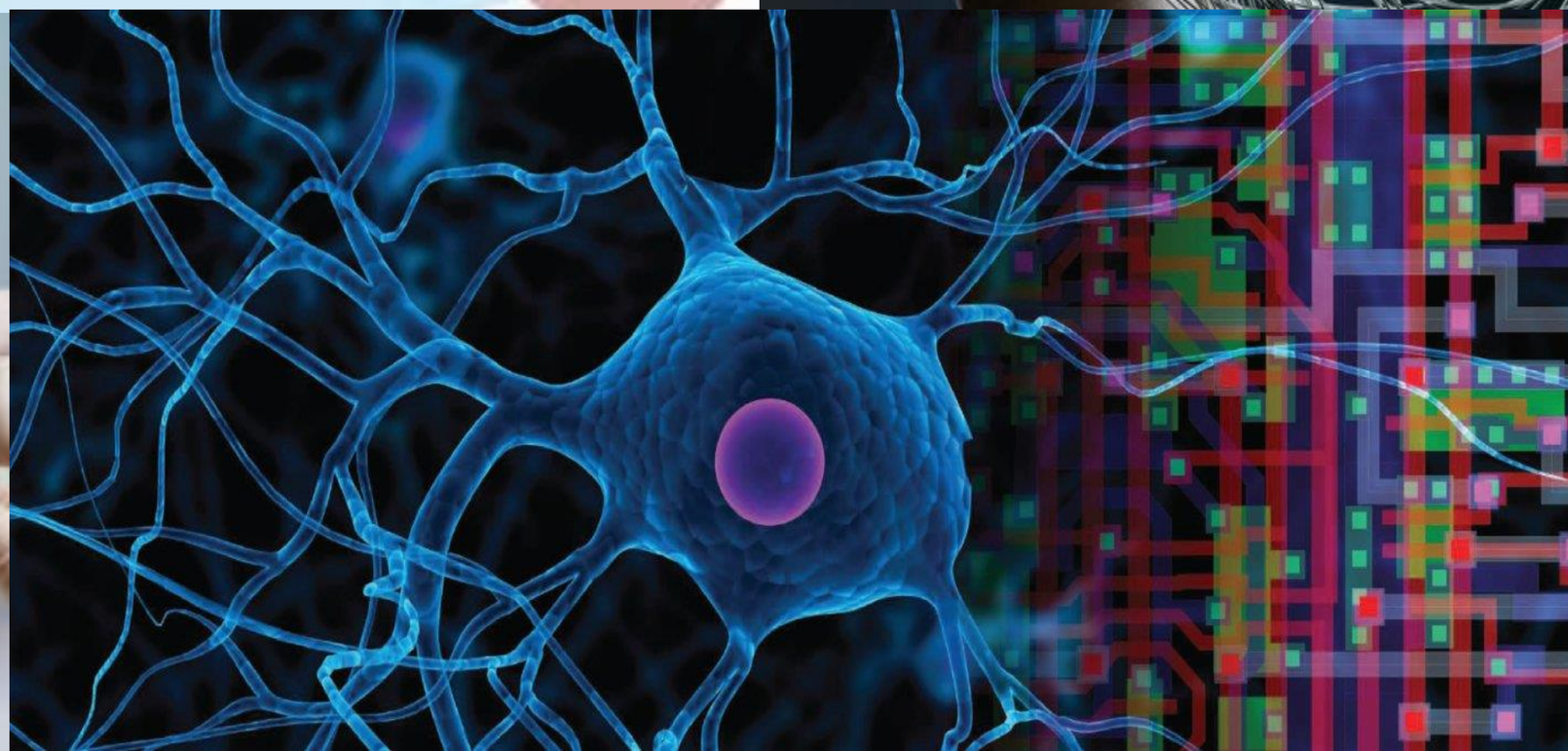


Creativity
Innovation
Vision
Inspiration
Goal
SUCCESS
Training
Focus
Teamwork
Motivation
Education

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Innovation Success Factors

Innovative People
Innovation as a Key to Success
Innovative Organization
Innovation Strategies

The Opportunities for Medical Research

Translational Research Powerhouse
From Idea to a Product

Idea-genesis

Animal modeling of human diseases – Tissue Bank

Feasibility studies on animal models - Pathology

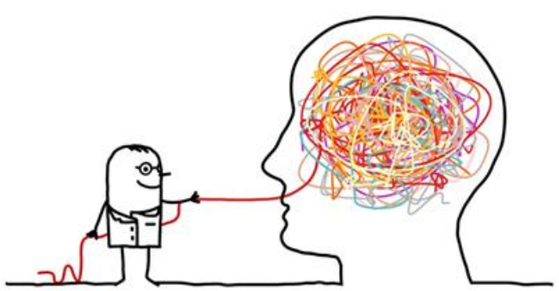
Helsinki Committee documentation

Clinical studies

"One Stop Shop"

Establishing IP

Developing IP with partners



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AT TEL HASHOMER

Scientific Discoveries to Technology Transfer

Our Aim:

To promote the transfer of Sheba's technology for society's use and benefit while generating unrestricted income to support research and education.

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It Takes Time to Innovate

Case Study

Success Commercialization

Technology	Lisnensor	Business Milestone
A minimally invasive, surgical transapical technology and a next generation percutaneous, transfemoral technology for Aortic Valve Replacement.	**Ventor**	Ventor was Accuired by Medtronic
Fibring based adhesive glue for wound hilling - EVICEL® Fibrin Sealant produce by ETHICON	**Biologic Glue**	Johnson & Johnson Acquired Omrix Biopharmaceuticals
Development of novel monoclonal antibody (mAb) targeting the immune checkpoint protein CEACAM1 for treatment of advanced or recurrent malignancies, including melanoma, non-small-cell lung, bladder, gastric, colorectal, and ovarian cancers.	**cCAM**	cCam Biotherapeutics is now a wholly owned subsidiary of MSD
A novel MRI-based tool for the high resolution depiction of contrast clearance and accumulation, allowing for the differentiation of brain regions with high and low vascular activity	**Brainlab**	THM gets Royalties
A novel based mechanism composition and an innovative strategy for acute MS treatment, targeting acute MS relapse with the potential to significantly reduce associated residual disability.	**RELTAR**	IND - application
Novel Mitral Valve technology	**Innovalve**	Toward first in Man

Innovation In Ophthalmology

Sanoculis Novel Glaucoma Treatment	Sanoculis Ltd. is an ophthalmic medical device company which develops a surgical solution for the 3rd-4th lines of Glaucoma treatment. Its Minimally Invasive Micro Sclerostomy (MIMS) device and technique are currently under clinical studies in India and Israel.
BELKIN LASER	BELKIN Laser presents a unique one-second glaucoma laser treatment, aimed at revolutionizing access to glaucoma care by becoming the first-line choice for glaucoma therapy for every patient, all over the world.
SpringVision	Spring Vision is a venture of innovative ways to use spectroscopy and spectral imaging in today medical world.
EVERADS THERAPY	Everads-Therapy is developing a revolutionary drug and cell delivery system for delivering injectable therapies to the back of the eye via the extravascular matrix of the choroid
Eximore	Eximore's passive drug delivery vehicle, provide a non-invasive punctual plug (sits in the tear duct), is able to load much more drug and even two different drugs into a tiny insert and have it released over six months (and more) at a controlled pace.
EpiTech	non-invasive magnetic stimulation is a breakthrough in the treatment of Dry eye Syndrome. This solution increases the durability of the corneal surface and therefore preserves the integrity of the cornea even under extreme conditions, as demonstrated in the feasibility studies in a rabbit model

Innovation In Ophthalmology

ACCUTOM	Development of a Pupillometer-Based Objective Chromatic Perimetry. This technology can be applied for ophthalmology applications - new perimetry technique can be used for objectively assessing VF defects and retinal function in patients with retinal dystrophies and for neurodegenerative diseases.
Ari Lesno	Novel disposable device for ocular muscle resection surgery - for Strabismus repair.
Ilia Piven	Toroidal Glaucoma Drainage Device - novel, minimally invasive device, improving outflow of eye fluid and has the potential to advance the surgical treatment of glaucoma. The device and methods of use thereof enable fine regulation of the eye fluid outflow .

תולה לכה


danke
謝謝
ngiyabonga
teşekkür ederim
спасибо
dank je
thank you
gracias
terimakasih
mauruuru
hvala
dziękuję
mochchakkeram
go raibh maith agat
obrigado
sukriya
kop khun krap
aríngato
dakujem
merci
grazie
terima kasih
감사합니다
мерси

HOW WE DO IT

A. Promotional Tools

Researcher Handout, Fact sheets, Publications , Exhibits, conference, Meeting, Internet marketing, Advertising

B. Proactive Technology Transfer Tools

- ✓ Cooperative Research and Development Agreements
- ✓ A Joint Funding Agreement
- ✓ Research Fellowships
- ✓ Internal Funds
- ✓ Patents
- ✓ NDA , MTA, IIA, MOUs, Researcher agreement, Fund Applications
- ✓ Patent Licenses

HOW WE DO IT

- ✓ **Marketing Plan**
- ✓ **Defining the Target Users and Market:**
- ✓ **Market surveys – Market analysis - potential users - companies – Competitors – Technology advantages - ranking of companies as potential licensees**
- ✓ **Marketing Strategies - Advertising - Publicity -**
- ✓ **Evaluation**
- ✓ **Marketing plan and sample market search conducted for an invention**

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HOW WE DO IT

- Maintain ties with investigators to promote awareness of research developments – Identification
- Maintain industry contacts and awareness of potential commercial applications
- Evaluate new technologies for patentability and commercial potential
- Assess the need for patent rights
- Facilitate the preparation and filing of patent applications

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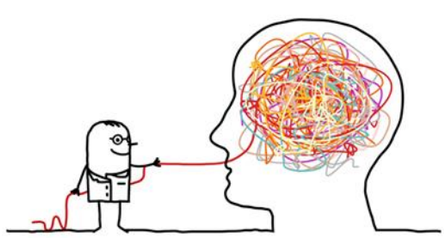
HOW WE DO IT

- Market inventions to potential licensees
- Negotiate license agreements
- Assist in the creation of start-up companies (if applicable)
- Administer executed license agreements and issued patents
- Licensing Agreement Management
- Activity Reports and follow-up
- Royalty Sharing

Identify Your Assets

Inspire Your Team

Interact With Company



Clinical and Innovation Strategies With Company

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Evaluation

Discuss with inventors

- Inventor provides technical expertise
- Inventor may also provide industry contacts

Discuss with others

Contact industry experts

Typical criteria

- Invention development status
- Inventor profile
- Intellectual property position
- Commercial potential
- Market analysis
- Licensing potential

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Marketing Strategy

- When do we start?
  - Waiting for publication
  - Waiting for data
- Individual vs. Portfolio
- Contact companies and provide information
  - Shotgun vs. Rifle approach
  - Sources of leads
- Steps
  - Create marketing content
  - Create list of potential licensees
  - Contact potential licensees
  - Follow-up

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Key License Terms

Financial terms

- **License issue fee**
- **Annual minimum payments**
- **Earned royalties**
  - **% of Net Sales**
  - **$ per product sold**
- **Reimbursement of patent costs**

Non-financial terms

- **Definitions**
- **Grant**
- **Development milestones & diligence provisions**
  - **Prototype**
  - **First Commercial Sale**
- **Warranties and indemnities**
- **Infringement actions**
- **Dispute resolution**

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Commercialization Approaches

- **Licensing to existing companies (most common)**
- **Facilitating the creation of start-up companies for Licensing Agreement**

Overview - License Agreements

- **Research and Option, Exclusive, Non-exclusive, Co-exclusive**
  - **Terms to monitor include regular submission of progress and/or royalty reports and payment of:**
    - **Upfront license issue fees**
    - **Minimum annual royalties**
    - **Milestone payments**
    - **Running royalties on product sales**

Translating the discoveries of the future
TTO Activities

The Technology Transfer mission is to bring the benefits of discovery to the world, by implementing the commercialization of Sheba's innovations for the public good by:

- **Encouraging and supporting invention disclosure;**
- **Encouraging and supporting entrepreneurs;**
- **Effecting technology development and licensing;**
- **Increasing available research funding; and**
- **Protecting and managing the intellectual property**

Lateral Technology Transfer Company

Sheba Medical Center

Ministry of Health – Central Laboratories

Barzilai Medical Center

Ziv Medical Center

Galilee Medical Center

Wolfson Medical Center

Mental Health Center