

**Fulcrum SP**

**Stable Protein Solutions**

# **FULCRUM SP Ltd. - The Company**

- **The company was founded in January 2001, after ten years of extensive basic research in the laboratories of our scientific founders, Prof. Altman and Prof. Shoseyov of the Hebrew University of Jerusalem.**
- **Wholly owned by founders and private investors.**
- **Patent pending for the entire Stable Protein (SP) group, including all applications.**
- **the Hebrew University granted Exclusive, world wide, unlimited license for the duration of the Patent.**
- **Lab & research facilities in Rehovot, Israel.**



# The Team

**Mr. Zvi Pe'er**, CEO. Founder & former manager, Romtech Electronics Ltd., responsible for bringing Romtech to Tel Aviv Stock Exchange.

**Mr. Nimrod Litvak**, Chairman of the Board, Economist, Founder of Fulcrum SP Ltd.

5

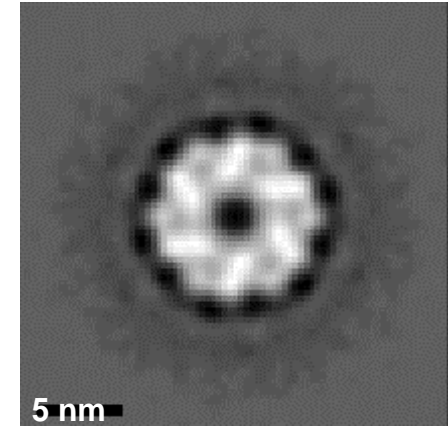
**Dr. Amnon Wolf**, CTO, Formerly affiliated with Weizmann Institute and UC Berkeley, Project Manager, Peptor Ltd.

5

**Prof. Arie Altman**, Scientific Director. Chair, the Institute of Plant Sciences and Genetics in Agriculture, The Hebrew University of Jerusalem.

**Prof. Oded Shoseyov**, Scientific Director. The Institute of Plant Sciences and Genetics in Agriculture, The Genetics in Agriculture, Hebrew University of Jerusalem, Scientific founder of CBD-Technologies Ltd.

# The Technology



Electron Microscope image

## The protein complex (SP1)

- SP1 is a ring-like nano-particle, its 3-D arrangement is known.
- SP1, is stable under extreme conditions.
- SP1 has an ability to bind small molecules.

*Wang , et al . Plant Physiol. 2002 Oct;130(2):865-75.*

*Dgany , et al. (2004), J. Biol Chem, 3;279(49):51516-23.*

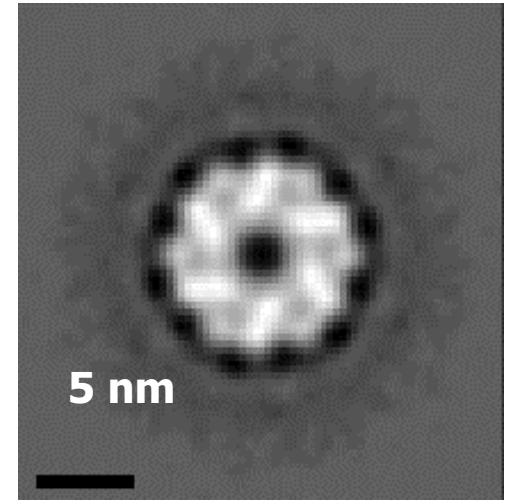


# Fulcrum SP Technology

- **SP1 is isolated from plants or as a recombinant protein from *E. coli*.**
- **SP1 (unlike most proteins) is extremely stable even under extreme conditions (high temperatures, detergents, extreme pHs) and resistant to proteases.**
- **SP1 has a repair and protection capability at low concentrations**
- **SP1 activity does not require externally added energy source**
- **Low cost of production**
- **SP1 spontaneously assembles into a 11 nm, 12 mer ring-like particle**

*Wang , et al . Plant Physiol. 2002 Oct;130(2):865-75.*

*Dgany , et al. (2004), J. Biol Chem, 3;279(49):51516-23.*



# Applications

## Protein Stabilizer

- Diagnostics & Molecular biology  
Reagents & Tissue culture media
- Skin & Hair care products
- Industrial enzymes

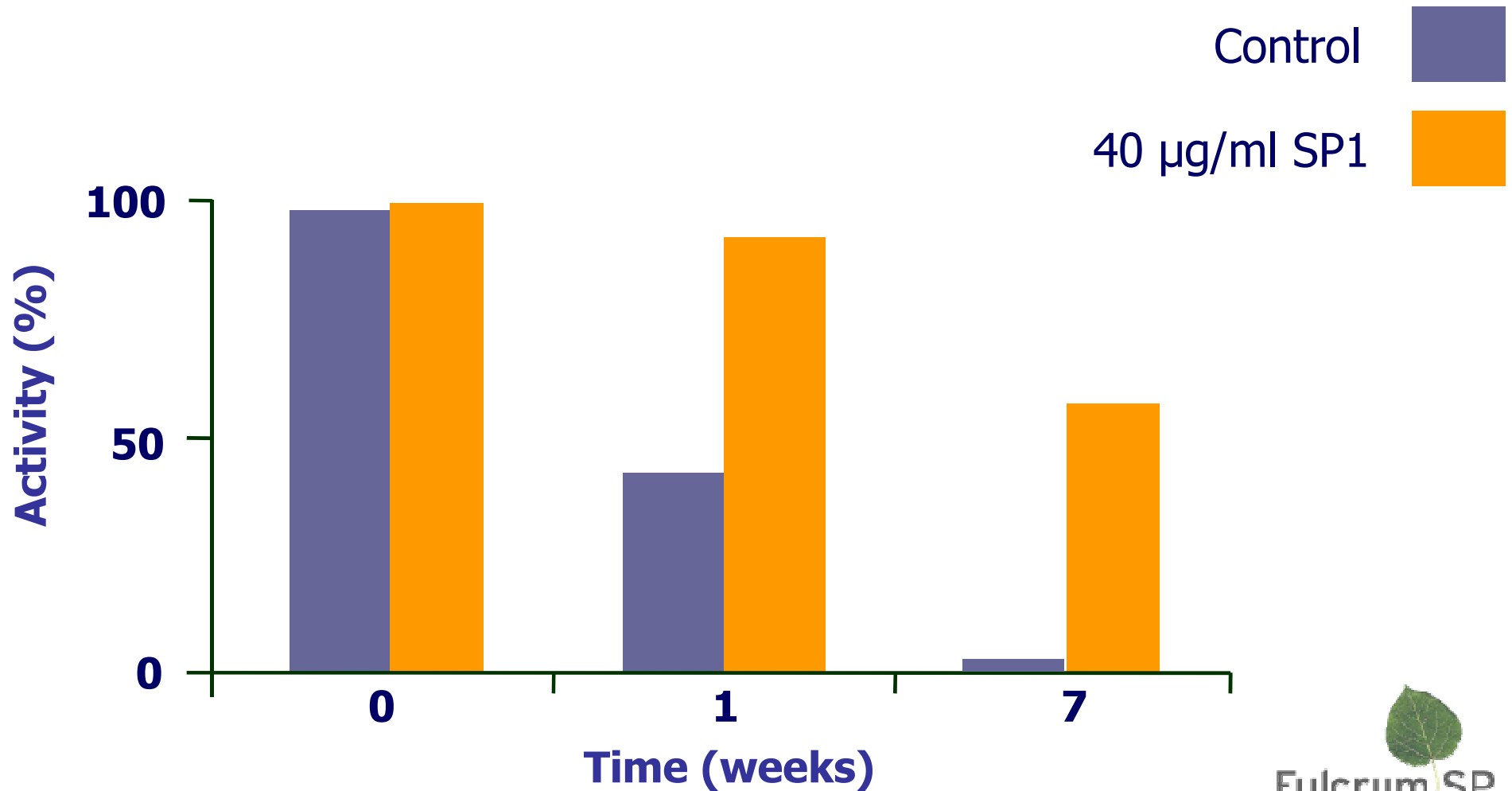
## Nano Bio Materials

## Nano Bio Pharma Ltd.

**Proteins have multiple applications  
but their inherent instability limits  
their widespread use**

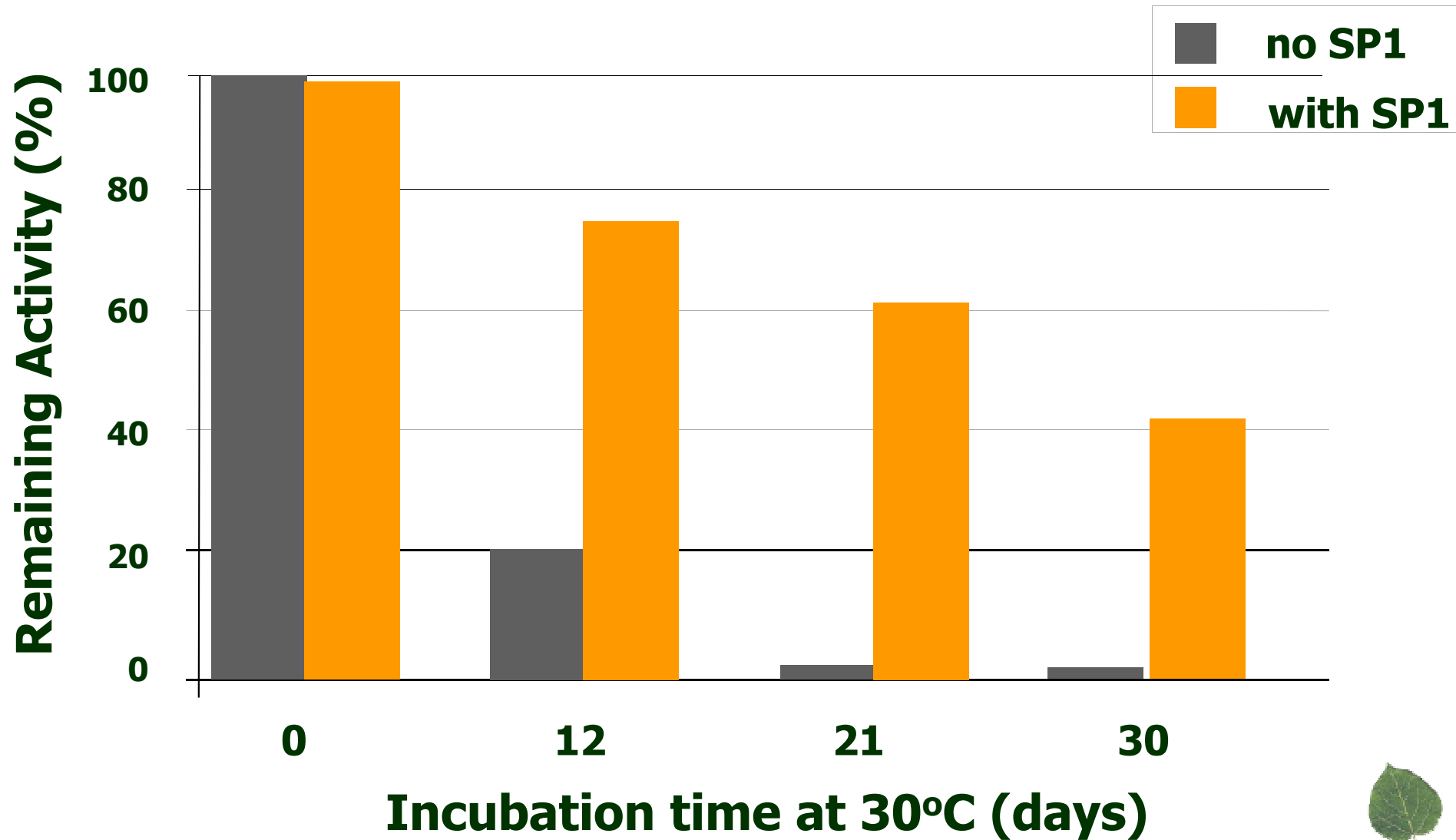
# Diagnostics

SP1 improves the performance of commercial ELISA-based diagnostic kits ( $\beta$  site)



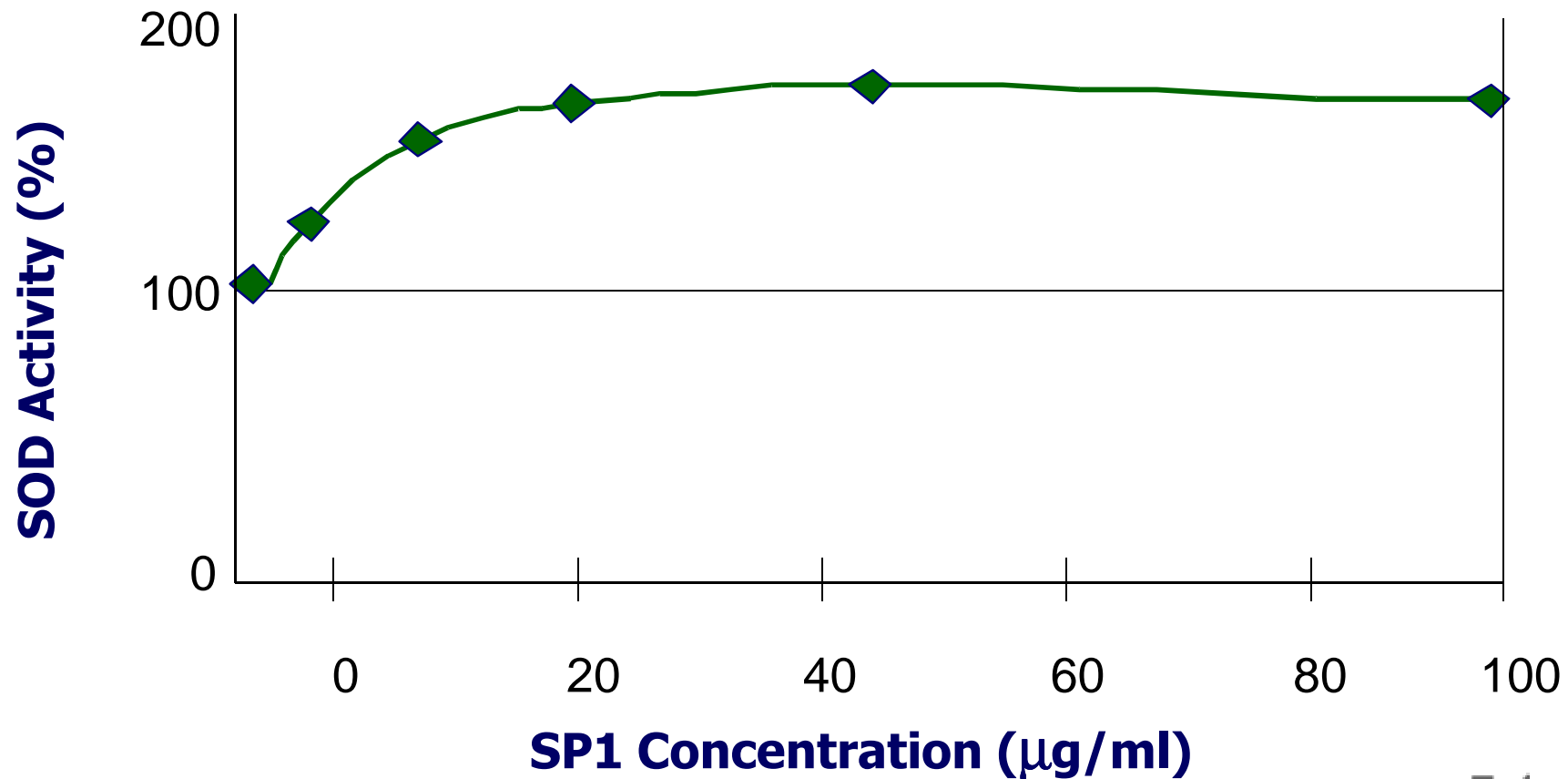
# SP1 Stabilizes Industrial Enzymes

Example: A Laundry detergent enzyme



# Skin Care

SOD activity is stimulated by SP1. (Superoxide Dismutase is an enzyme that protects the skin from free radicals.)



# SPGuard™: A ready-to-use solution for stabilization of HRP conjugates



# **SPBoost™: 10X booster for standard stabilizers for HRP conjugates**



# Fulcrum's Advantage

Market competition includes stabilizers (animal derived proteins such as albumin & casein), polymers (polyethelyneglycol, PEG), and sugars (glycerol).

## The Fulcrum SP Competitive Edge

- **Repair capabilities**
- **High stability**
- **Natural and Safe** (non animal source)
- **Low Cost** (requires lower concentrations)



# International Recognition

Fulcrum SP attended the Capital IT Conference in Paris, Spring 2002, and was awarded:

- Top prize for “International Potential of the Company”
- One of the top four for “Innovation Potential of the Product”
- One of the top four for “The Best of the Best 40s”





**Fulcrum SP**

**Stable Protein Solutions**