To enhance and prolong human life

NETWORK IMMUNOLOGY

CORPORATE FACTS

Location: Vancouver, BC (UBC spin-off)

Founders: Geoffrey Hoffmann and George Hoffmann

Intellectual Property: 6 Patent Applications

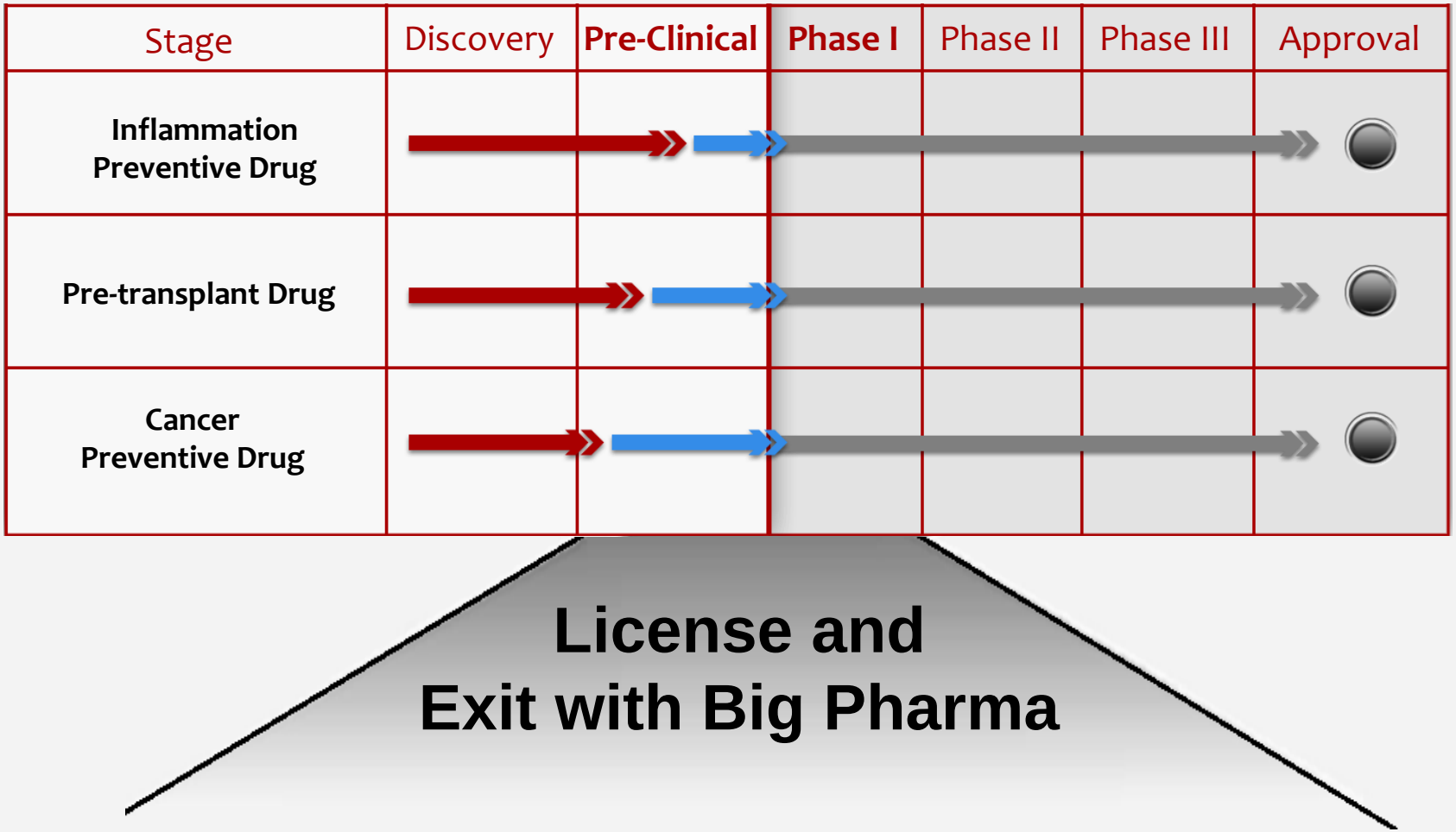
Lead Product: Preventive Drug for Inflammatory Disease

Team: 5 Directors, 4 Scientific Advisory, 3 Management

Financing Raised to Date: $1.1M

Seeking: $4M for pre-clinical toxicology and Phase I Trial to optimal Exit

PIPELINE AND EXIT



NETWORK IMMUNOLOGY

PRODUCT

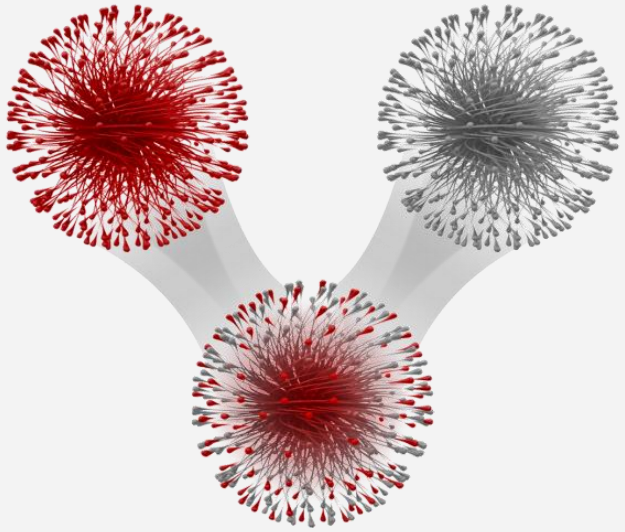
TEAM

OPPORTUNITY

PRODUCT

IMMUNE SYSTEM UPGRADE

We have the technology to combine two immune systems, to create a stronger immune system.



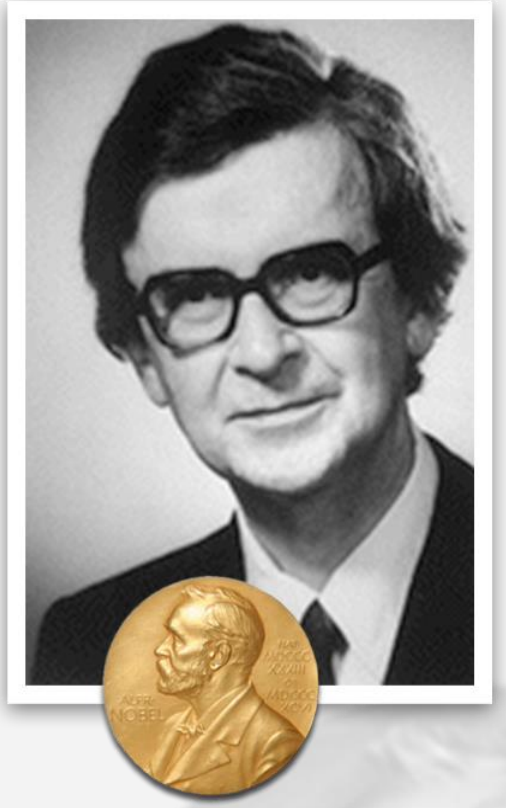
Implications:

For Inflammatory diseases

→ Fundamentally strengthen your immune system

HISTORY OF IMMUNE NETWORK THEORY

Dr. Niels Jerne
Immune Network
Hypothesis;
Awarded
Nobel Prize in 1984



Dr. Geoffrey W. Hoffmann
Developed Immune Network Theory
From 1974 to Present
Leading Authority of Theory Today

HISTORY OF IMMUNE NETWORK THEORY

1974
Niels Jerne formulates immune network hypothesis

1984
Jerne wins Nobel Prize for immune network theory

1985
Immunologists are unable to resolve the IJ paradox (central to network theory), and they leave the network paradigm

1994
Hoffmann publishes a paper on principle of co-selection, with the resolution to the IJ paradox

2008
Hoffmann and Leung discover a new co-selection phenomenon

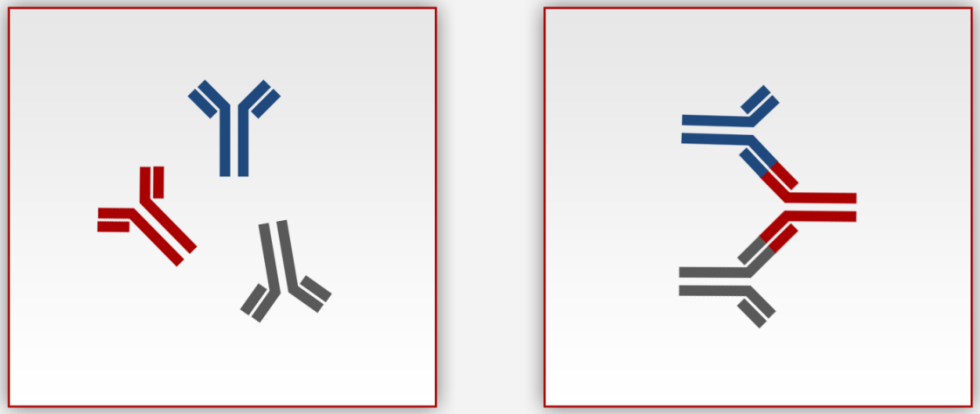
2010
Extension of theory

2014-2016
Data obtained supporting co-selection based technologies

IMMUNE NETWORK THEORY

MAIN PREMISE:

The immune system is composed of cells and antibodies that interact with one another as a network



- Understanding these network interactions is critical to understanding the adaptive immune system
- We are the only company worldwide developing technologies based on this understanding

EXTERNAL VALIDATION OF PLATFORM

- **IRAP Canada (Government Funding)**

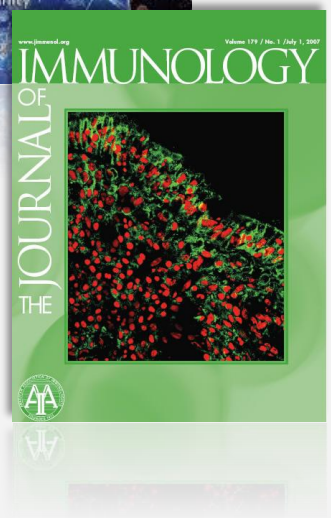
- **PREVENT (Centre of Excellence)**

Publications in Peer Reviewed Journals

NETWORK IMMUNOLOGY

Hoffmann, G.W. "Co-selection in immune network theory and in AIDS pathogenesis." ***Immunology and Cell Biology***, 72, 338-346, 1994.

Kion, T. A. and Hoffmann, G. W. "Anti-HIV and anti-anti-MHC Antibodies in Alloimmune and Autoimmune Mice", ***Science***, 253, 1138-1140, 1991.

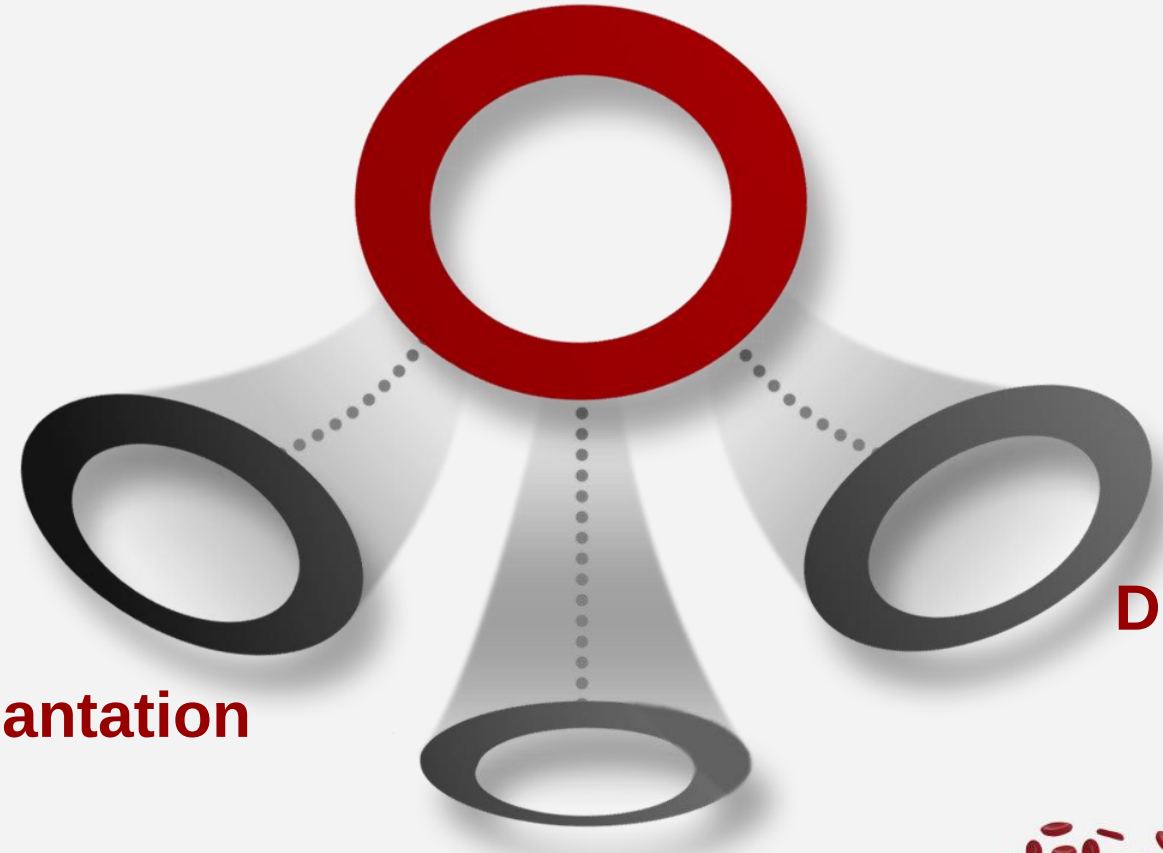


Hoffmann, G.W. " A Theory of Regulation and Self-Nonself Discrimination in an Immune Network", ***European Journal of Immunology***, 5, 638-647, 1975.

ONE PRINCIPLE, MANY APPLICATIONS

We have discovered a fundamental principle of the immune system.

1 Principle



Transplantation

Autoimmunity

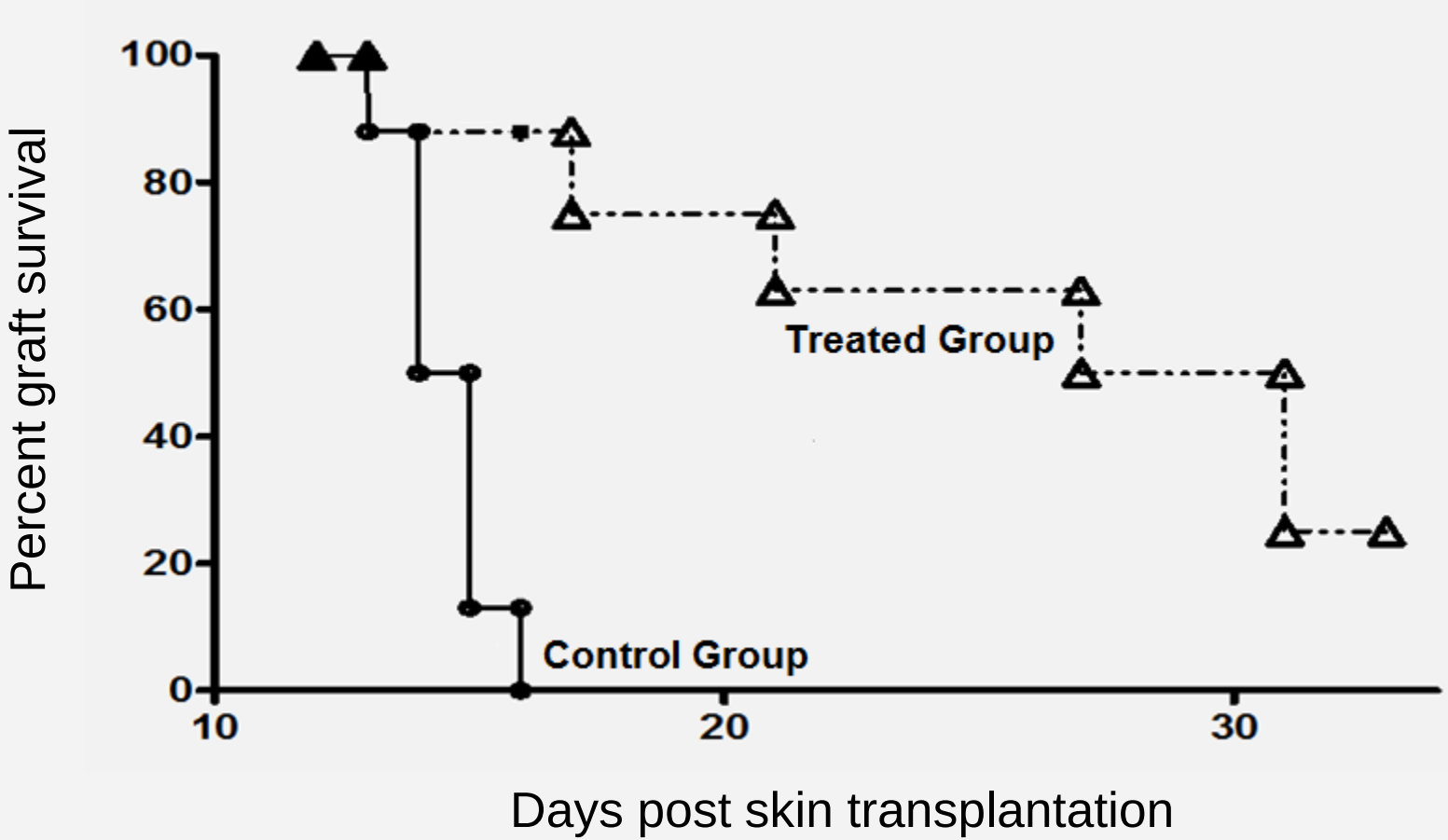
Cancer, Degenerative Diseases

PRE-TRANSPLANTATION THERAPY

Proof of Principle

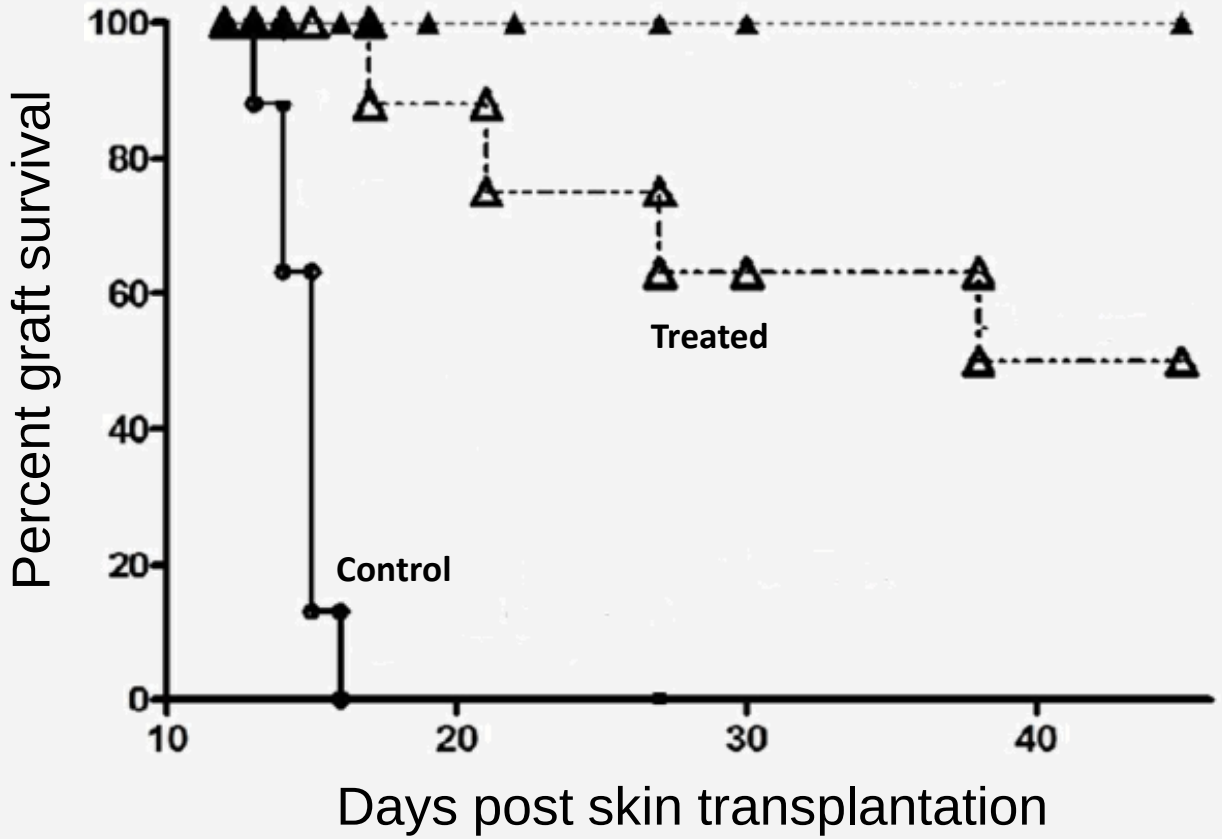
- Technology transformed immune systems of one group of mice to be compatible with those of another group of mice.

First Experiment: Prolonged Transplant Survival



→ Subtle perturbation of the immune system caused 100% enhancement of skin graft survival time to day 30 <u>without the use of immunosuppressant drugs.</u>

Second Experiment: Further Extended Transplant Survival



Increase of approx. 200% duration of skin graft survival in treated (Δ) versus control (●) was observed

Note: Skin graft transplanted into mice with same genetic background showed no rejection (▲)

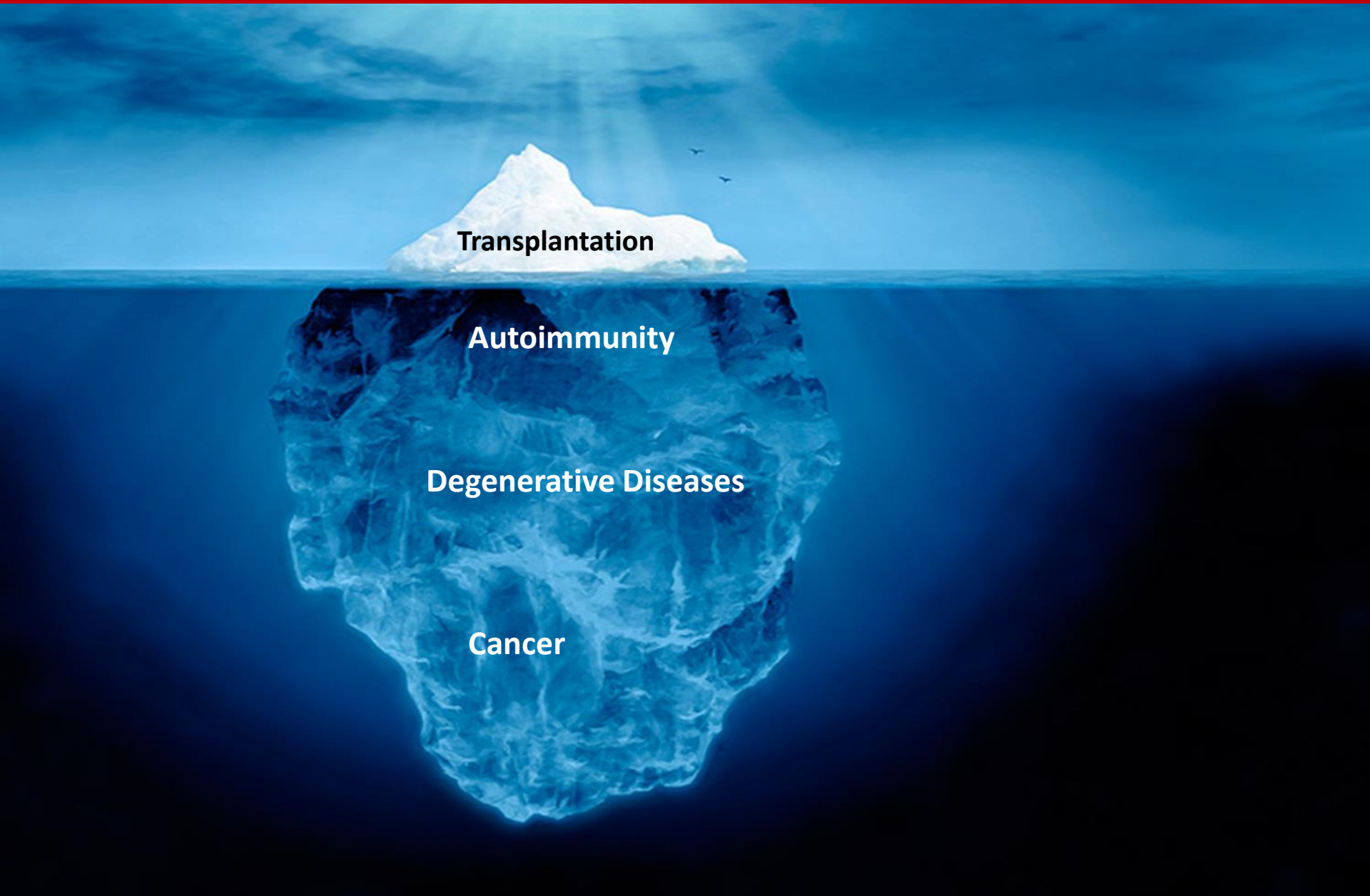
SUMMARY OF KEY DATA

- First experiment – 100% enhancement of skin graft survival time without immunosuppressant drugs
- Second experiment – 200% enhancement of skin graft survival time without immunosuppressant drugs
- No loss of self tolerance, no loss of ability to respond to third party tissue
- Design of experiment based on the symmetrical immune network theory

UNIQUE METHOD OF ACTION

- This method does not involve suppressing the immune system
- Immune system plays a positive and active role in the technology
- Expected to remove need for harmful immunosuppressant drugs

IMPLICATIONS OF THE DATA

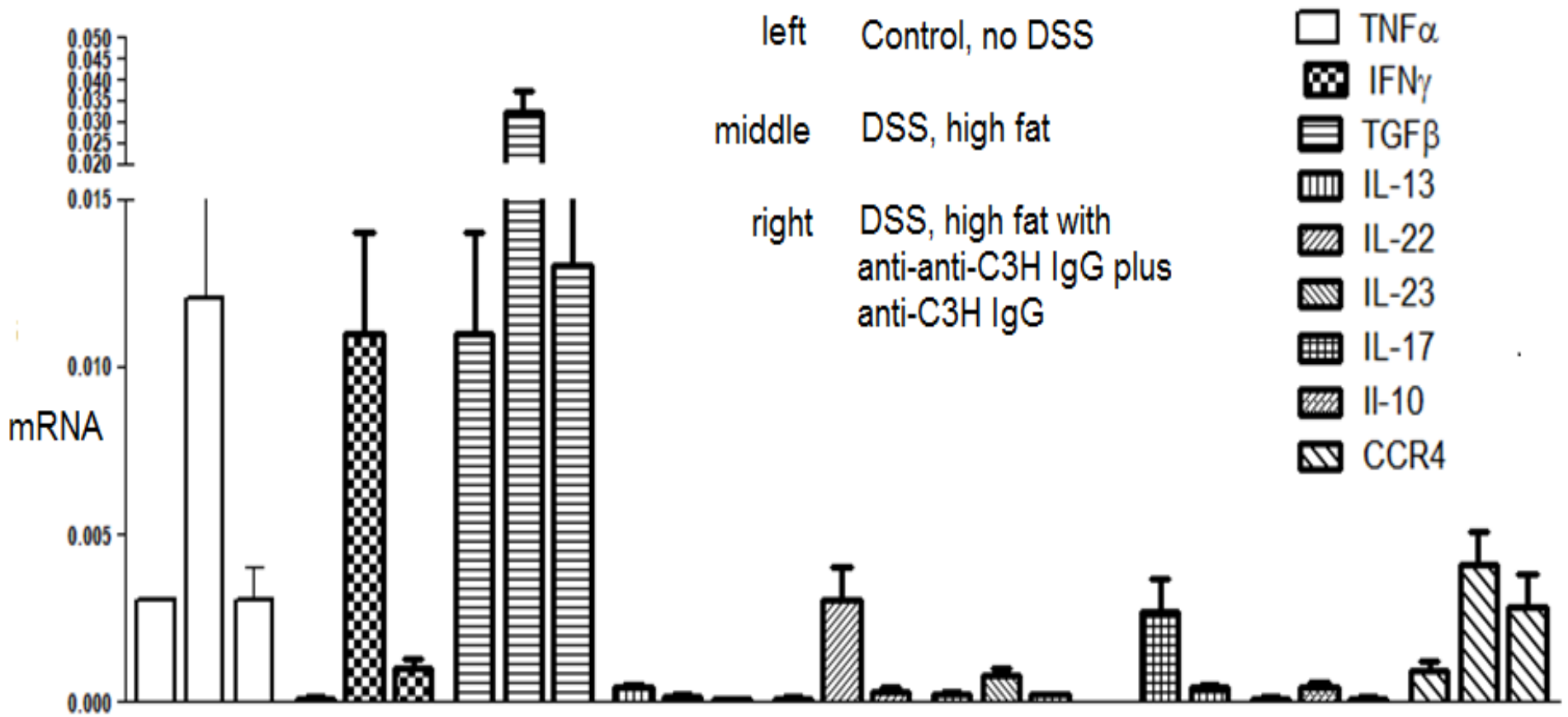


AUTOIMMUNITY DATA

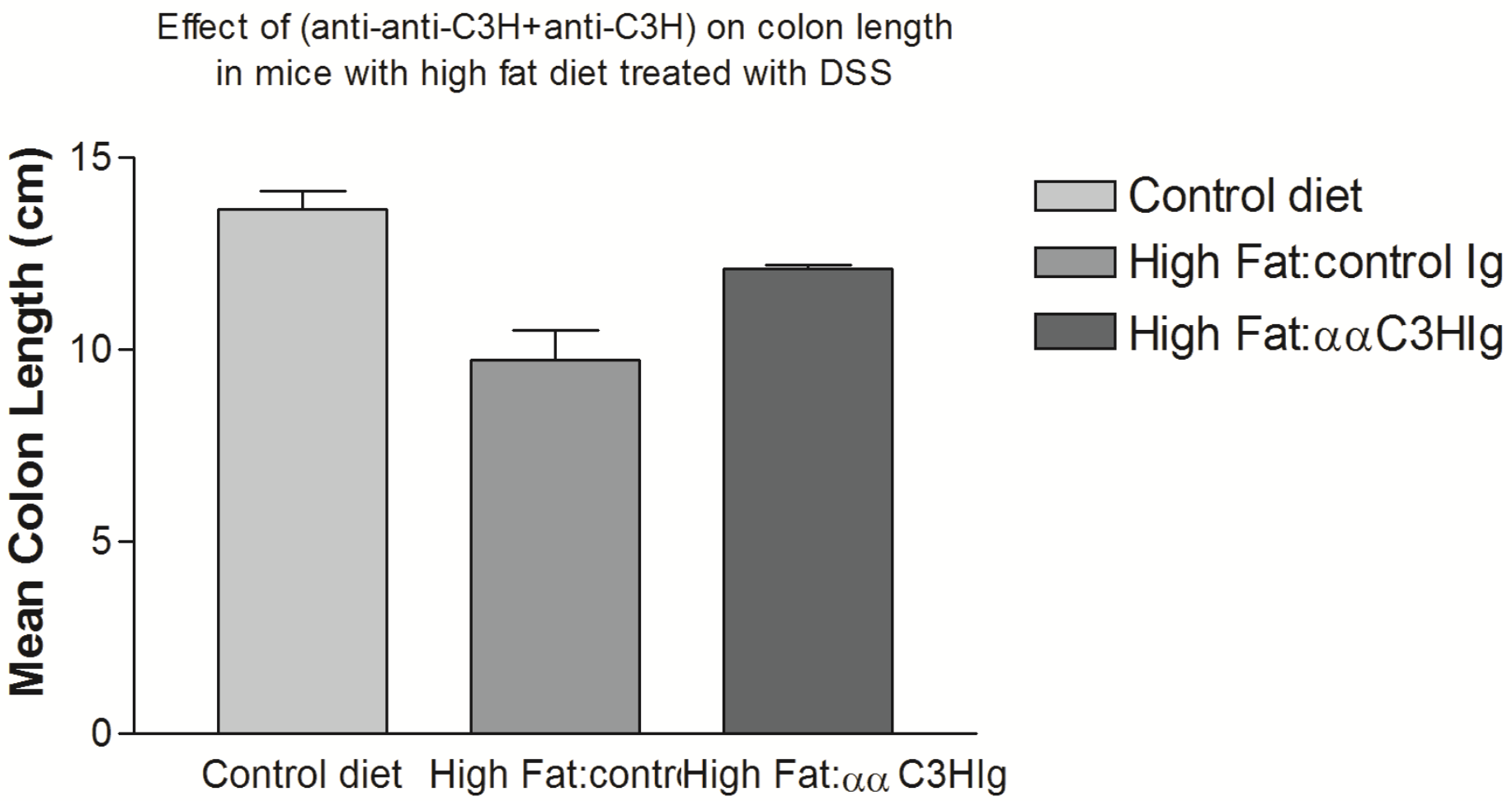
- Technology tested in mouse model for prevention of inflammatory bowel disease (IBD)
- Mice treated with anti-anti-C3H plus anti-C3H IgG antibodies
- Therapy worked as measured in three different ways in DSS (dextran sodium sulphate) model:

    1. Reduced production of inflammatory cytokines
    2. Reduction in decrease of colon length
    3. Reduction in weight loss

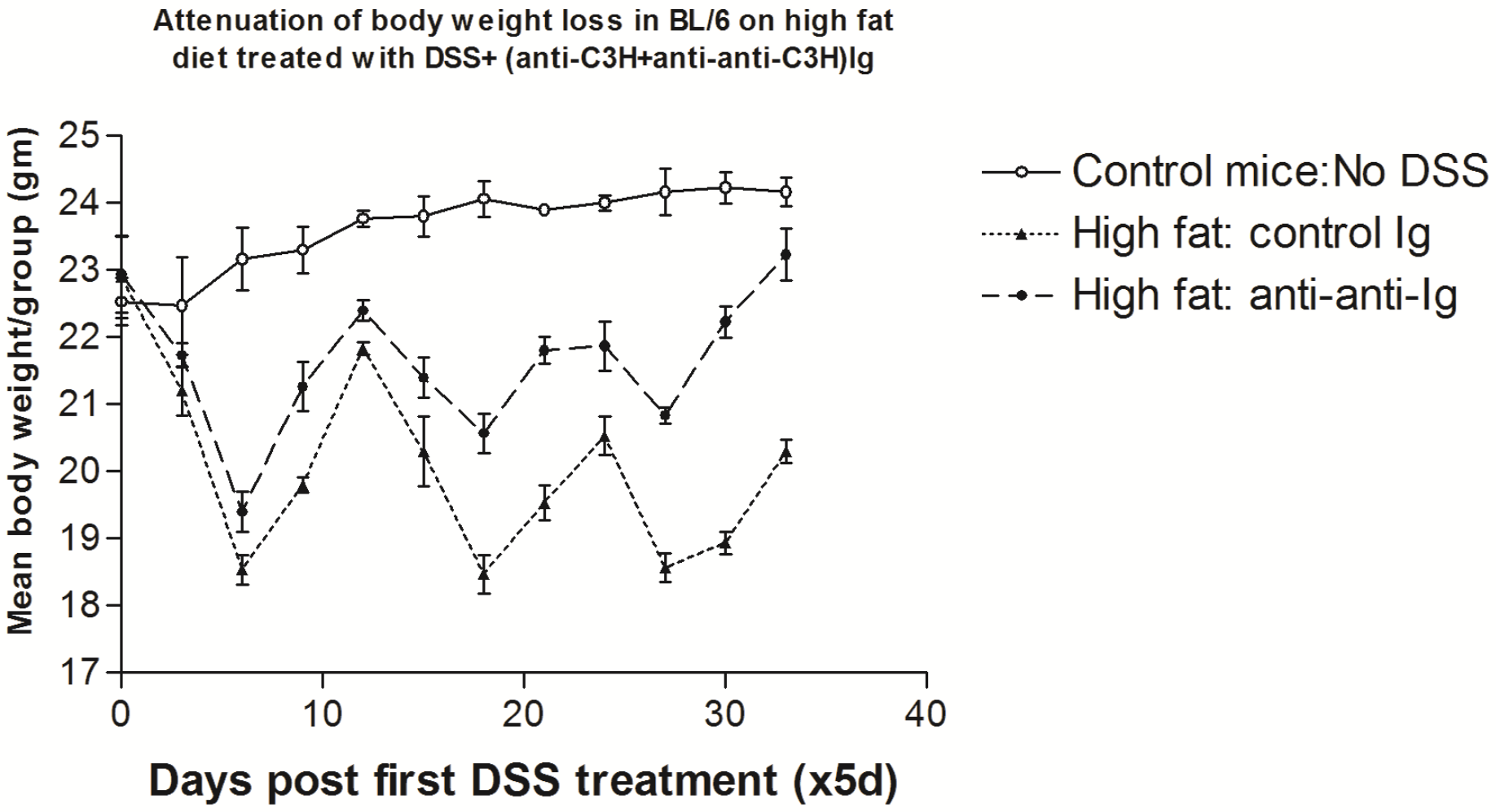
IBD: PRODUCTION OF CYTOKINES



IBD: COLON LENGTH



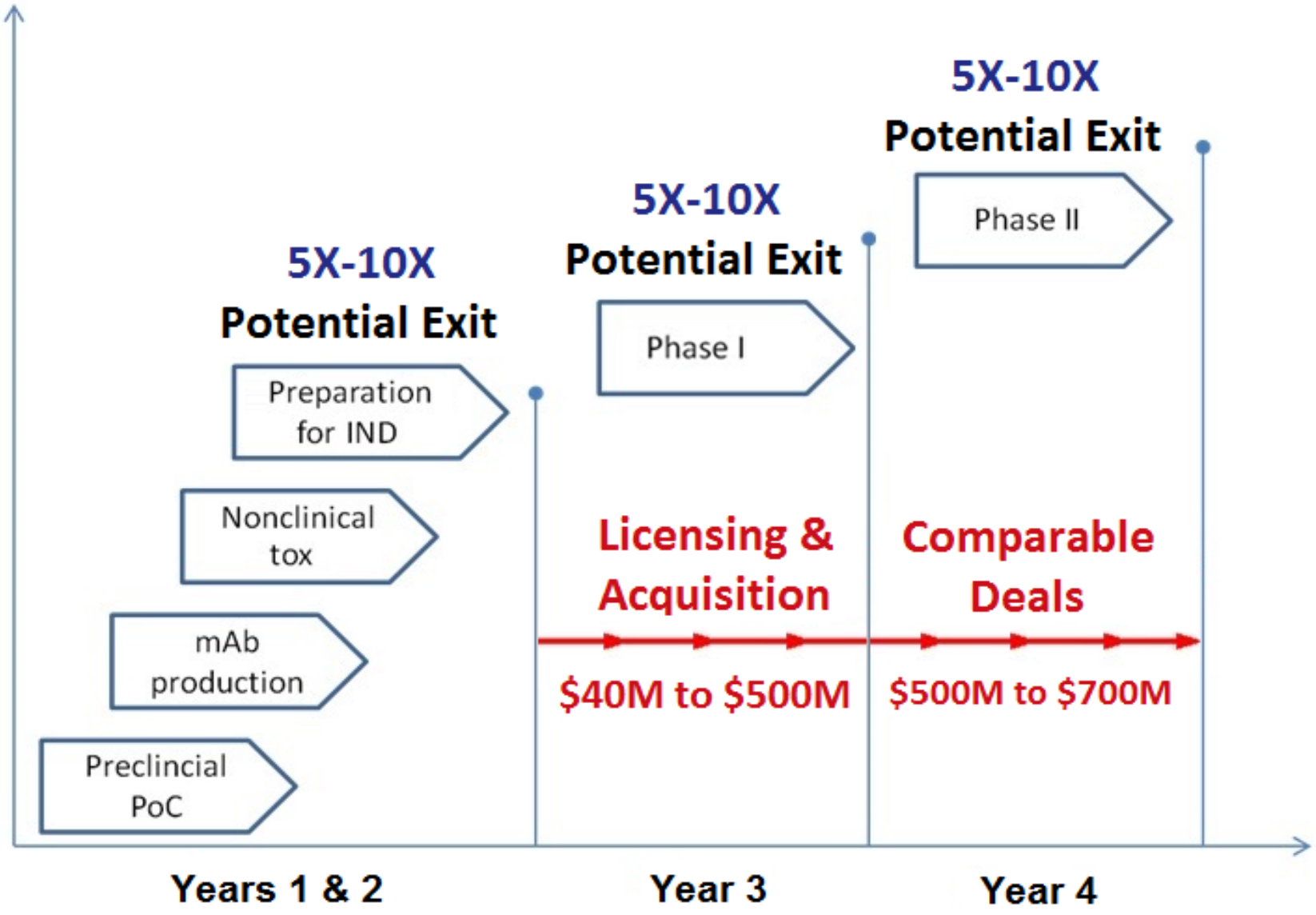
IBD: WEIGHT LOSS



DRUG

- Autoimmunity drug to be developed is a combination of two monoclonal antibodies
- Immune system stabilizer
- Preventive therapy
- Applicable to many inflammatory/autoimmune diseases
- Our blockbuster drug

TIMELINE AND MILESTONES



COMPARABLE AUTOIMMUNITY DEALS

$580MM - Roche and Adheron (October 9, 2015)

- $105 million up front; up to $475 million in milestones
- Deal done between Phase I and II.

http://www.fiercebiotech.com/story/roche-picks-new-autoimmune-drug-580m-adheron-deal/2015-10-09

$690MM - Lilly and Hanmi (March 19, 2015)

- $50 million up front; up to $640 million in milestones
- Deal done between Phase I and II

http://www.fiercebiotech.com/story/lilly-inks-690m-deal-get-its-hands-autoimmune-drug/2015-03-19

$544MM - Biogen and Mitsubishi Tanabe (September 9, 2015)

- $60 million in cash; up to $484 million in milestones
- Deal done between Phase II and III

http://www.fiercebiotech.com/story/crash-course-celgene-biogen-inks-544m-autoimmune-drug-deal/2015-09-09

AUTOIMMUNITY-INFLAMMATION DRUGS

Humira: $14B in sales (2015)

Remicade: $10B in sales (2014)

- **Both Humira and Remicade treat Ulcerative Colitis and other Autoimmune/Inflammatory diseases, including Psoriasis and Arthritis**
- **Both block <u>one</u> inflammatory cytokine (TNFa)**
- **Nll's drug, used as a preventive, reduced the production of <u>seven</u> key inflammatory cytokines, including TNFa**

COMPETITION

Immunosuppressant drug side effects:

- Infections due to suppressed immune system
- Increased susceptibility to cancer
- Liver and kidney damage

NEXT STEPS

1) Produce drug (monoclonal antibodies)

2) Generate high impact pre-clinical (mouse) data for additional inflammatory diseases

2) Discussions with Pharma

TEAM

MANAGEMENT

George Hoffmann BA
Managing Director
Capital Raising,
Business Development,
Internal Administration

Edwin Gershom PhD
Chief Executive Officer
Business Development and
Technology Commercialization,
Experience in preclinical and
clinical development projects

Geoffrey Hoffmann PhD
Chief Scientist and Chairman of
Board of Directors
Managed laboratory at
University of British Columbia
for 20 Years;
40 years of theoretical and
experimental immunology;
Leading developer of Immune
Network Theory

DIRECTORS

George Hoffmann BA
Managing Director
Built NII from idea stage, to a company with data for an revolutionary immuno-modulatory product

Daniel Wattier BSc.
Completed one of BC's most lucrative biotech exits for investors with sale of Valocor Therapeutics to Dermira in 2011; Contributes in the area of strategic direction

Jonathan Willmer MD
Senior Medical Director, Global Research and Early Development at EMD Serono, formerly Merck Serono; past role as Chief Medical Director at CANTEST Clinical Research, Prime Trials Inc., CroMedica Inc.

John Hatton PhD
PhD Oxford Physical Chemistry
As one of the company's longest term directors, Dr. Hatton has been a consistent support for the company

SCIENTIFIC ADVISORY BOARD

Michael Grant PhD
Immunologist,
Professor
Memorial University
Expertise in Immune Network Theory

Earnest Leung MSc
Experimentalist
Performed important work in Immune Network R&D

Rob Forsyth PhD
Lecturer in Biotechnology
BCIT
Experience with Immune Network Theory

Matt Parsons PhD
Immunologist
University of Melbourne
Expertise in Immune Networks

BUSINESS

LEAN BUSINESS MODEL

- Tightly managed costs
- Low R&D costs
- No leased office or lab space
  → Studies contracted to reputable laboratories
  → Collaborators at five universities
- Efficient use of consultants
- Multiple highly experienced, non-paid advisors

INTELLECTUAL PROPERTY

- Patent portfolio includes:
  - Novel platform technology for immune system modification
  - Novel method of vaccination (flu, hepatitis, malaria)
- Technologies protected by 6 patent applications
- No known “freedom to operate” issues
- No known competitors working on immune network framework based technologies

PLAN AND EXIT

- Generate further high impact pre-clinical data during 2016-2017
- Develop towards clinical Phase I
- When at IND stage (2018 expected) sell company to Pharma and/or launch IPO

Financing Plan

Equity Financing

$4,000,000 for 10,000,000 shares at $0.40

Represents 27% of the company

Fully Diluted Share Capital

Current shares issued and outstanding	22,014,195
Current options outstanding	1,716,532
Warrants outstanding	3,300,000
Total shares, options, warrants pre-financing	27,005,727
New shares, $4,000,000 financing at $0.40	10,000,000
Total shares, options, warrants post-financing	37,005,727

REVIEW

- **Inflammation preventive therapy with strong IP**
- **Excellent pre-clinical data in mice studies**
- **Multi-billion dollar markets**

CONTACT

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