Clinical Validation of Zygosid-50

First in Class Oral Drug that

Prevents & Treats Type 2 Diabetes

by Restoring Insulin Resistance to Normal levels

Currently in 2nd Clinical Trial

Concenter BioPharma

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Need: Diabetes is “a pandemic of unprecedented magnitude” – No effective treatment exists!

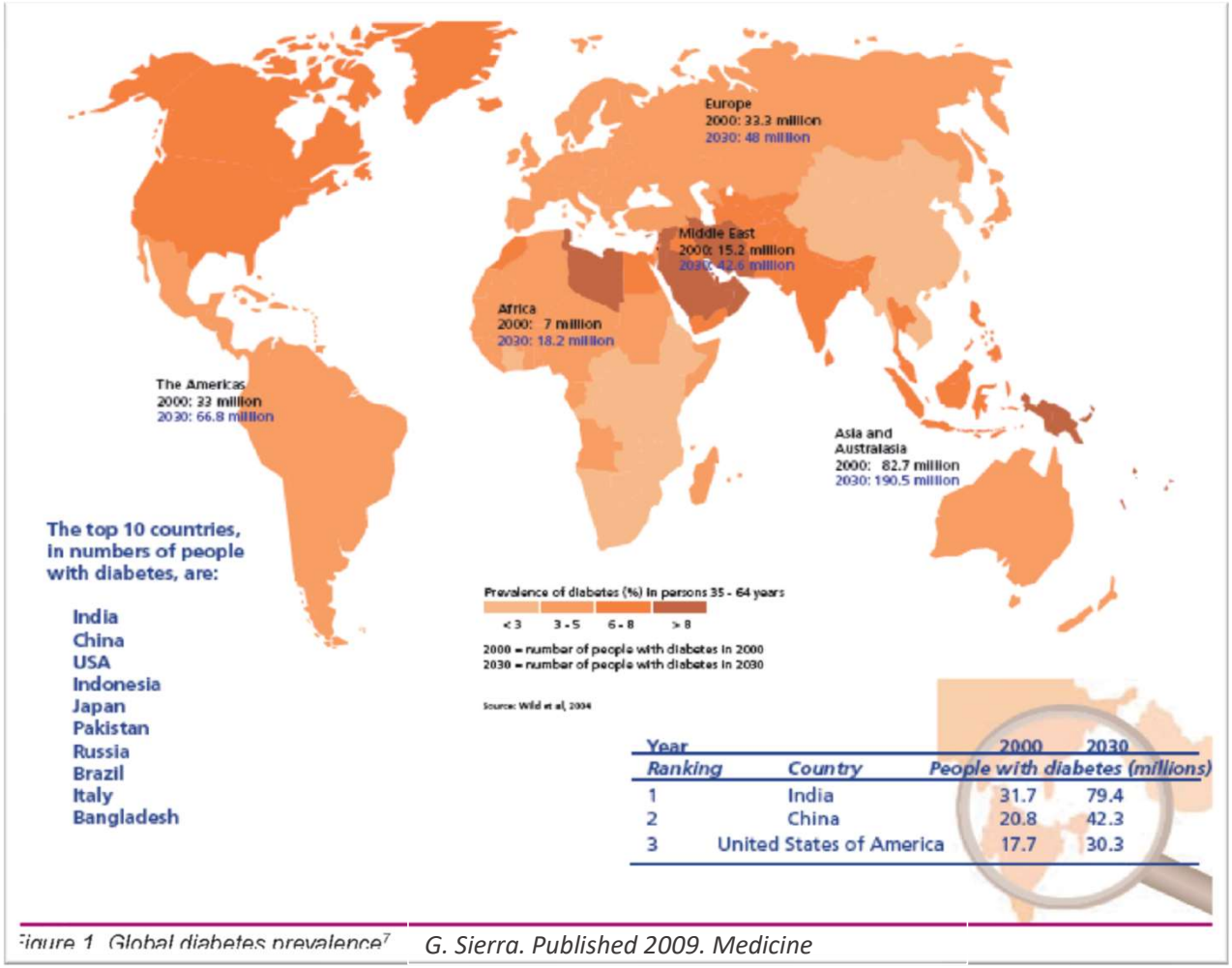


Figure 1 Global diabetes prevalence[7] G. Sierra. Published 2009. Medicine

Problem

Existing Type 2 Diabetes (T2D) medications or diets target symptoms and complications of the disease without affecting the core of T2D – Insulin Resistance (IR).

T2D Market

- Worldwide - over 537M patients in 2021, expected to reach 783 M by 2045;
- CDC/USA - ~50% of US population is either Diabetic or Pre-Diabetic:
  - Diabetic - over 32M patients (13.6% of the population);
  - Pre-diabetes 97M people 18+ (38.0% of the adult populations);
- US T2D drugs market was $32B in 2022;
- EU T2D drugs market is $15.8B in 2023;
- India T2D drugs market is $1.7B;

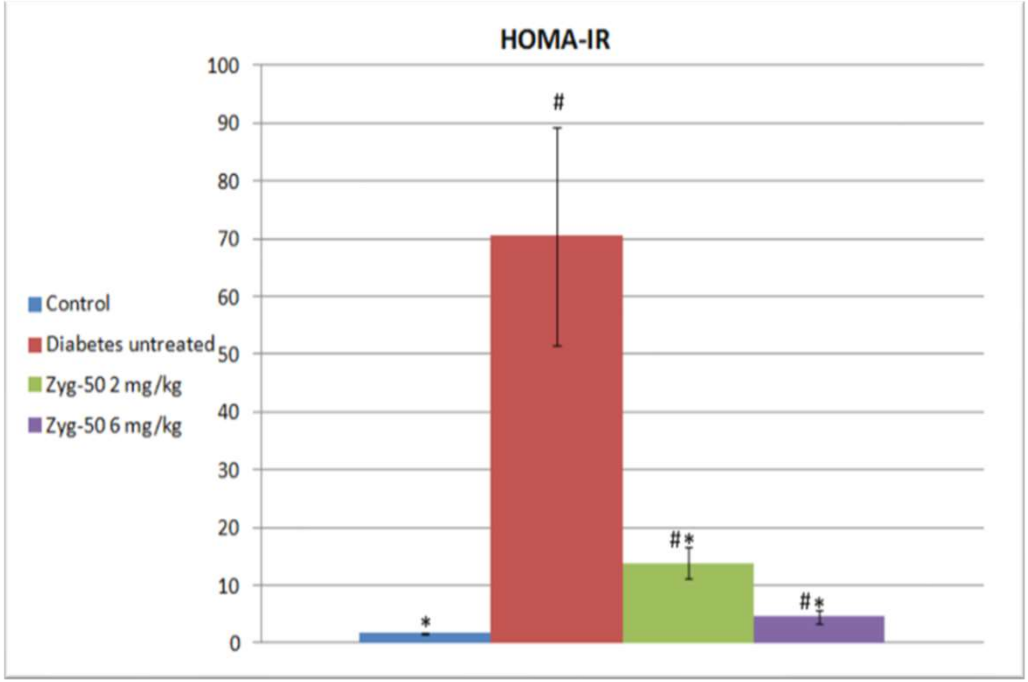
Solution: Zygosid-50 – the novel medication targeting INSULIN RESISTANCE

Zygosid-50, the novel oral drug

- Prevents and treats T2D by targeting the core pathophysiologic defect of T2D - elevated and continuously rising **insulin resistance** (IR)
- Normalizes T2D-associated derailment of lipid profile
- Stabilizes body weight

without changing patient diet or lifestyle!

Therapeutic outcomes - 1



Zygosid-50 effect on IR expressed as HOMA-IR

Technology:

Zygosid-50 first-in-class oral, cost-effective anti-T2D drug with a novel mechanism of action, proven safe and efficacious for treating of diabetics and prophylaxis in pre-diabetics, producing potent multifactorial effects:

Preclinical model:

- Reduced both blood glucose (from >300 mg/dl to <100 mg/dl) and insulin resistance (>90%) to normal levels - better than any other drug;
- Normalized diabetes-associated derailment of lipid profile;
- Suppressed the expression of pro-inflammatory cytokines;
- Stabilized body weight;

Clinical trial (pilot):

- Reduced insulin resistance (>50%, better than any other drug) and increased time-in-range (glucose control efficacy) from 41% to 90%

- No systemic adverse events were observed.

Zygosid-50 – is superior to any competitor

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Market Product	Product "Name" – Example	Targets IR	Side-effects	Improve lipid profile	Decreases inflammatory response	Replenis zinc	Price (per month)
Biguanides	METFORMIN "Glucophage"	No	Mild – 1,2	No	Yes	No	Low (€55-75)
Sulphonylureas	GLIBENCLAMIDE "Glyburide"	No	Severe – 14,15,16	No	No	No	Low (€85-165)
SGLT-2 inhibitors	DAPAGLIFLOZIN "Forxiga", "Jardiance"	Reduces ~26% IR	Mild to Severe – 3,4,5,6,7	Yes	Yes	Yes	Medium (€310-450)
GLP-1 receptors agonists	LIRAGLUTIDE "Victoza", "Ozempic"	No	Mild to Severe – 1,8,9	Yes	Yes	No	High (€540-2710)
PPAR agonists (TZD)	PIOGLITAZONE "Actos"	Reduces ~33% IR	Severe – 4,11,12,16	Yes	Yes	No	Medium (€100-250)
DPP-4 inhibitors	SITAGLIPTIN "Januvia"	No	Mild to Severe – 9,10	Yes	Yes	No	High (€500-1100)
AG inhibitors	MIGLITOL "Glyset"	Reduces ~30% IR	Mild to Severe – 1, 14	No	Yes	No	Low (€70-100)
Meglitinides	REPAGLINIDE *"Novonorm"*	No	Mild to Severe – 1, 15,17	Yes	No	No	Low (€70-100)
Insulins	Several manufacturers of various types of insulin	No	Mild to Severe – 15,16,17	No	No	No	High (€600-1500)
Zygosid-50		**↓ 93% (animals) 59% (human)**	**None observed Cardioprotecti effect shown***	**Yes**	**Yes**	**Yes**	**Low (**€78)**

Side Effects:

1. Gastrointestinal
2. B12 deficiency
3. Risk of amputations
4. Risk of bone fractures
5. Genitourinary infections
6. Hypotension
7. Increase in LDL
8. Risk of thyroid tumors
9. Acute Pancreatitis
10. Joint pain
11. Congestive heart failure
12. Fluid retention
13. Bladder cancer
14. Cardiovascular mortality
15. Hypoglycemia
16. Weight gain
17. Allergic reaction

Investment Summary

Fundraising goal: $2.5 M
(~11.1% of equity; Company pre-money valuation = $20M)

- Clinical Trials in Israel (Phase 2a – MoH approval granted) + India (Phase 2 pre-licensure study – approval in process)
- India market launch approval after Phase 2 due to unmet medical need status in India
- Completing the laboratory studies requested by the US FDA and re-submission of the updated IND package

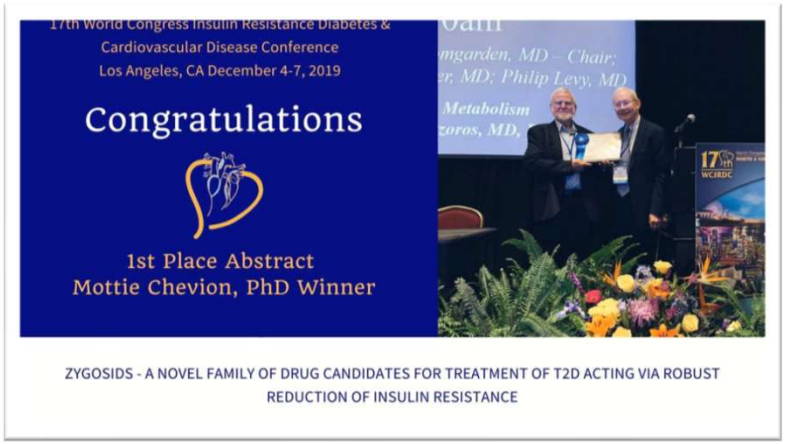
Use of Funds:

- Drug Manufacturing for trials - $500K
- Clinical Trials - $450K
- Laboratory research - $1,030K
- Salaries and other – $490K

Business Summary

- Completing requirements of CDSCO (Indian equivalent of the US FDA) to enter the Indian market
- Out-license Zygosid-50 drug to a global pharmaceutical company for finalizing the clinical trials (Phase 2b/3), manufacturing and commercialization
- The licensing partner will capture the US market followed by the EU markets and then expand to the rest of the world, paying the royalties to Concenter

Concenter Biopharma Ltd.



Strong and Lean Company

- Established in Israel (2015)
- IP from HUJI and Hadassah Hospital with lifetime exclusive license
- Skilled & experienced team (5) with world class SAB
- Conducted First-in-Man Pilot CLINICAL trial - Sheba Medical Center (Israel, 2021)
- Awarded First Place in the 17th World Congress on Insulin Resistance, Diabetes and Cardiovascular Disease
- 2018 TiE50 Awards Program Finalist (of over 7,400 startups)
- GRANTED Patents, recently filed Oral Formulation applications
- €1.1 Million raised (9/2020) + €900K raised (10/2022) – using the Pipelbiz crowdfunding platform

Team and Supporters

Dr. Itzchak Angel

Head of Discovery and R&D

- 35 years experience drug development, BD in large and emerging companies
- Head of Pharmacology at Synthelabo France (now Sanofi)
- Brought drugs to market - Ambien®, Xatral®, Mizollen®, others
- Author of 100+ articles and patents

Prof. Amir Elami (MD)

Chief Medical Officer

- 35+ years as a MD and over 18+ multicenter research studies
- Assistant Professor at UCLA
- Associate Professor at HUJI

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CEO

- Serial entrepreneur
- 30+ years of global experience
- Board member in 2 publicly companies

Dr. Sheila Zrihan-Licht, Adv.

IP Legal Advisor (RCIP)

- 20+ years of legal advisory experience start-ups and multi-national corporations
- Provides opinions on patentability and freedom to operate

Dr. Susan Alpert

Head of Regulatory Affairs

- 30+ years regulatory affairs
- Chief Quality & Regulatory Officer and Senior Vice President of Global Regulatory Affairs at Medtronic Inc.
- Division Head at FDA

Dr. Vladimir Vinokur

Head of Biology

- Inventor of 3 patents on T2D
- 15+ years in drug development
- M.Sc. and Ph.D.

SAB – Decorated global KOLs

Prof. Peter Nawroth (MD) - SAB

Head of the joint Heidelberg-IDC-Translation Diabetes Program

Prof. Ralph A. DeFronzo (MD) - SAB

Global leader in T2D over the last 50 years

Principal Investigator for the study in Israel

Prof. Muhammad Abdul-Ghani (MD, PhD)– PI *Maccabi Health Services*

Prof. at UT Health – Diabetes (San Antonio) & Diabetes practitioner at Maccabi Health Services

A New Concept in Antidiabetic Therapeutics:

Concerted Removal of Labile Iron and Intracellular Deposition of Zinc

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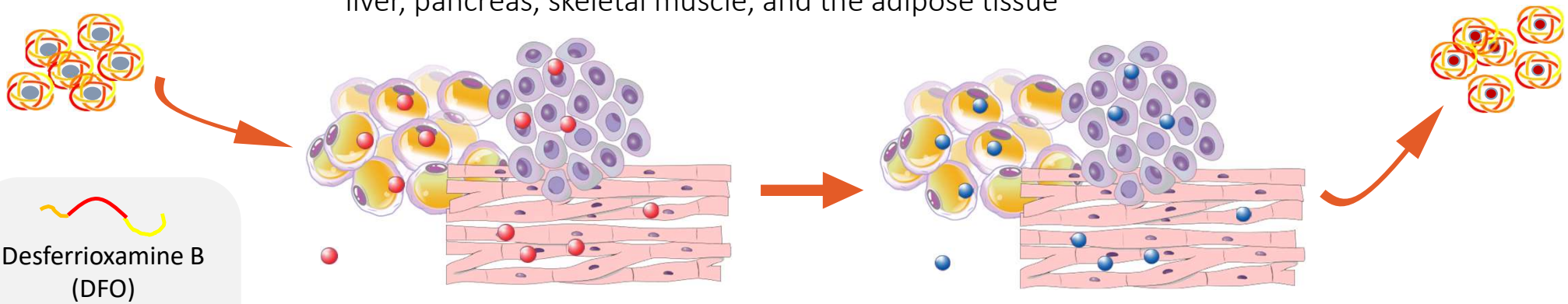
(Vinokur V. et al. Diabetes Metab J. 2024 Jan 3. doi: 10.4093/dmj.2022.0292)

Zn-DFO (Zygosid-50)

Labile iron is sequestrated and exchanged by zinc which is deposited in liver, pancreas, skeletal muscle, and the adipose tissue

Fe-DFO (excreted)



Desferrioxamine B (DFO)

Zn^{2+}

Zn-DFO (Zygosid-50)

Labile Fe3+

- Hyperglycemia
- Hyperinsulinemia
- Insulin resistance (HOMA-IR)↑
- Pro-Inflammatory cytokines↑
- Dyslipidemia

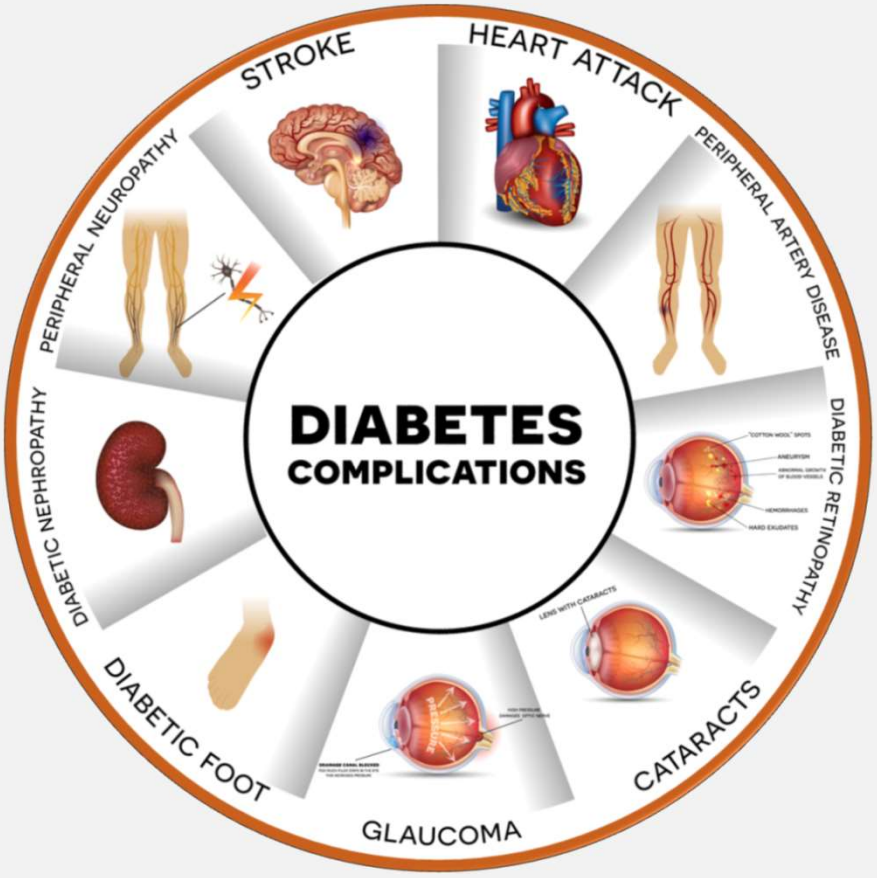
Zn2+

- ✓ Blood glucose level (BGL) normalization
- ✓ Insulin↓
- ✓ Insulin resistance reduction (HOMA-IR)↓
- ✓ Mitigation of inflammation
- ✓ Lipid profile improvement

Zygosids utilize a novel mechanism of action which demonstrates robust therapeutic efficacy in treating Type 2 Diabetes

dmj DIABETES & METABOLISM JOURNAL

Thank you!


DIABETES
COMPLICATIONS
STROKE
HEART ATTACK
PERIPHERAL ARTERY DISEASE
DIABETIC RETINOPATHY
CATARACTS
GLAUCOMA
DIABETIC FOOT
DIABETIC NEPHROPATHY
PERIPHERAL NEUROPATHY