

DIABETES RESEARCH CENTER

Tel: 02-6778021
Fax: 02-6484515
E-mail: ntv502@netvision.net.il

STAFF

Director: Itamar Raz, MD

Associates:

Scientific Coordinator: Rafael Neshet, PhD

Steering Committee: Benjamin Glaser, MD
Itamar Raz, MD
Rafael Neshet, PhD
Nurit Kaiser, PhD
Ehud Ziv, PhD
Gil Leibowitz, MD
Danielle Melloul, PhD

INTRODUCTION

The Hadassah Diabetes Center (HDC) was established as a center of excellence at Hadassah within the Internal Medicine Department. The primary goal of the HDC is to provide the most advanced care to individuals with diabetes - including hospitalized patients, the local Jerusalem population as well as out-of-town patients and even international patients who are interested in the most expert care for their disease. The HDC promotes basic research in diabetes and the application of the results in clinical studies involving Type 1 and Type 2 diabetic patients. The ultimate goal of the HDC is to facilitate translating the results of this research into clinical practice at Hadassah - treatment of the disease, reduction of the incidence and severity of its long-term complications and prevention of diabetes in susceptible populations.

Basic Research Projects:

1. Study of the beta cells as a cause of diabetes and development of beta cell alternatives using stem cells.
Key words: beta cells, stem cells
2. Regulation of the gene insulin.
Key words: gene, insulin
3. Research of regeneration of beta cells and apoptosis of beta cells.
Key words: regeneration, beta cells, apoptosis
4. Study the causes of insulin resistance and beta cell failure in animals and in humans, using novel methods to evaluate resistance in different animal models for diabetes that were developed in our laboratories.
Key words: Insulin resistance, beta cell
5. Diabetic kidney: etiology and novel treatment
Key words: kidney, novel treatment

Clinical Research Projects:

1. Study of novel therapeutic interventions that have been developed in our laboratory for the prevention and cure of Type 1 and Type 2 diabetes in animal models.
Key words: prevention, novel, diabetes, animal models
2. Applied clinical research projects that study new medications and novel treatments (including insulin-delivery and glucose-monitoring systems) in human subjects.
Key words: novel treatments, human

RECENT PUBLICATIONS

Metzger M, Leibowitz G, Wainstein J, Glaser B, Raz I. Reproducibility of glucose measurements using the glucose sensor. *Diabetes Care* 25:1185-91, 2002

Leibowitz G, Uckaya G, Oprescu AI, Cerasi E, Gross DJ, Kaiser N. Glucose-regulated proinsulin gene expression is required for adequate insulin production during chronic glucose exposure. *Endocrinology* 143: 3214-20, 2002

Melloul D, Marshak S, Cerasi E. Regulation of insulin gene transcription. *Diabetologia* 45: 309-26, 2002

Lewis EJ, Hunsicker LG, Clarke WR, Berl T, Pohl MA, Lewis JB, Ritz E, Atkins RC, Rohde R, Raz I. Renoprotective effect of the angiotensin-receptor antagonist irgesartan in patients with nephropathy due to type 2 diabetes. *N Engl J Med* 345:851-60, 2001

Raz I, Elias D, Avron A, Tamir M, Metzger M, Cohen IR. Beta-cell function in new-onset type 1 diabetes and immunomodulation with a heat-shock protein peptide (Diapep277): randomized, double-blind, phase II trial. *Lancet* 358:1749-53, 2001

Kalman R, Ziv E, Shafir E, Bar-On H, Perez R. Psammomys obesus and the albino rat - two different models of nutritional insulin resistance, representing two different types of human populations. *Lab Anim* 35:346-352, 2001

Kassem SA, Ariel I, Thornton PS, Hussain K, Smith V, Lindley KJ, Aynsley-Green A, Glaser B: p57(KIP2) expression in normal islet cells and in hyperinsulinism of infancy. *Diabetes* 50:2763-9., 2001

Leibowitz G, Ferber S, Apelqvist A, Edlund H, Gross DJ, Cerasi E, Melloul D, Kaiser N: IPF1/PDX1 deficiency and beta-cell dysfunction in Psammomys obesus, an animal with type 2 diabetes. *Diabetes* 50:1799-806., 2001

Nesher R, Warwar N, Khan A, Efendic S, Cerasi E, Kaiser N: Defective stimulus-secretion coupling in islets of Psammomys obesus, an animal model for type 2 diabetes. *Diabetes* 50:308-14., 2001

Permutt MA, Wasson JC, Suarez BK, Lin J, Thomas J, Meyer J, Lewitzky S, Rennich JS, Parker A, DuPrat L, Maruti S, Chayen S, Glaser B: A genome scan for type 2 diabetes susceptibility loci in a genetically isolated population. *Diabetes* 50:681-5, 2001