Research & Publications

2005-2010

Shimon Scharf, MD, MPH
Gilles Lugassy, MD
Dear Colleagues,

I am happy to present you to the second edition of the Barzilai Medical Center Research & Publications Report.

This Research directory summarizes information on the activities in basic and clinical sciences at Barzilai Medical Center Between 2005-2010.

As an academic institution whose departments are affiliated with the Faculty of Health Sciences at Ben Gurion University of the Negev, we feel an acute responsibility to constantly advance research studies, both on the basic and clinical levels.

This report stands witness to the varied and intense academic efforts of our staff and picture the high quality and breadth of scientific research. Those keep Barzilai at the forefront of medical science.

Recognizing the many hours that were required to make this possible, I wish to thank the entire Barzilai Medical Center community for the effort they have invested in producing the studies found within this book. A particular expression of gratitude is due to Ms. Ornit Cohen and Professor Gilles Lugassy who are most responsible for the notion and edit of this text.

I hope this report will strengthen cooperation among research staff, and develop further collaboration with others from Israel and abroad. I believe research is a significant component of our mandate and we are therefore committed not to rest on these already impressive accomplishments.

Dr Shimon Scharf. MD, MPH.

C.E.O and Medical Director
Barzilai Medical Center
Executive Summary

The Barzilai Medical Center (BMC) was established in 1961 and it is the only hospital in the Lachish region, located in the city of Ashkelon 35 miles south of Tel-Aviv and only six miles from the boarder of Gaza. It has the major task of serving the 500,000 inhabitants of the area including a substantial number of immigrants who came to Israel in the past 15 years from the former USSR and from Ethiopia. In case of a major confrontation, Barzilai is now a Front Line Hospital as well, equipped with its own helicopter landing pad.

A 500 bed licensed medical center, Barzilai provides high quality, cost sensitive advanced health services to 100,000 residents in an area of 502 sq miles.

Concern academic prosperities, BMC have its own School of Nursing and is a teaching hospital affiliated with the Ben Gurion University of the Negev approved by the Israeli Medical Council for full residency program.

The hospital treated several thousand patients with Acute and Post Traumatic Stress Disorders and Stress Diseases as well as over 500 physically injured as results of over 7000 rockets missiles fired directly into our area.

Our Emergency Department is receiving over 100,000 admissions in a year using the same infrastructure as it did 50 years ago before the amount of the population grew.

However, it is important for me to emphasize that Barzilai continues to maintain its regular policy in spite of the fact that the hospital is under constant threat. Our center continues to accept ill Arabs from within the Palestinian Authority. Whether for the treatment of illnesses or intervention for injuries incurred while fighting Hamas or from Palestinian missile aggression we continue to provide high level health services to those who need us on both sides of our border.

The hospital services and capabilities remain the same straining under the rapidly growing demand in times of routine and events of mess casualties.
FOREWORD

The Barzilai Medical Center/Campus is proud to publish the Second Research and Publication Issue, for the period 2005-2010.

In terms of academic and research activities, the BMC has demonstrated a constant progression over the years: basic scientific research has become an important part of the Center’s efforts, while clinical studies, both local and multicenters, have grown to above 100 new proposals a year.

This publication is the witness of the impressive accomplishments by the Medical Departments of the Barzilai Medical Center/Campus, and of their excellency.

Prof Gilles Lugassy, MD

Chairman, Division of Hematology
Chairman, Helsinki Committee
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Emile Hay, MD
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List of Publications


**Active Participation in Scientific Meetings**

Director, BMC Research Institute
Regional Health Officer, Ashkelon District Health Office

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Research Team

Michael Hartal (Huerta), MD, MPH  Senior Lecturer
Department of Epidemiology
Ben-Gurion University

Description

Main goals

• Support for BMC staff – research methodology and analysis
• Study of air pollution associated health effects.
• Application of diverse research/study methodology in a range of topics within the fields of epidemiology, preventive medicine and public health.

Up to date, the research led by Dr Gdalevich has dealt with the study of the epidemiology of infectious diseases, sero-epidemiology, vaccine-preventable diseases and the study of health behaviors of children, adolescents and young adults. Methodology that was applied in research projects included case-reports,
reviews, cross-sectional studies, simple and nested case-control studies, survival analyses, cohort studies, clinical trials, and meta-analytic systematic reviews. The work has involved collection of original data, as well as analysis of existing databases, either as a primary investigator or the epidemiology/research methodology advisor for other researchers.

During the last five years Dr Gdalevich and Dr Hartal begun to investigate the area of environmental epidemiology and environmental health. The main item of their interest is the study of the health effect of air pollution in Israel, where the subject has not been approached systematically, yet claims more and more of both the public's and the decision makers' attention.

Ongoing research projects in this field include:

- Pollutant dispersal mapping
- Dispersal model validation
- Historical-cohort studies of the association between pollutant exposure and community- and hospital-oriented health outcomes among children, adolescents and adults.
Michael Gdalevich, MD, MPH

Regional Health Officer, Ashkelon District Health Office
Minister of Health
BMC Research institute

List of Publications

A - Original Articles


B – Review


Active Participation in Scientific Meetings


10. N. Asur, Y. Arbeli, M. Huerta, S. Scharf, M. Gdalevich. Epidemic rash after exposure to dicyclohexylmethane-4, 4'-diisocyanate during an art class. Poster presentation at the 11th scientific seminar, European Programme for Intervention Epidemiology Training, Mao, Menorca, Spain, 12-14 October 2006


### Competitive and Non-Competitive Research Grants

2007  
**Association of Towns for Environmental Protection, 600,000 NIS**  
Gdalevich M (PI), Huerta M (PI), Bibi H, Scharf S  
Measuring the effects of air pollution from the Rotenberg power plant on the morbidity, mortality and healthcare consumption of the population in the Ashkelon region.

2008  
**National Institute for Health Policy Research, 168,000 NIS / 1 year**  
Gdalevich M (PI), Huerta M (PI), Bibi H, Scharf S, Levin H  
Health effects of air pollution in the Ashkelon District – Analysis of costs

2008  
**Ministry of Environmental Protection, 381,000 NIS / 3 years**  
Gdalevich M (PI), Huerta M (PI), Broday D, Bibi H, Scharf S  
Air Pollution acute health effects in Ashdod population – a quantitative analysis
Current clinical studies

In progress

3. Epidemiology of pemphigus in Israel. Partners: Mimouni D, David M.
5. Effects of air pollution on the morbidity, mortality and healthcare consumption of the population of southern Israel. Partners: Huerta M, Bibi H, Haviv J, Yuval, Broday, Scharf S.
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- Luiz Griffel, MD
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  Instructor in Medicine, Ben-Gurion University
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  Lecturer in Medicine, Ben-Gurion University
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  Instructor in Medicine, Ben-Gurion University
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  Clinical Research Coordinator
- Zoya Goldberg, B.Sc
  Clinical Research Coordinator
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  Head, Israeli Rat Genome Center
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- Svetlana Rosenblum, M.Sc  Research Associate

- Gurion Katni, M.Sc  Research Associate

- Ira Agranovitz  Supervisor, Animal Facility
Yoram Yagil, MD
Department of Nephrology & Hypertension

Research Activities

Clinical Research
- Active participation in multiple multinational multicenter studies

Basic Research
- Genomic investigation of the pathophysiology of salt-sensitive hypertension in the Sabra rat model of glomerulosclerosis
- Genomic investigation of the pathophysiology of proteinuria in the Sabra rat model of glomerulosclerosis
- Genomic investigation of the pathophysiology of diet-induced type 2 diabetes in the Cohen Diabetic rat
- Genomic investigation of the pathophysiology underlying diabetic nephropathy in the Cohen Diabetic rat model
- Generation of consomic and congenic strains for hypertension, proteinuria and diabetes-related quantitative trait loci
- Investigation of the role of ACE2 in an experimental rodent model of pre-eclampsia
**List of Publications**

Refereed articles in scientific journals (2006-2011)

**A- Original Articles**


Description of the Israeli Rat Genome Center (IRGC)

The Israeli Rat Genome Center (IRGC) was established in the early 90’s by Prof. Yoram Yagil and Prof. Chana Yagil, two scientists from the Ben-Gurion University Faculty of Health Sciences, who decided to dedicate their research activities to the study of human disease. Their focus was the investigation of complex diseases, including cardiovascular, metabolic and renal diseases. Searching for experimental animal models that would fulfill their research aspirations, they recognized the rat as a species which physiology has been studied extensively over the years and that would serve as an excellent model for the investigation of the physiology and pathophysiology of disease in humans. Seeking appropriate models, they soon became aware of a number of unique rat models of disease that had been developed in Israel by Israeli researchers and that were solely available in Israel. As these models were dispersed throughout the country, they realized that there was a need to create one central repository of experimental rat models of disease in Israel. This consideration and their intent to apply genomic tools to their research led them to establish the Israeli Rat Genome Center, dedicated to hosting exclusively genetically derived rat models of human disease.

The Israeli Rat Genome Center, a non-profit academic organization, was established within the compounds of the Barzilai Medical Center campus of the Ben-Gurion University Faculty of Health Sciences in Ashkelon, Israel. The Center consists of the Zootechnic Laboratory and the Laboratory for Molecular Medicine. The Zootechnic Laboratory is an animal facility that hosts genetically inbred rat strains that were developed in and that are available solely in Israel. It is staffed by a veterinarian and technicians who are highly qualified in animal care. The Laboratory for Molecular Medicine, which is operated by technical staff and post-graduate students, provides phenotyping and genomic services. It is also directing independently genomic projects seeking to unravel the genetic basis of disease, using rat models.

The stated aim of the Israeli Rat Genome Center is to provide the scientific community in Israel and worldwide full access to the animal resources that are available through the Center. Its intention is to promote thereby continuing scientific research and international collaboration that will forward the understanding of normal physiology in mankind and pathophysiology of human disease, using the rat as an experimental model simulating complex diseases in humans.

The Israeli Rat Genome Center currently hosts several genetically inbred rat models of human disease. The first animal model that was donated to the Israeli Rat Genome Center was the Sabra rat model of salt-sensitive hypertension. This model was founded in the early 70’s by Professor Drori Ben-Ishay from the Hebrew University in Jerusalem, Israel. Ben-Ishay et al. (1-4) developed a genetically and phenotypically distinct line of salt-sensitive (SBH) and salt-resistant (SBN) rat strains.

The SBN and SBH substrains were available for many years solely from the original breeding colony at the animal facility of the Hebrew University Medical Center in Jerusalem. When the genetic homogeneity of that colony and its suitability for
genetic studies became an issue with the appearance of reports pointing to genetic contamination of other experimental models, a nucleus from the original colony was transferred to the Israeli Rat Genome Center in 1992. Renewed selective inbreeding was initiated and an extensive effort for genetic purification of the sub-strains was undertaken and. Inbreeding has proceeded so far for over 55 generations. The products of the renewed inbreeding were designated SBH/y and SBN/y, to distinguish from the original breeding colony.

The phenotypic feature that render SBH/y and SBN/y a unique model of salt-sensitive hypertension consists of total dependence of blood pressure on dietary intake of salt. The salt-sensitive and the salt-resistant animals are normotensive at baseline, when fed regular diet with "normal" salt content. When salt-loaded, the salt-sensitive SBH/y substrain invariably develops systolic and diastolic hypertension. In contrast, the salt-resistant SBN/y substrain remains normotensive throughout its lifetime, irrespective of the amount of salt in diet. The hypertensive SBH/y substrain develops left ventricular hypertrophy and renal damage consistent with nephrosclerosis. The cardiovascular phenotypes of SBH/y or SBN/y are not affected by age, gonads or maternal environment (5).

Genome screening with microsatellite markers has demonstrated full homozygosity of the two sub-strains, qualifying them as genetically inbred (6). The presence of a large number of polymorphic markers renders these sub-strains highly suitable for genetic studies. The two sub-strains have in fact been crossbred several times, generating F1 and F2 generations, which phenotype has been determined (7;8). Congenic and consomic strains, introgressing part or entire rat chromosomes from SBH/y or SBN/y onto the genetic background of the reciprocal strain, have been constructed and are available at the Israeli Rat Genome Center (7-11). The genomes of the two sub-strains are currently being sequenced, as part of an ongoing international collaborative effort. The Genomic distribution of single nucleotide polymorphisms (SNPs) has been studied; details are available on the RGD website (http://rgd.mcw.edu/). The transcript-tome of the two sub-strains has been studied under normal diet and during salt-loading and is available for public use (12).

The SBH/y and SBN/y sub-strains are currently produced solely at the Israeli Rat Genome Center in Ashkelon, Israel. They are available for collaborative studies with laboratories interested in salt sensitivity, hypertension, target organ damage, the genetic basis of hypertension or any other related studies.

The second model that was introduced to the Israeli Rat Genome Center was the Cohen model of diabetes. This model was developed by Prof. A.M. Cohen, also from the Hebrew University. The model consists of two substrains, the Cohen Diabetic sensitive rat (CDs) and the Cohen diabetic resistant (CDr) rat.

The Cohen Diabetic rat is a genetically derived experimental model of diet-induced type 2 diabetes mellitus that reproduces many features of the disease in humans (13; 14). This model stands out among other experimental rodent models of type 2 diabetes mellitus in several important ways. Its most outstanding and distinctive feature is the absolute dependence
of the phenotype upon dietary perturbation, expressing genetic susceptibility (sensitivity and resistance) to a "diabetogenic diet" (15). When fed regular rat chow (normal diet), both the CDS sensitive and CDr resistant sub-strains remain normoglycemic. When fed a custom-prepared diabetogenic diet that is rich in carbohydrates and casein and poor in copper, CDs invariably develop a diabetic metabolic phenotype within one month, whereas the resistant CDr substrain maintains a normal non-diabetic phenotype. It is important to stress that diabetes does not develop spontaneously in these animals and is totally dependent upon diet. This unique phenotypic feature is not present in other genetically inbred rat strains that simulate type 2 diabetes in humans, including the Goto-Kakizaki (GK) (16;17), the Otsuka Long-Evens Tokushima Fatty (OLETF)(18-20) and the Zucker diabetic fatty rat (ZDF) (18;21;22) that develop diabetes spontaneously, without any important relationship to the composition of diet. Another central feature of the Cohen model is that it consists of two genetically-derived contrasting strains, originating from the same parent strain, which is useful for genetic and physiological studies. A third feature that makes the Cohen rat stand out is that it is a non-obese model of diabetes, which allows dissociation of the confounding obesity factor from other factors that induce the development of diabetes.

The original colony of the Cohen Diabetic rat model was held for many years solely at the Hebrew University animal facility of the Hadassah Medical Center in Jerusalem. In the late 90’s, nearly 30 years after the colony had been originally established; a nucleus from this original breeding colony was transferred to the Israeli Rat Genome Center. A program of secondary selective re-inbreeding was undertaken in order to maximize phenotypic and genotypic homogeneity of the respective strains. Animals from the two sub-strains were selectively inbred by stringent criteria for over 10 additional generations, currently bringing overall inbreeding to >55 generations. The IRGC team subsequently studied the phenotype of the newly inbred strains and established an updated reference database for Cohen Diabetic rat model.

The metabolic phenotype the Cohen Diabetic sensitive CDs substrain that is fed regular chow consisted of fasting normoglycemia, normal glucose tolerance to glucose loading, normal fasting insulin levels and a normal insulin response to glucose loading. However, when fed a custom-prepared high-sucrose low-copper diabetogenic diet, CDs become overtly diabetic, with normal or elevated fasting glucose levels and markedly elevated plasma glucose and a reduced insulin response to glucose loading. In sharp contrast, the Cohen Diabetic Resistant CDr substrain that is fed regular or diabetogenic diet does not develop diabetes and maintains normal glucose tolerance and insulin secretion. A striking gender difference is observed in CDs that are fed diabetogenic diet: Males have a lower growth rate and a more severe glucose intolerance pattern than females (15). Gonadectomy shortly after weaning does not prevent the development of the diabetic phenotype in its early phase in either sex but markedly attenuated its expression in males at a later phase, abolishing the gender differences. Importantly, the development of the diabetic phenotype in CDs that are fed diabetogenic diet is not accompanied by obesity or hyperlipidemia.

The genetic profile of the substrains was established using 1590 microsatellite markers evenly distributed throughout the rat genome (15). The genetic homozygosity of CDs and CDr has been verified. The rate of polymorphism between the contrasting strains is 33.8%. The two substrains have been crossbred thrice, generating F1 and F2 generations which phenotype has been determined (23-25). Congenic and consomic strains,
introgressing part or entire rat chromosomes from CDr onto the genetic background of CDr, have been constructed and are available at the Israeli Rat Genome Center (25).

The metabolic phenotypes of the re-bred colony of CDs and CDr and their genetic makeup render the Cohen Diabetic rat a useful experimental model that is highly suitable for studying the interaction between nutritional-metabolic environmental factors and genetic susceptibility (sensitivity and resistance) for the development of type 2 diabetes mellitus. The model is also distinctively useful for investigating the effect of gender on the expression of the diabetic phenotype. The presence of a large number of polymorphic markers renders these sub-strains highly suitable for genetic studies.

The CDs and CDr substrains are currently produced at the Israeli Rat Genome Center where they are continuously monitored for phenotypic and genetic homogeneity. They are available for collaborative studies with laboratories interested in diet induced-type 2 diabetes, the genetic basis of diabetes or any other related studies. Animals from the original colony continue to be produced at the Hebrew University.

The third model that was entrusted to the Israeli Rat Genome Center repository is the Cohen Rosenthal Diabetic Hypertensive (CRDH) rat. This model was developed in the early 90’s jointly by Professor Talma Rosenthal from the Tel-Aviv University Sackler Faculty of Medicine and Professor Cohen from the Hebrew University. The model combines type-2 diabetes mellitus and essential hypertension in one strain. The development of impaired glucose tolerance after feeding with diabetogenic diet involves both genetic and environmental factors. The combining of hypertension and type-2 diabetes in one experimental model provides an outstanding opportunity to study these concomitant pathologies in one animal strain.

The CRDH rat is a unique animal model in which genetic spontaneous hypertension and type 2 diet-induced diabetes developed after cross-breeding between the Cohen Diabetic sensitive (CDs) substrain and the Spontaneously Hypertensive Rat – (CDs x SHR) (13). In the selection process, Rosenthal and Cohen selected and mated sibling pairs with the highest spontaneous blood glucose and blood pressure. In the selected generations thereafter, diet-induced type 2 diabetes and spontaneous hypertension became evident.

The phenotype of CRDH incorporates, amongst other important features, diffuse diabetic glomerulosclerosis and hypertensive changes in arteries and arterioles that are not observed in the parental CDs or in the SHR strains. This model is thus useful in probing the mechanisms potentiating cardiovascular and renal morbid events in the setting of spontaneous hypertension and diabetes, reproducing thereby the common occurrence of type-2 diabetes and hypertension in humans.

The CRDH strain is currently produced at the Barzilai Medical Center in Ashkelon, as well as at the Tel-Aviv University. It is available for collaborative studies with interested laboratories, pending written consent of Prof. Talma Rosenthal.

Beyond the three major genetically derived inbred strains that were entrusted to the care of the Israeli Rat Genome Center, several additional animal models were derived.
within the Zootechnic facility and are currently bred within the compound. Notable among these are consomic and congenic strains originating from genetic manipulations between SBN/y and SBH/y (8-10) and between CDs and CDr (24). In these genetically derived strains, part or entire chromosomes of interest were introgressed from one strain (for example from SBN/y or CDr) onto the genetic background of contrasting strain within the same experimental model (for example SBH/y or CDs). Such strains allow investigating the contribution of introgressed chromosomal segment or entire chromosomes to phenotypes of interest. These strains are available to all interested parties on the basis of collaboration.

In addition to hosting and developing genetically derived rat models simulating diseases in humans, the investigators at the Israeli Rat Genome Center have concentrated part of their efforts on performing independent genomic research using their rat models, aiming to elucidate the genetic basis of complex diseases. Their focus has been on the investigation of the genetic basis of salt-sensitive hypertension using the Sabra rat model of salt-sensitive hypertension (6-9;26) and of type 2 diet-induced diabetes using the Cohen rat model of type 2 diet-induced diabetes (15;24;25). The renal phenotype of the Sabra model has also allowed the researchers at the Israeli Rat Genome Center to engage in the genetic dissection of proteinuria and glomerulosclerosis (10;11;27;28). The renal phenotype of the Cohen model of diabetes (29) has allowed them to initiate the genetic dissection of diabetic nephropathy [ongoing studies]. In all these genetic studies, much emphasis was laid on extensive and thorough determination and documentation of the phenotype of the respective models (5;10;15;23;27;29-38), laying thereby a necessary database for future research using these animal models. The genomic research at the Israeli Rat Genome Center has incorporated positional cloning, including multiple F2 crosses between contrasting strains. These extensive and often ambitious endeavors have successfully led to the detection of novel quantitative trait loci for salt-sensitive hypertension, diet induced type 2 diabetes and proteinuria (6-9;11;24;25;28;30; 37;39;40). The genomic component of these studies has been complemented by transcriptomics, with the global study of gene expression using DNA microarrays and other means (12;25;28;30;41) that led to the identification of novel candidate genes in hypertension, diabetes and proteinuria.

One of the notable findings was the discovery of ACE2 as a candidate gene for hypertension and cardiovascular homeostasis (42;43), which would not have been possible without the work carried out by the Israeli Rat Genome Center team and its respective animal models of disease. The discovery of ACE2 has revolutionized our understanding of the renin-angiotensin system and has added a new previously unappreciated dimension to this important system that appears to be involved in multiple pathophysiological pathways incorporated within the cardiovascular, cerebrovascular, and renal systems. The interest generated in ACE2 has stimulated extensive academic research as well as a major interest of the pharmaceutical industry, which is now developing drugs based on our discoveries. The Israeli Rat Genome Center currently hosts an ACE2 transgenic animal in which the human ACE2 gene was introduced into the genome of the SBH/y rat. This model was produced by Prof. Michael Bader at the Max-Delbruck Institute for Molecular Medicine in Berlin, Germany and is currently available at our Center.

The Israeli Rat Genome Center fosters, as its binding policy, national and international collaborations. These collaborations have aimed primarily at promoting and spreading
the use of the rat as an experimental animal model simulating disease in humans. The second major aim of these collaborations has been to enhance our understanding of the genetic basis of complex diseases in humans by expanding the use of our rodent models for genetic research. At the national level, the Israeli Rat Genome Center team has been actively collaborating with researchers from the Hebrew University in Jerusalem (Prof. Itamar Raz, Dr. Sarah Zangen, Prof. Michael Burzstein), the Tel-Aviv University (Prof. Talma Rosenthal, Prof. Yoni Lior, Dr. David Kaine, Dr. Adiel Barak), the Technion in Haifa (Prof. Batya Kristal, Dr. Shifra Sella), the Ben-Gurion University in Beer-Sheba (Prof. Arieh Moran, Prof. Israel Sekler, Prof. Yael Segev, Prof. Dani Landau) and the Haifa University in Haifa (Prof. Avraham Korol). At the international level, the Israeli Rat Genome Center team has been collaborating, among others, with investigators from the Max-Delbruck Center for Molecular Medicine (Prof. Detlev Ganten, Prof. Friedrich Luft, Prof. Reinhold Kreutz, Prof. Norbert Huebner, Prof. Michael Bader, Dr. Claudia Goesele, Dr. Ursula Ganten), the University of Wisconsin (Prof. Howard Jacob, Prof Martin Hessner), and Inserm in Paris, France (Prof. Liz Bankir).

In conclusion, the Israeli Rat Genome Center is a unique Israeli rat resource that holds in its possession inbred genetic rat models of common diseases that afflict a large part of humanity. The models were developed by Israeli researchers over many years of hard and intensive work and consist a valuable asset and a unique national and international resource for investigators interested in promoting our understanding of the physiology, pathophysiology and genetic basis of complex diseases, including cardiovascular, renal and metabolic diseases. The Israeli Rat Genome Center offers it resources to all interested parties on the basis of collaboration and encourages continuing as well as new collaborations nationally and worldwide.
Reference List


(23) Yagil Y, Ben-Ishay D, Wald H, Popovtzer MM. Water handling by the Sabra hypertension prone (SBH) and resistant (SBN) rats. Pflugers Arch 1985; 404:61-66.


(31) Yagil Y, Mekler J, Wald H, Popovtzer MM, Ben-Ishay D. Sodium handling by the Sabra hypertension prone (SBH) and resistant (SBN) rats. Pflugers Arch 1986; 407:547-551.


THE PROFESSOR JOSEPH MICHAELI

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  Specialist in Internal Medicine and Hematology
  Lecturer of Medicine Ben-Gurion University
- Joseph Barshai, MD  Specialist in Internal Medicine and Hematology

Research:
- Tatyana Buligin  Clinical Trials Research
- Dora Ben-Alon  Head of Hematology Laboratory

Nursing Team:
- Ms Yona Taktuk  Head Nurse
- Ms Nili Ohana  Deputy Head Nurse

Main Fields of Research Activities

Experimental
1. Modulation of EPO receptors by Vitamin D and Calcium

Current clinical studies
1. New anticoagulant agents in venous thromboembolism
2. Therapy of Multiple Myeloma, Chronic Lymphocytic Leukemia
List of Publications


10. **Lugassy G**. Autoimmunity in chronic lymphocytic leukemia: which B lymphocyte is the culprit? IMAJ, 2006; 8:864


17. Barshay Y, **Lugassy G**. The use of Erythropoietin in oncological patients, Israeli Journal of Medicine, 2009,15:10-13 (in Hebrew)


22. Ben-Alon D, Eden A, **Lugassy G**, Nathan I, Modulation of 1 ALPHA ,25 (OH)2 D3 – induced proliferation of erythroblast, Submitted for publication


**Co-Investigator in multinational clinical studies**


6. Einstein DVT dose ranging Study, Blood; 2008;112:2242-2247


8. Exclaim Study, Ann Intern Medicine, 2010;153:8-18


ONCOLOGY DEPARTMENT

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Medical Team
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- Irena Hinchin, MD
- Ms. Mazal Amoyal- Head Nurse

Description
The team of three experienced physicians has a special expertise in breast, ovary, gastro-intestinal, gynecological cancers and cancer genetics. We conduct regularly meetings with colleges specialists in breast surgery, gastroenterology gynecology etc.

The treatments provided at the Oncology Institute are mostly delivery of chemotherapy and molecular targeted biological drugs.

The principal aim of the staff is to make the therapeutic environment more comfortable and to give to our patients a feeling of home. In addition a number of volunteers are involved in supportive care offering different beauty treatment, reflexology and shiatsu, all helps to improve patient’s mood. We believe that improving mood affects directly the ways of coping with cancer.
Main Fields of Research Activities

1. Comparative genetic and epidemiological studies in cancer patients from different ethnic populations.
2. Palliative and supportive care in patients with malignancy.
3. Epidemiology of breast cancer and early detection.
4. Study of new chemotherapy and molecular targeted biological drugs.
Frida Barak, MD

Oncology Department

List of Publications

A-Original Articles


B- Accepted for publication

1. Barak F, Ostrowsky A, Kreitler S. Adjuvant chemotherapy for breast cancer patients: Patients expectations and physicians' attitudes. Palliative and Supportive Care

C- Sent for publication


2. Barak F, Amoyal M, Kalichman L. Using a simple questionnaire for management of nausea and vomiting during chemotherapy

D- Chapters in Books


Active Participation in Scientific Meetings

A- Abstracts

1. Kreitler S, Barak F, Siegelmann-Danieli N. The survivors’ guilt: The case of cancer. IPOS 11th World Congress June 21-25, 2009 Vienna, Austria

2. Barak F, Scharf S, Kreitler M, Kreitler S. Psychosocial support of patients and their families during the terminal period of life. IPOS 11th World Congress June 21-25, 2009 Vienna, Austria


Current clinical studies

Ongoing

1. Genetic screening in elderly Ashkenazi women to identify factors which contribute to breast cancer morbidity in BRCA1/ BRCA2 mutation carriers. 2011

2. The rate and penetrance of the predominant Jewish Ashkenazi mutations (3984Dup4*MSH6 and A636P*MSh2 genes) in unselected patients with HNPCC-associated malignancies. 2011

3. A Randomized, Double-blind, Placebo-controlled, multi-center phase III study of Denosumab as adjuvant treatment for women with Early-stage breast cancer at high risk of recurrence (D-CARE). 2011

4. An open label, randomized phase III trial of BIBW 2992 and Vinorelbine versus Trastuzumab and Vinorelbine in patients with metastatic HER2-overexpressing breast cancer failing one prior Trastuzumab treatment. 2011

5. Effect of Shiatsu on chemotherapy-induced nausea and vomiting in breast cancer patients. 2010

6. A multi-center study investigating the correlation between Erlotinib induced rash and efficacy among EGFR-mutated NSCLC patients receiving first-line therapy. 2010

7. Relationships between the personality characteristics and cancer. 2008

8. A phase III Open Label, randomized Two-Parallel-Arm Multicenter Study of E7389 versus Capecitabine in Patients with locally Advanced or Metastatic Breast Cancer
Previously Treated with Anthracyclines and Taxanes and Refectory to the Most Recent Chemotherapy .2007


10. A Randomized, Double-Blind, Multicenter Study of Denosumab Compared With Zoledronic Acid (Zometa) in the Treatment of Bone Metastases in Men with Hormone-Refractory Prostate Cancer. 2006

11. A randomised three-arm multi-centre comparison of 1 year and 2 years of Herceptin versus no Herceptin in women with HER2- positive primary breast cancer who heve completed adjuvant chemotherapy. 2002

12. Multicenter phase III randomized trial comparing Doxorubicin and Cyclophosphamide followed by Docetaxel (AC-T) with Doxorubicin and Cyclophosphamide followed by Docetaxel and Trastuzumab (Herceptin) (AC—TH) and with Docetaxel, Carboplatin and Trastuzumab(TCH) in the adjuvant treatment of node positive and high risk node negative patients with operable breast cancer containing the HER2 alteration. 2001

13. A multicentre phase III randomised trial comparing Docetaxel in combination with Doxorubicin and Cyclophosphamide (TAC) versus Doxorubicin a Cycloohosphamide. Followed by Docetaxel (AC—T) as adjuvant treatment of operable breast cancer HER2NEU negative patients with positive axillary lymph nodes. 2001

Completed Projects


2. An expanded access program of Tarceva (Erlotinib) in patients with advanced stage IIIIB/IV non small cell lung cancer (NSCLC).2006-2010

3. A Randomized, Double-Blind, Multicenter Study of Denosumab Compared with Zoledronic Acid (Zometa) in the Treatment of Bone Metastases in Subjects With Advanced Cancer (Exluding Breast and Prostate Cancer) or Multiple Myeloma. 2006-2010


5. A randomized controled study of Docetaxel Monotherapy or Doxil(caelyx) and Docetaxel For the Treatment of Advanced Breast Cancer.2005- 2007

6. A randomized, open-label, phase III study of RPR109881 IV every 3 weeks versus capecitabine (Xeloda) tablets twice daily for 2 weeks in 3-week cycles in patients
with metastatic breast cancer progressing after taxanes and antracycline therapy. 2005-2007


10. Multi center phase III open label randomized trial comparing CPT-11 in Combination with a 5-FU/FA infusional regimen to the same 5-FU/FA infusional regimen alone as adjuvant treatment of stage II and III colon cancer. 1999-2010

11. A multicenter, randomized, double-blind study of Idoxifene 40 mg/day versus Tamoxifen 20 mg/day as first-line hormonal therapy in postmenopausal women with metastatic breast cancer. 1997-2007
RHEUMATOLOGY UNIT

Head of Unit
Dr Tatiana Reitblat, MD

Lecture of Medicine Ben-Gurion University
tatyanar@barzi.health.gov.il

Medical Staff
- Galina Reifman, MD  Clinical researches responsible
- Alexander Reitblat PhD  Clinical researches manager, statistics.
- Ms. Tatiana Shemetov  Secretary

Description
Rheumatology Unit serves as an outpatient clinic for patients with rheumatic and systemic autoimmune disorders.
The unit involved in many clinical trials concerning treatments of several autoimmune diseases, such as rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis, lupus, and others.
Rheumatoid Unit serves as consulting centre for family doctors – lectures, seminars, individual teaching

Main Fields of Research Activities
- Rheumatoid arthritis
- Ankylosing spondylitis
- Psoriatic arthritis
- Systemic lupus erythematosus
- Osteoarthritis
List of Publications


2. Reitblat T, Ben-Horin CL, Reitblat A. Increased 67 Gallium uptake among Polymyalgia Rheumatica patients. Is it additional evidence of its vasculitic nature? Rheumatology Int. 2006 Apr 5; [Epub ahead of print]


6. Aloush V, Ablin JN, Reitblat T, Caspi D, Elkayam O. Fibromyalgia in women with ankylosing spondylitis Rheumatol Int. 2007 May 3; [Epub ahead of print]


DEPARTMENT OF
GASTROENTEROLOGY & HEPATOLOGY

Head of Department
Dr Jorge-Shmuel Delgado, MD
Lecturer of Medicine Ben-Gurion University
delgado@bgu.ac.il

Medical Team:

- Genady Katz, MD Senior Gastroenterologist
- Arkady Berezovsky, MD Senior Gastroenterologist
- Nourit Amir, MD Pediatrician and Senior Gastroenterologist
- Jakob Kogan, MD Senior Hepatologist and Internist.
- Ms. Mali Kadosh Head Nurse

Description

The Department of Gastroenterology and Hepatology at the Barzilai Medical Center, Ben-Gurion University of the Negev, has been at the forefront of digestive disease care in the Southern Israel for the last years. Today, we provide care for all types of gastrointestinal conditions, from inflammatory bowel disease and liver disorders, to esophageal, pancreatic, and bile duct diseases and all forms of gastrointestinal cancers.

Our department of Gastroenterology features some of the Southern Israel leading experts in fatty liver, hepatitis C, hepatitis B, alcoholic hepatitis, autoimmune hepatitis, liver cirrhosis and liver tumors as well as in inflammatory bowel disease (IBD) treatment and research. In addition, our team includes specialists from adult and pediatric gastroenterology, surgery, pathology, radiology and other disciplines who provide focused expertise in inflammatory bowel diseases, including Crohn's disease and ulcerative colitis.
Comprehensive Care:

A-Gastrointestinal Diseases

We provide an integrated, comprehensive approach to care that draws upon the expertise of many specialists in the field of IBD and other inflammatory gastrointestinal diseases. We work closely with each patient to develop ongoing, effective treatment plans that improve and maintain overall health and nutrition.

Our endoscopy center specializes in the diagnosis and treatment of complex gastrointestinal diseases, including among others, esophagitis, peptic ulcer, gastrointestinal tumors, and gastrointestinal bleeding. We perform routinely interventional endoscopy to retrieve many of the pre-malignant lesions in the gastrointestinal system, especially gastric and colon polyps.

Our range of advanced interventional endoscopy procedures, include: gastroscopy, colonoscopy, sigmoidoscopy, endoscopic hemostasis, endoscopic mucosal resection (EMR), percutaneous endoscopy gastrostomy and therapeutic endoscopic retrograde cholangiopancreatography (ERCP)

B-Liver Diseases

Our department offers leading-edge approaches for diagnosing and treating the broad spectrum of liver-related diseases, including viral hepatitis, fatty liver disease, alcoholic liver disease, cholestatic liver disease, autoimmune liver diseases, drug-induced liver injury, liver cirrhosis and liver tumors. Furthermore, we perform the following procedures:

- Upper endoscopy and colonoscopy to provide an insider’s view of digestive system structures.
- Esophageal variceal banding to treat varicose veins that can cause gastrointestinal bleeding
- Liver biopsy in collaboration with the Radiology and Pathology department for the diagnosing and staging of liver diseases and liver cancer.
Main Fields of Research Activities

Our research focuses on many areas, including new treatments of chronic hepatitis C and primary biliary cirrhosis, diverticulitis, ulcerative colitis and Crohn’s disease. Furthermore our center is currently involved in the study of the epidemiology and natural history of autoimmune hepatitis, primary biliary cirrhosis and hepatitis E in the southern Israel.
List of Publications
Refereed articles in scientific journals

A- Original Article


**Active Participation in Scientific Meetings**


Head of Department
Dr Zeev Weiler. MD, FCCP
Lecturer of Medicine Ben-Gurion University
weilerz@barzi.health.gov.il

Medical Team
- Polyakov Nelly, MD    Instructor of Medicine Ben-Gurion University
- Rozov Alexander, MD

Nursing Team
- Ben-Hamo Osnat, Head Nurse
- Shachanowitz Yelena
- Waisburd Regina

Research
- Arush Einat
- Drobitzki Marina
- Yitzchak Rivka
- Yossefian Ronit
- Kalmikov Marta

Field of Research Activity
- COPD: Asthma: Interstitial Lung Disease
Weiler Zeev, MD

Pulmonary Institute & Pulmonary Physiology Laboratory

List of Publications


**Active Participation in Scientific Meetings**

1. Six minute walk test – physiological aspects for health care professionals- Israel Society of Pulmonology annual scientific meeting, March 2006.

2. Bronchiolitis obliterans organizing pneumonia. Israeli Pulmonary Association meeting, Tel Aviv, December 2006.

3. The underdiagnosed disease- actinomycosis. Israel Pulmonary Association meeting, Tel- Aviv, October 2007


5. Biphasic Exercise challenge testing in the diagnosis of asthma, Israeli Pulmonary Association Annual Scientific meeting, Jerusalem, June 2009


**New Technologies Used For Pulmonary Evaluation**

1. Combined Cardio-Pulmonary Exercise testing.

2. Video bronchoscopic imaging of pulmonary pathologies.

3. Ultrasound guided pleural effusion aspiration.

4. Right heart catheterization assessments for pulmonary hypertension.

5. Fine needle & Core biopsy aspiration of pulmonary nodules.
Current clinical studies

1. **Teva- Fps-AS-202**: Efficacy and safety of Fp Spiromax. Administered twice daily compared with placebo in adolescent and adult subject with severe persistent asthma uncontrolled on high dose inhaled corticosteroid therapy, (Phase 3, randomized, double-blind, placebo and open label active-controlled, parallel-group, multicenter), 2011

2. **Actelion- ACT-129968**: Efficacy of different doses in adult patients with partly controlled asthma, (Phase 2b, double blind, placebo-controlled, parallel group study), 2011

3. **Cephalon- C38072/3082**: The Efficacy and Safety of Reslismab in the reduction of clinical asthma exacerbations and change in lung function in patients with Eosinophilic asthma. (Phase 3, randomized, double-blind, placebo controlled parallel group, one year study), 2011

4. **Nycomed- PPD RO 2455-404-RD**: Effect of roflumilast on exacerbation rate in patients with COPD treated with fixed combinations of LABA and ICS. (Phase III/IV, randomized, double-blind trial), 2011


6. **Novartis, CQAB149B2348**: Comparison of effect of inhaled Indacaterol versus inhaled tiotropium on lung function, rate of exacerbations and related outcomes in patients with COPD (phase 3b multicenter, 52 week treatment, randomized, blinded, double dummy, parallel group efficacy study, 2009

7. **Boehringer Ingelheim BI 205.389 PAREXEL**: Effect of inhalation of titropium once daily 18 mcg versus salmeterol twice daily 50mcg on time to first exacerbation in COPD patients (a randomized, double-blind, double- dummy, parallel group, one year study), 2008

8. **PPD- Novartis CQMF149A2201**: 14 day dose ranging trial of 4 doses of indacaterol delivered via Twist haler in adult and adolescent patients with persistent asthma (a randomized, multi-center, parallel group, double blind, placebo and formoterol controlled), 2008

9. **Quintiles- Roche- NB19751**: The efficacy and safety study of 5mg R03300074 once daily for 2 years in subject with smoking-related, moderate-to-severe COPD with emphysema receiving concurrent optimal COPD drug therapy (a double-blind, placebo-controlled), 2007

10. **GSK FFA106783**: The efficacy and safety of GW685698X 200 mcg twice daily, GW685698X 200 mcg and 400 mcg once daily in the evening compared with placebo for 8 weeks in adolescent and adult subject with persistent asthma (a randomized, double-blind, placebo controlled, parallel group, multi center study), 2006
11. **PPD- XRP1526B/ 3031**- The safety and efficacy of Formoterol HFA MDI (10mg) and Formoterol DPI (Foradil 12 mg) or placebo in adult patient with Asthma (a randomized, Double-Blind, Placebo- and active controlled parallel group, stratified multi center 12 week study), 2006
THE ISRAELI FORUM FOR PREVENTION OF CARDIOVASCULAR DISEASES

Head of Department
Prof J. Reuven Viskoper, MD

Description
Prof Viskoper is the President of "The Israeli Forum for - Prevention of Cardiovascular Diseases" located at Barzilai Medical Center. This committee was established in 2002 as a result of the joint decision of the Ministry of Health, the four Sick Funds and the scientific societies of the Israel Medical Association that deals with cardiovascular (heart and blood vessel) disease prevention.

The following projects were developed within the forum activity:

1. CVD prevention in "healthy workers" of industry. This project was preformed in nine industries - % of high risk for CVD is 50%. After three months of intervention encompassing: physical exercise, healthy nutrition, smoking cessation and MD advise for risk factors control, the risk was reduced by 50%, HBP by 30% and smokers by 20%. The industrial society, Bituach Leumi and Kern Manof cooperate in this mission.

2. Risk factors control in community: some project in several Kibbutzim in north and in south Israel.

3. "The heart prefers green": intervention in food preparation and subsequently, labeling healthy food in green and unhealthy food in red. Preformed in several large scale industries and in several Kibbutzim.

4. Training catering firms, especially those working with industries, how to prepare healthy food and monitoring the performance.
5. Healthy lifestyle instruction for elderly, especially in Kiryat-Gat.

6. Training students of Medicine to become health instructors in the community, in cooperation with Deans of faculties of Medicine.

7. Instruction of parents and teachers of 70 schools on healthy lifestyle, in cooperation with ministry of education program "Tafur Alai" and "Kern Karev".

8. Health promotion – prevention of CVD with special approach to CVD offspring by public health nurses in: Ashkelon and Ashdod region, in cooperation with: Ministry of health – public health department and department of health education. The Kupat Holim Leumit nurses also participate in this program as well as Family physicians treating Arab and Druze populations in northern Israel.

**Main Fields of Research Activities:**

Its activities are directed to the so called "healthy population" and are two fold:

1. Diagnose those at high risk to develop cardiovascular diseases.

2. Teach those subjects with high risk, healthy life style during a 3 months period and Reduce % of the high risk subjects
List of Publications


Active Participation in Scientific Meetings

- Israeli Society of Hypertension meeting Caesarea: April 2011
- Attendances at International Meetings: Sept. 2010, 23 Scientific ISH (International Soc. of Hypertension) meeting – Vancouver Canada.
Departments
DEPARTMENT OF PSYCHIATRY

Head of Department
Prof Gabriel Schreiber MD, PhD

Professor of Medicine Ben-Gurion University

Elected Dean of Faculty of Health Sciences, Ben Gurion University of the Negev.

schreibg@bgu.ac.il

Medical Team:

- Andrey Belgorodsky, MD  Deputy Director Department
  Instructor in Medicine BG University

- Katty Major, MD  Director Outpatients Clinic
  Instructor in Medicine BG University

- Leonid Knyazhansky, MD  Senior Psychiatrist
  Instructor in Medicine BG University

- Oxana Narsia, MD  Senior Psychiatrist
  Instructor in Medicine BG University

- Natalia Miroshnik, MD  Deputy Senior Psychiatrist
  Instructor in Medicine BG University

- Anna Podberegsky, MD  Senior Psychiatrist
  Instructor in Medicine BG University

Additional Medical Team:

- Natalia Vasilets, MD  Resident
- Alexander Goldshtein, MD  Resident
- Anton Lagerev, MD  Resident
- Georgy Piven, MD  Resident
- Michael Kopilov, MD  Resident
- Elena Yahaiov, MD  Resident
- Natalia Kabluchic, MD  Resident
Nursing Team:

- Mr. Moshe Rotshstein  Head Nurse
- Ms. Hana Amar       Deputy Head Nurse

Research Activity

The research projects at the Department of Psychiatry at Barzilai Medical Center involve:

1. The involvement of G proteins and beta-arrestins, proteins that play a major role in cellular signal transduction in the mechanism of action of antidepressants and mood stabilizers and in the pathophysiology, diagnosis and treatment of mood and other mental disorders.

2. The application of mathematical dynamic concepts: non-linear dynamics, chaos, and fractals to understand dynamic principles of psychoanalysis.

3. The epidemiology and prevention and management of ASR, ASD and PTSD syndromes in the Ashkelon area and around the Gaza strip.

4. Treatment of negative symptoms in schizophrenia through the use of NMDA ligands.
Gabriel Schreiber, MD, PhD
Psychotherapy Department

List of Publications

Refereed articles in scientific journals

A-Original Articles


B- Chapters in Books


C- Book


Active Participation in Scientific Meetings

A- Abstracts & Letters


Competitive Research Grants

<table>
<thead>
<tr>
<th>Year</th>
<th>Grant Description</th>
</tr>
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<tbody>
<tr>
<td>2005-2007</td>
<td>NARSAD Investigator Award (U.S.A.) 100,000$/ 2 years</td>
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<tr>
<td></td>
<td>Sofia Avissar and Gabriel Schreiber (clinical aspects) &quot;GRK, β-arrestin and PhLP, regulators of receptor–G protein coupling: Involvement in mood disorders and in the mechanism of action of antidepressants and mood stabilizers</td>
</tr>
<tr>
<td>1998-2006</td>
<td>50,000$.</td>
</tr>
<tr>
<td></td>
<td>Yadgaroff Family Foundation-Gabriel Schreiber</td>
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<tr>
<td></td>
<td>Standing Donation for Research in Biological Psychiatry</td>
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<tr>
<td>2007</td>
<td>Lundbeck Grant; 100,000$ PTSD Prevention Study</td>
</tr>
</tbody>
</table>
DEPARTMENT OF NEUROLOGY

Head of Department
Dr Ron Milo. MD, Director
Lecturer in Medicine, Ben Gurion University
Ronm@barzi.health.gov.il

Medical Team - Consultants

Prof Esther Kahana, MD
Specialist in Pediatric Neurology; Neuroepidemiology

Elena Dorodnicov, MD
Deputy head; Stroke, Vascular Neurology
Instructor in Medicine, Ben Gurion University

Zoja Aladjem, MD, Ph.D
Head of memory Clinic

Natalia Tikhmanovich, MD
Specialist in Neurophysiology, Neuromuscular diseases

Lea Pery, MD
Specialist in Headache; Research

Tatiana Katz, MD
Specialist in multiple sclerosis

Alexander Gur, MD
Stroke, vascular neurology

Lior Volchek, MD
Research; Neurophysiology
Instructor in Medicine, Ben Gurion University

Additional Medical Team - Residents:

- Jenia Reznik-Zoref, MD Resident
- Larisa Gerasimov, MD Resident
- Alexander Shenker, MD Resident
- Anna Gelfand, MD Resident
**Description**

The department of neurology is involved in all aspects of neurological clinical services, teaching and research.

The department cares for patients with all neurological problems. Patients are referred for hospitalization from the emergency department, the outpatient clinics, other departments at the hospital and by family physicians and neurologists from community healthcare services in the catchment area.

Three thousand patients are also seen at the outpatient clinics each year, and the department provides consultation services to the emergency and other departments of the hospital and elsewhere.

The Department of Neurology comprises of 12 bed inpatient wards and outpatient clinics which offers care of the following: General neurology, memory and dementia, stroke, neuroimmunology, multiple sclerosis and neuromuscular diseases. Other services provided by the department include acute stroke care, transcranial doppler (TCD) and neurophysiological tests such as EEG, EMG+NCV and evoked potentials (VEP, SEP, BERA).

The Department of Neurology conducts multiple clinical trials in multiple sclerosis, epilepsy, stroke, headache, Alzheimer's disease, Parkinson's disease, neuropathies and other conditions. As a consequence, the Department of Neurology is responsible for the largest number of clinical studies in 2010.

The department is affiliated to the Faculty of Health Sciences at the Ben-Gurion University of the Negev and involved in educational activities such as frontal teaching for medical students and at the School of Nursing at the Barzilai MC, teaching of residents and rotating interns in neurology, and rotating clerkships for medical students from the Ben-Gurion university and all over the world.
Main Fields of Research Activity

1. Multiple sclerosis- epidemiology, cognitive dysfunction, quality of life, neuropsychological assessment, breast cancer in MS.

2. Stroke- characteristics of acute stroke patients treated with tPA

3. Creutzfeldt-Jacob disease– protein biomarkers in the CSF, surveillance in Israel, studies on the epidemiology and genetics of the disease in Lybian jews.

4. Epilepsy- epidemiology of the disease in Ashkelon

5. Epidemiology of SSPE.


7. Cognitive dysfunction in dementia and other medical conditions.
List of Publications

Refereed articles in scientific journals

A-Original Articles


**Co-Investigator in multinational clinical studies**


2. Diener HC, Sacco R, Yusuf S; Steering Committee; PRoFESS Study Group: Rationale, design and baseline data of a randomized, double-blind, controlled trial comparing two antithrombotic regimens (a fixed-dose combination of extended-release dipyridamole plus ASA with clopidogrel) and telmisartan versus placebo in patients with strokes: the Prevention Regimen for Effectively Avoiding Second Strokes Trial (PRoFESS). Cerebrovasc Dis. 2007; 23(5-6):368-80.


B- Chapters in Books


Active Participation in Scientific Meetings

1. **Milo R**: Addressing immunology and pathology of multiple sclerosis with glatiramer acetate. *Invited lecture* at the Annual Congress of the Taiwan Neurological Society, Taipei, Taiwan, April 23-24, 2005.


11. **Milo R**: Making therapeutic decisions in MS. 42th National Congress of the Turkish Neurological Society, Antalya, Turkey, November 12-17, 2006.


27. Kahana E, Alter M, Zilber N, and The Israeli MS study group: Environmental factors determine multiple sclerosis risk in migrants to Israel. World Congress on Treatment and Research in Multiple Sclerosis, Montreal, Canada, September 17-20 2008.


34. **Dorodnicov E**, Shkil A, **Milo R**: Thrombolysis in acute ischemic stroke: 3-year experience at the Barzilai Medical Center. Annual Meeting of the Israel Neurological Association, Tel-Aviv, January 6-7, 2009.


52. Aladjem Z, Zamir D, Polishchuk I, Novochatko G, Reitblat T, Milo R, Kertzman S: Night duties cause disturbances in memory but not in psychomotor function or


56. LaGanke C, on behalf of the CAMMS Study Groups: Exploring alemtuzumab’s long term efficacy and safety: design of the CARE-MS extension study. A550. The 62rd Annual Meeting of the American Academy of Neurology, Toronto, Canada, April 10-17, 2010. Neurology 2010; 74 (suppl 2)


66. Auquier P, et al, on behalf of the MusiQoL Responsiveness Study Group: Responsiveness of the Multiple Sclerosis International Quality of Life questionnaire to Expanded Disability Status State score changes in patients with Multiple Sclerosis: Month 12 results from an international observational study. 13th Annual ISPOR Annual European congress, Prague, Czech Republic, November 6-9, 2010.


**Current clinical studies**

**Ongoing**

1. Quality of life and neuropsychological assessment in multiple sclerosis patients treated with immunomodulatory agents. 2001

2. MS 27919: A phase III, double-blind, placebo-controlled, randomised trial to determine the efficacy and safety of a dose range of 50 to 100 mg/day of safinamide, as add-on therapy, in subjects with idiopathic Parkinson’s Disease with motor fluctuations, treated with a stable dose of levodopa and who may be receiving concomitant treatment with stable doses of a dopamine agonist, an anticholinergic and/or amantadine. 2008

3. BEACON (MP-00102): Betaferon Prospective Study on adherence, Coping and nurse support. 2009

4. AC-058B201: Multicenter, randomized, double-blind, placebo-controlled, parallel-group, dose-finding study to evaluate the efficacy, safety and tolerability of three doses of ACT-128800, an oral S1P1 agonist, for six months in patients with relapsing-remitting multiple sclerosis, followed by a study extension up to 24 months. 2009

5. MACSI: A double blind, randomized, placebo-controlled, parallel group, multicenter phase 3 pivotal study to assess the safety and efficacy of 1 mg/kg/day intravenous DP-b99 over 4 consecutive days versus placebo when initiated within nine hours of acute ischemic stroke onset. 2009

7. Protocol H6L-MC-LFBF: Open-label extension for Alzheimer’s disease patients who completed one of two semagacestat phase 3 double blind studies (H6L-LFAN or H6L-MC-LFBC). 2010

8. The IMPACT-24 Trial: A Multicenter, Randomized, Double Blind, Sham Control, Parallel Arm Trial to Assess Effectiveness and Safety of the Ischemic Stroke System ISS, as an Adjunct to Standard of Care in Subjects with Acute Ischemic Stroke. 2010

9. Protocol 28850: Open label trial to determine the long-term safety of safinamide in Parkinson’s disease patients. 2010

10. Protocol 205MS301: Multicenter, double-blind, randomized, parallel-group, monotherapy, active-control study to determine the efficacy and safety of daclizumab high yield process (DAC-HYP) versus avonex (interferon β-1a) in patients with relapsing-remitting multiple sclerosis. 2010


## Completed clinical Studies

<table>
<thead>
<tr>
<th>Duration</th>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-2007</td>
<td>Beyond</td>
<td>A multicenter, randomized, double-blind, double-dummy, parallel group, study assessing the add-on effect over Glatiramer Acetate (GA) of alfacalcidol or simvastatin in relapsing-remitting multiple sclerosis (RR-MS) subjects treated with GA</td>
</tr>
<tr>
<td>2003-2007</td>
<td>Beyond</td>
<td>International, randomized, multicenter, phase IIIb study in patients with relapsing-remitting multiple sclerosis comparing over a treatment of 104 weeks</td>
</tr>
<tr>
<td>2004-2006</td>
<td>PREVAIL</td>
<td>An open-label, randomized, parallel group, multicenter study to evaluate the efficacy and safety of enoxaprin versus unfractionated heparin in the prevention of venous thromboembolism in patients following acute ischemic stroke</td>
</tr>
<tr>
<td>2004-2008</td>
<td>GALA</td>
<td>A multicenter randomized trial conducted mainly in Europe to compare primarily the risk of stroke, myocardial infarction and death as a result of carotid endarterectomy under either general or local anesthesia</td>
</tr>
<tr>
<td>2004-2005</td>
<td></td>
<td>A multi-center survey to evaluate the antibodies to glatiramer acetate in sera of multiple sclerosis patients treated with copaxone for 2 years or more.</td>
</tr>
<tr>
<td>2004-2008</td>
<td>PRoFESS</td>
<td>Prevention regimen for effectively avoiding second strokes: A double-blind, active and placebo controlled study of Aggrenox vs. clopidogrel, with and without micardis.</td>
</tr>
<tr>
<td>2004-2005</td>
<td>EMR 62-225</td>
<td>Feasibility investigation for investigational site selection for the phase III studies with Sarizotan</td>
</tr>
<tr>
<td>2005-2006</td>
<td>PADDY-1</td>
<td>A double-blind, placebo-controlled, multicenter multinational phase III study to evaluate the safety</td>
</tr>
</tbody>
</table>
and efficacy of Sarizotan HCl 1 mg b.i.d. in patients with Parkinson’s disease suffering from treatment-associated dyskinesia.

<table>
<thead>
<tr>
<th>Year</th>
<th>Study Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2009</td>
<td>BetaPlus</td>
<td>Observational study to assess drug adherence in patients with multiple sclerosis and after conversion to Betaferon by using elements of the BetaPlus Program</td>
</tr>
<tr>
<td>2005-2009</td>
<td>CogniMS</td>
<td>Observational study to assess cognition in patients with early multiple sclerosis</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Paddy-O</td>
<td>An open-label, multicenter, multinational phase III follow-up study to investigate the long-term safety and efficacy of Sarizotan HCl 1 mg b.i.d. in patients with Parkinson’s disease suffering from treatment-associated dyskinesia</td>
</tr>
<tr>
<td>2006-2010</td>
<td>AVNo6</td>
<td>Assessment of CD4+CD25+ regulatory T cells in MS patients and the impact of treatment with Avonex® on them. Analysis of the FoxP3 protein production and its impact on the regulatory cells function</td>
</tr>
<tr>
<td>2006-2009</td>
<td>CFTY720D2301</td>
<td>A 24-month, double-blind, randomized, multicenter, placebo controlled, parallel-group study comparing efficacy and safety of FTY720 1.25 mg and 0.5 mg administered orally once daily versus placebo in patients with relapsing-remitting multiple sclerosis</td>
</tr>
<tr>
<td>2006-2008</td>
<td>FORTE (GA9016)</td>
<td>A multinational, multicenter, randomized, parallel group, double-blind, study to compare the efficacy, tolerability and safety of glatiramer acetate injection 40 mg/ml to that of glatiramer acetate injection 20 mg/ml administered once daily by subcutaneous injection in subjects with relapsing-remitting (R-) multiple sclerosis (MS).</td>
</tr>
<tr>
<td>2006-2009</td>
<td>ISRO:</td>
<td>The Israeli Stroke Registry and Outcome</td>
</tr>
<tr>
<td>2006-2007</td>
<td>VRX-RET-E22-302</td>
<td>(Restore) Study: Randomized double-blind, placebo-controlled, multicenter, parallel-group phase III study to determine the efficacy and safety of two doses of retigabine (900 mg/d and 600 mg/d) used as adjunctive therapy in refractory epilepsy patients with partial-onset seizures</td>
</tr>
</tbody>
</table>
the Efficacy, Safety and Tolerability of E2007 in Levodopa Treated Parkinson’s Disease Patients with Motor Fluctuations

**2007-2008**  
**E2007-G000-303**  
A Multi-centre, open label extension study to evaluate the long term safety, tolerability, and efficacy of E2007 as an adjunctive therapy in levodopa treated Parkinson’s disease patients with Motor Fluctuations

**2007-2008**  
Beyond Follow-up: International, multicenter, phase III-b study of subcutaneous every other-day treatment of patients with relapsing multiple sclerosis with (Phase A) double-blind Betaseron/Betaferon 250 μg or 500 μg or open-label Betaseron/Betaferon 250 μg and (Phase B) open-label betaseron/Betaferon 500 μg

**2007-2009**  
**ISN 087-CL-084**  
A phase 4, randomized, parallel group, multi-center study to assess the safety and efficacy of multiple dosing regimens of IV conivaptan in subjects with euvoelemic hyponatremia

**2007-2009**  
**NTI ASP 0503**  
A Randomized, Double-Blind, Placebo-Controlled Study of Ancrod (Viprinex TM) in Subjects Beginning Treatment within 6 Hours of the Onset of Acute, Ischemic Stroke

**2007-2008**  
**204PD202**  
A Randomized, Double-Blind, Placebo-Controlled, Dose-Escalation Study of Single and Multiple Oral Dose Administration of BIIB014 in Subjects with Moderate to Late-Stage Parkinson’s Disease Who Are Also Receiving Treatment with Levodopa

**2007-2009**  
**E2007-G000-318**  
A multi-centre, open label extension study to evaluate the long term safety, tolerability, and efficacy of E2007 as an adjunctive therapy in levodopa treated Parkinson’s disease patients with motor fluctuations

**2007-2010**  
**DEFINE, 109MS301**  
A Randomized, Multicenter, Double-Blind, Placebo-Controlled, Dose-Comparison Study to Determine the Efficacy and Safety of BG00012 in Subjects with Relapsing-Remitting Multiple Sclerosis

**2007-2010**  
**MusiQol**  
A multicenter, multi-regional observational study to test the responsiveness of the validated MusiQol (Multiple Sclerosis International Quality of Life Questionnaire) instrument to EDSS status changes in any form of multiple sclerosis (MS) in patients with and without treatment

**2008-2009**  
**204PD203**  
A Randomized, Double-Blind, Placebo-Controlled,
Dose-Escalation Study of Multiple Doses of BIIB014 Administered Orally in Subjects with Early Parkinson's Disease


2008-2010 H6L-MC-LFAN Effect of γ-Secretase Inhibition on the Progression of Alzheimer's Disease: LY450139 versus Placebo

2008-2009 CAMMS324005 07 A phase 3, randomized, rater-and dose-blinded study comparing two annual cycles of intravenous low-and-high-dose alemtuzumab to three-times weekly subcutaneous interferon beta 1-a (Rebiš) in patients with relapsing remitting multiple sclerosis who have relapsed on therapy.

2008-2011 CFTY720D2301 E1 An extension of the 24-month, double blind, randomized, multicenter, placebo-controlled, parallel group study comparing efficacy and safety of FTY720 1.25 mg and 0.5 mg administered orally once daily versus placebo in patients with relapsing-remitting multiple sclerosis

2010-2011 Protocol CENA713DIL01 A 12-week, multi-center, open-label evaluation of caregiver preference, safety and tolerability of Exelon® Patch (Rivastigmine transdermal) in patients with Alzheimer’s disease (BETTER Study)

2010-2011 Protocol 101MS305 (SURPASS) A Multicenter, Randomized, Rater-Blind, Parallel-Group, Active-Controlled Study to Evaluate the Benefits of Switching Therapy (Glatiramer Acetate or Interferon β-1a) to Natalizumab in Subjects with Relapsing Remitting Multiple Sclerosis
DEPARTMENT OF CARDIOLOGY

Head of Department
Prof Amos Katz. MD
Professor of Medicine Ben-Gurion University
amosk@barzi.health.gov.il

Head of Units
- Jamal Jafari, MD  
  Director, Invasive Cardiology Unit.  
  Lecturer of Medicine Ben-Gurion University
- Vladimir Khalameizer, MD  
  Director, Cardiac Electrophysiology & Pacing Unit.
- Chaim Yosefy, MD  
  Director, Non Invasive Unite.  
  Associated Professor of Medicine Ben-Gurion University
- Shlyakhover Vladimir, MD  
  Physician in charge, Intensive Coronary Care Unit.  
  Instructor of Medicine Ben-Gurion University
- Berman, Michael, MD  
  Physician in charge, Cardiology Unit.
- Boris Brodkin, MD  
  Physician in charge, Nuclear Cardiology Service and cardiac rehabilitation service  
  Instructor of Medicine Ben-Gurion University
- Tatiana Droznikov, MD  
  Physician in charge, Clinical Research Unit.

Additional Medical Team:
- Havey Rabbey, MD
- Yan Orlov, MD
- Eugene Fishman, MD
- Tatiana Troshine, MD
- Tatina Koznichovel, MD
- Natalia Golodnizhki, MD
- Tatiana Plaiev, MD
- Zana Yechezkel, MD
- Vitali Sheklovsky, MD
- Gihad Abu Hamed, MD
Description

The Cardiology Department at Barzilai Medical Center provides high quality diagnostic and treatment services for patients referred with actual, or suspected, heart disease. The clinical work of the department encompasses all modern aspects of cardiology. The department employs the leading edge technologies and treatments in all aspects of cardiology.

The department is consisting of several units: Hospitalization, Invasive and Non Invasive Cardiology, Cardiac Electrophysiology and Pacing, Nuclear Cardiology, Cardiac Rehabilitation service, and Clinical Research Unit.

The head of the department, Prof Katz, graduate of the first class of the medical school of the Ben Gurion University of the Negev. He did his cardiology training in Soroka University Medical Center in Beer-Sheva. He is an expert in cardiac electrophysiology and did his fellowship in cardiac electrophysiology in Indianapolis Ind. He is involved in medical education, teaching at Ben Gurion University and was associate Dean for student's affaire for 10 years, and he is going to be the associate dean for academic promotion in the faculty of health sciences.

He is involved in clinical and basic cardiology research and has more than 70 scientific publications in leading national and international medical journals. As one of the leading Israeli Cardiologists he was recently involved in the legislation of the Israeli law to put AEDs [automatic external defibrillators] in the community to prevent sudden cardiac death. He is involved in cardiac arrhythmia basic research at Ben Gurion University collaborating with Dr Yoram Ezion and Prof. Arie Moran. The Arrhythmia Research Laboratory performs original research in arrhythmia prevention and treatment especially atrial fibrillation. The research is funded by competitive national and international research grants.
Amos Katz, MD
Cardiology Department

Main Fields of Research Activities

**Experimental**
The Basic cardiac research is conducted in the Arrhythmia Research Laboratory of with Dr Yoram Ezion (Soroka University Medical Center) and Prof. Arie Moran (physiology department). The Laboratory performs original research in arrhythmia prevention and treatment especially atrial fibrillation mostly on rodent and isolated cardiomyocytes. Research is funded by competitive national and international research grants.

**Clinical Epidemiological Studies at Cardiology Department**

- Impact of Descent and Stay at the Dead Sea Resort (low altitude) on Patients with Systolic Congestive Heart Failure and an Implantable Cardioverter Defibrillator
- Potential value of automated daily screening of cardiac resynchronization therapy defibrillator diagnostics for prediction of major cardiovascular events. Results from Home-CARE (Home Monitoring in Cardiac Resynchronization Therapy study).
- Association Between Mitral and Aortic Valve Calcification and Preferential Left or Right Coronary Artery Disease
- Accuracy of diagnosing atrial flutter and atrial fibrillation from a surface electrocardiogram by hospital physicians: analysis of data from internal medicine departments
- Ultra Short-Term Heart Rate Variability for Early Risk Stratification following Acute ST Elevation Myocardial Infarction
List of Publications

Refereed articles in scientific journals

A- Original Articles


Inhibitor of L-Type Calcium Channels. The Journal of Biological Chemistry 2009;20:32434-32443.


B- Accepted Articles (in press)


C- Case Reports

D- Editorial & Reviews Article
3. Shiyovich A, Katz A. "The 'Shock Factor': ICD configuration and programming to optimize shock treatment," Accepted for publication in the Journal of Cardiovascular Electrophysiology

F- Chapters in Books
Active Participation in Scientific Meetings

A- Abstracts


8. A. Beharier, Y Etzion, A. Katz, M.Mor, S. Kollt, A. Moran. Reduced Surface Expression of L-type Calcium Channels in Rapidly Paced Cardiomyocytes; A New Mechanism of Atrial Electrical Remodeling? The 54th Annual Conference of the Israeli Heart Society, April 2007.


23. Y. Etzion, Beharier, A. Shalev, Matsa, G. Sahar, A. Moran, A. Katz. ZnT-1 in Expression in the Human Atria and new Insights on its Activity as an

Barzilai Medical Center
Research & Publications 2005-2010
Inhibitor of L-type Calcium Channels. American Heart Association, Nov 5 2007, Orlando


31. Kolt S, Beharier O, Buzaglo L, Shaltiel L, Gitler D, Gaber L, Etzion Y, **Katz A.** Moran A. ZnT-1, a Novel Modulator of Cardiac L-type Calcium Channels; Insights into the Molecular Mechanism. 55th Annual Conference of the Israel Heart Society, April 9-10, 2008, Tel Aviv, Israel.

Barzilai Medical Center
Research & Publications 2005-2010


37. More M, Beharier O, Etzion Y, Levi S, Katz A, Moran A. ZnT1 a Novel Regulator of T-type Calcium Channels Mediating a Crosstalk between T-Type and L-Type Calcium Channels. 56th Annual Conference of the Israel Heart Society, April 23, 2009, Tel Aviv, Israel.


The Patients’ View. 56th Annual Conference of the Israel Heart Society, April 23, 2009, Tel Aviv, Israel.


B- Invited Lectures & Presentations

1. Prof Amos Katz: Invited speaker The Israel Innovation Summit, Haifa Israel, April 2006
2. Prof Amos Katz: Invited speaker; Do we need AEDs in the era of liberalizes ICDs use for primary prevention? The 7th International Dead Sea Symposium Tel Aviv Israel
3. Prof Amos Katz: Invited speaker; Electrophysiology in the CCU: New AF Guidelines. 5th International Meeting Intensive Cardiac Care. Tel Aviv, Israel.
4. Prof Amos Katz: Invited speaker; Drug Therapy of Cardiac Arrhythmias, Session I Antiarrhythmic Action of Non-antiarrhythmic Drugs. Statines. XII World Congress on Cardiac Pacing and Electrophysiology, Rome, Italy.
5. Prof Amos Katz: The 1st World Congress on Controversies in Cardiovascular Diseases (C-Care) July 3-6, 2008, InterContinental Hotel, Berlin, Germany. Organizing Committee & Lecturer.
6. Prof Amos Katz: First International Cardiovascular Conference: Focus on the Middle East, Faculty. April 1-2 Indianapolis Indiana USA.
7. Prof Amos Katz: Plenary Session lecture in the 56th Israeli Heart Society annual meeting “Joint session: Israel Heart Society European Society of Cardiology (ESC),
New Frontiers in Heart Failure. Controversies and New Directions in Device Therapy for CHF.

8. Prof Amos Katz: Anglo-Israeli Symposium Future Directions in Cardiology. Atrial Fibrillation: Is there a light at the end of the tunnel? Dan Caesarea, Israel


2. Prof Amos Katz: Chairman, Session on Diagnosis and Electrophysiology of Ventricular Arrhythmia. American Heart Association 2010 annual scientific meeting, Chicago US

Competitive Research Grants

2006   Israel Ministry of Health, Chief Scientist grant: [20,000 $ X 3 years].
       ZnT-1, an intrinsic modulator of Zinc and Calcium influx; Possible role in Atrial Fibrillation.
       Prof. Amos Katz With Dr Yoram Ezion, Internal Medicine E Soroka University Medical Center and Prof. Arie Moran from the Department of Physiology, Faculty of Health sciences, Ben-Gurion University.

2007   Israel Science Foundation; [194,000 IS for 4 years]
       Involvement of ZnT-1 in rapid pacing and ischemia in electrical changes as a modulator to arrhythmia induction. Induction.
       Prof. Amos Katz With Prof. Arie Moran from the Department of Physiology, Faculty of Health sciences, Ben-Gurion University and Dr Yoram Ezion, Internal Medicine E Soroka University Medical Center.
The Cardiology Department Current clinical studies

Ongoing

A  Acute Coronary Syndrome studies:

1. **SEPIA 2 TAO**: A multi center randomized, double-blind, triple-dummy trial to compare otamixaban to unfractionated Heparin + eptifibatide, in patients with unstable angina/Non ST segment elevation Myocardial infarction scheduled to undergo an early invasive strategy.

2. **IMPROVE IT**: A multi-centre, randomized, double-blind, placebo-controlled study to examining outcomes in subjects with acute coronary syndrome: Vytorin (Ezetimibe/Simvastatin) vs Simvastatin.


4. **TIMI 50 TRA 2P**: A multi-centre, randomized, double-blind, placebo-controlled study to evaluate the safety and efficacy of SCH 530348 in addition to standard of care in subjects with a history of atherosclerotic disease: thrombin receptor antagonist for secondary prevention of atherothrombotic ischemic events

5. **SYR-322-402**: A multicenter, randomized, double-blind, placebo-controlled study to evaluate cardiovascular outcomes following treatment with Alogliptin in Addition to standard of care in subjects with type 2 diabetes and ACS.

6. **TIMI 52 SOLID**: A multicenter, randomized, double-blind, placebo-controlled study to evaluate long-term treatment with Darapladib enteric coated tablets, 160 mg (oral once daily dose) as compared to placebo when added to standard of care in an ACS patient population on the incidence of first occurrence of the composite of MACE (i.e., CV death, non-fatal myocardial infarction [MI], non-fatal stroke).

B  Atrial Fibrillation studies

7. **PALLACE**: A multicenter, randomized, double-blind, placebo-controlled study to evaluate Dronedarone treatment in patients with permanent atrial fibrillation.

8. **RELAY able**: A multicenter, open label continues study to evaluate the efficacy of Dabigatran to Warfarin

9. **AVEROES LTOLP**: A multicenter, open label continues study to evaluate the efficacy of Apixaban to Warfarin

C  Congestive Heart Failure Studies

10. **ASTRONAUT**: A multicenter, randomized, double-blind, placebo-controlled study to evaluate long-term treatment with Aliskerin in patients with congestive heart failure

D Pacemaker / Defibrillator Studies (Conducted in the Electrophysiology and pacing unite)

12 ECHO CRT Biotronik
13 Pain Free Medtronic
14 MADIT RIT. Rochester University USA

E Invasive Cardiology Studies (coronary angiography, stents) (Conducted in the invasive cardiology unite)

15 DELIVERY -Medtronic

Completed Clinical Research Projects

1. ABLYNX
2. Astellas 6517-CL
3. DOT HF
4. MADIT RIT
5. COGNIS 4
6. ASSERT
7. PreFerMVP
8. IN TIME
9. HOME CARE
10. ALPHEE
11. MADIT CRT
12. TRACER study
13. KAI – MEDPANCE
14. SEQUEL
15. ACTIVE
16. PROTECT I, II, P
17. BAS PRE RELAX
18. ESPIRE
19. BIOGEN Tridenti
20. NILE
21. TAXUS OLIIMPIA
22. PROTECT Endever stent
23. PLATO
24. SEPIA-ACS1 TIMI 42
25. APPRAISE 2
26. ROCKET
27. ARISTOTLE
28. AVEROES
Chaim Yosefy, MD

Director, Non Invasive Unit
Associated Professor of Medicine Ben Gurion University

Additional Physicians
- Boris Brodkin, MD
- Tatiana Droznikov, MD

List of Publications

A- Original Articles


**B- Review Article**


C- Letters


Active Participation in Scientific Meetings

A- Abstracts


15. Yosefy C, Ben Ishay R, Herman M. Classification of Left Heart Functional Dimensions by Clustering Cardiac Echo-Doppler Measurements. A Mathematical Data Mining Technique Can be Used to Find Pathological Patterns. Israel Heart Society Annual Meeting, April 2008, Tel-Aviv, Israel.


B- Invited Lectures & Presentations

1. Dr **Yosefy Chaim**. Debate with Prof. Weisgerten Shki: The future of Beta-Blocker in the treatment of hypertension. The Israel Society of Internal Medicine Annual meeting; January 3, Tel-Aviv, Israel.

2. Dr **Yosefy Chaim**. Echocardiography in the Diagnosis of Hypertensive Heart Disease. The Israel Society of Hypertension Annual meeting; December 2006, Tel Aviv, Israel.

3. Dr **Yosefy Chaim**. Debate with Prof. Weisgerten Shki: The future of Beta-Blocker in the treatment of hypertension. The 1st Obesity, Hypertension and Diabetes (DOT) Annual meeting; January 2, Tel-Aviv, Israel.

4. Dr **Yosefy Chaim**: Left Atrium, Left Ventricle and Hypertrophy Regression. The Israel Society of Hypertension Annual meeting; May 2007, Eilat, Israel.

5. Dr **Yosefy Chaim**: LVH and Cardiomyocytes loss in chronic renal failure. The Israel Society of Nephrology Annual meeting; May 2007, Ramot, Israel.

6. Dr **Yosefy Chaim**: Left Ventricular Hypertrophy and the Kidney. The Israel Society of Hypertension Annual meeting; December 2007, Tel Aviv, Israel.

7. Prof **Yosefy Chaim**: Atherosclerosis, Metabolic Syndrome and the Gordian knot. The 2nd Obesity and Metabolic syndrome Society Annual meeting; January 30, Tel-Aviv, Israel.

8. Prof **Yosefy Chaim**: Advisory Board: Smoking prevention and cessation in the Community. The Israel Society for Smoking Prevention and Cessation. February 6-9, the Dead Sea, Israel.

9. Prof **Yosefy Chaim**: New Diagnostic Advances in Cardiology: Cardiac CT and 3D Echocardiography. The 2nd Obesity, Hypertension and Diabetes (DOT) Annual meeting; March 19, Tel-Aviv, Israel.

10. Prof **Yosefy Chaim**: Salt and Hypertension (Lecture and Chairperson). The Israel Society of Nephrology Annual meeting; May 2008, Ramot, Israel.

11. Prof **Yosefy Chaim**: Debate with Prof. Weisgerten Shki: The future of Beta-Blocker in the treatment of hypertension. Obesity, Hypertension and Diabetes (DOT) Annual meeting; March 18, Tel-Aviv, Israel.

12. Prof **Yosefy Chaim**: Hypertension news. The Israel Society of Nephrology Annual meeting; April 2009, Goshrim, Israel.
Jamal Gafari, MD

Director, Invasive Cardiology Unit

Director of Invasive Cardiology Unite
Dr Jafari Jamal, MD
Lecturer of Medicine Ben-Gurion University

jafarij@barzi.health.gov.il

List of Publications

Co-Investigator in clinical studies


2. Design and methodology of the Occluded Artery Trial (OAT). The Occlude Artery (OAT) Research Group. Am Heart J 2005; 150:627-42. Association between mitral and aortic valve calcification and preferential left or right coronary artery disease.
Active Participation in Scientific Meetings

A- Abstracts

1. Y. Blaer, J. Jafari, A. Podberezsky, T. David, L. Reizin, J. Benjamin Single-blind and double-blind randomized controlled trials of PALMTHERAPY\textsuperscript{R}, an alternative medical approach, for anxiety before cardiac catheterization. Poster presentation. Acute Cardiac Care Congress. 21-24 October 2006, Prague, Czech Republic.


Vladimir Kalhamiezer, MD

Director, Cardiac Pacing & Electrophysiology Unit

Description

The Electrophysiology and Pacing Unit evaluates and treats patients with all types of arrhythmia disorders. Using advanced cardiac mapping technology, the cardiac electrophysiologists perform diagnostic electrophysiology studies and cardiac ablations. In addition, pacemaker, ICD, and cardiac resynchronization device implantation are performed by our highly trained staff. The unit became the leading unit in Israel for Cardiac Resynchronization Device Implantation and a referral center for complex cases from all over the country. The unit is a teaching center for all the device company for physicians from Israel and international staff.
List of Publications

Refereed articles in scientific journals


Active Participation in Scientific Meetings

A- Abstract


B- Invited Lectures

1. Dr Vladimir Kalahmaiezer: Presentation of First CRT-D implantation using femoral approach -7th Annual Dead SEA Symposium, Tel Aviv 2006

2. Dr Vladimir Kalahmaiezer: Presentation of first in History LV leads implantation through Diaphragmatic Veins-8th Annual Dead Sea Symposium, Tel-Aviv 2008-
Brodkin Boris, MD

Nuclear Cardiology Service & Rehabilitation Service

Head of Unit
Dr Brodkin Boris, MD
Instructor of Medicine Ben-Gurion University
borisb20@barzi.health.gov.il

List of Publications

Lecture & Presentations at National and International Meetings


Experimental
A single genetic factor controls the transition from prediabetes to diabetes in Psammomys obesus (fat sand rat).
List of Publications


Active Participation in Scientific Meetings

Abstract

DEPARTMENT OF GYNECOLOGY & OBSTETRICS

Head of Department
Prof Eyal Anteby, MD - Chairman
Associate Professor of Medicine, Ben-Gurion University.
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Head of Units:
Gemer Ofer, MD Head of Gynecologic Endoscopy
And in charge of Gynecology
Associate Professor Ben-Gurion University

Zohav Efraim, MD Head of Obstetric and Gynecologic Ultrasound
Senior Lecturer Ben-Gurion University

Orvieto Raoul, MD Head of IVF Unit
Professor of Medicine Ben-Gurion University

Shenhav Simon, MD Head of High Risk Pregnancy unit and vice chairman
Lecturer in Medicine, Ben-Gurion University

Zalis Yosef, MD Head Labor and Delivery
Additional Medical Team:

- Michael Volodarsky, MD
- Victoria Kapostian, MD
- Octav Segal, MD
- Mordehia Yaniv, MD
- Prof. Roi Homburg, MD
- Anatoli Shaperberg, MD
- Gringeild Livio, MD
- Meltcer Shimon, MD
- Felix Erelevitch, MD
- Dov Krol, MD
- Svetlana Rosinsky, MD
- Marina Bergman, MD
- Faina Lectick, MD
- Lorian Miki, MD
- Gadi Liberty, MD
- Weissman Dora, MD
- Arkadi Varshavsky, MD
- Genia Kruchkovich, MD
- Shohat Victoria, MD
- Riss Bozana, MD
- Ravit Nahum, MD
- Bord Elia, MD
- Yair Sagi, MD
- Marchak Eva, MD
- Sianov Arena, MD
- Saaid Azbarga, MD
- Elisha Avi, MD
- Putish Maria, MD
- Harmati Yael, MD
- Elbo Jaak, MD
- Ela Eivshin, MD
- Silverhish Andress, MD
Eyal Anteby, MD

Chairman, Department of Obstetrics & Gynecology

Main Fields of Research Activity

- Ultrasound in Obstetrics and Gynecology
- High risk pregnancy
- Cardiac function in pregnancy
- The effect of stress on obstetric parameters
- The effect of stress on neonatal parameters

List of Publications

A- Original Articles


Endometrial Volume May Predict Early IVF-Pregnancy Loss. Fertil Steril (Accepted for publication).


32. Orvieto R, Nahum R, Rabinson J, Ashkenazi J, Anteby EY, Meltzer S. Follitropin-alpha (Gonal-F) versus follitropin-beta (Puregon) in controlled ovarian


B- Chapters in Books


Gemer Ofer, MD

Head of Gynecologic Endoscopy and In charge of Gynecology

Associate Professor of Medicine BGU

Medical Team

- Viktoria Kapostian, MD  Instructor of Medicine, BG University
- Mark Treger, MD  Instructor of Medicine, BG University
- Michael Volodarsky, MD
- Marina Bergman, MD
- Dov Krol, MD

Current clinical studies

- A multicenter study of PET CT in triage of patients with cervical cancer

- Prospective randomized trial of versus Non-closure of the Visceral and Parietal Peritoneum at Cesarean section and adhesions formations at subsequent cesarean delivery.
List of Publications

A- Original Articles


Active Participation in Scientific Meetings

Presentation at National and International Conferences (Oral and Poster)


THE INFERTILITY & IVF UNIT
AND MALE INFERTILITY CLINIC

Director of Infertility & IVF Unit and Male Infertility Clinic
Prof Raoul Orvieto, MD
Professor of Medicine Ben-Gurion University
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Medical Team
- Simion Meltcer, MD
- Ravit Nahum, MD
- Gadi Liberty, MD
- Yaacov Rabinson, MD
- Jenya Kruchkovich, MD
- Prof. Roy Homburg, MD

Description
The Fertility and In-vitro Fertilization (IVF) Unit is part of the department of Obstetrics and Gynaecology. The unit treats infertile couples referred from the region and performs between 400-500 cycles of IVF and a further 200-300 cycles of other infertility treatments a year, with an overall live-births rate (take-home babies) of 25%.

The Unit includes an outpatient clinic with an adjacent laboratory and operating theater.

In the outpatient clinic, we operate a Women’s Fertility Clinic and a Male infertility Clinic. Treatments include IVF and ICSI, freezing of embryos and blastocysts, intra-uterine insemination, testicular surgery to extract sperm, etc.

The Unit is affiliated to the Ben-Gurion University of the Negev and is active academically in basic and clinical studies.
Raoul Orvieto, MD

Head of Infertility & In Vitro Fertilization Unit
and Male Infertility Clinic

List of Publications

A- Original Articles


B- Accepted Articles (in press)


C- Case Reports


D- Review Article

E- Letters to the Editor


F- Other Publications


Chapters in Books


### Active Participation in Scientific Meetings

**A- Abstracts**


3. R. Nahum, B. Kaplan, Y. Yairi, M. Hirsch, J. Pardo, Y. Yogeve, **R. Orvieto.** Use of various contraceptive methods and time of conception in a community-based population. Annual Meeting of the Israeli Fertility Association, Tel Aviv, Israel, May, 2005


5. **R. Orvieto, A. La Marca, W. Badir, J. Bar, B. Fisch.** Influence of urinary versus recombinant gonadotropin on serum P-selectin levels in vivo. Annual Meeting of the Israeli Fertility Association, Tel Aviv, Israel, May, 2005

6. R. Abir, A. Ben Haroush, H. Raanani, **R. Orvieto,** D. Feldberg, B. Fisch. A pilot study investigating if and when cryopreservation of ovarian tissue should be considered after initiation of chemotherapy. 21st Annual Meeting of the European Society of Human Reproduction and Embryology, Copenhagen, Denmark. June 2005


38. **Orvieto R.** Does Metformin Prevent Spontaneous Abortions in PCOS patients? 12th National Congress of Sterility, Contraception and Hormone Replacement Therapy, Borovetz, Bulgaria, March 2011


**B- Lecture & Presentations**


2. Premature Ovarian Failure and Poor Ovarian Response Symposium, Sophia, Bulgaria. 2007. Invited Speaker


6. PCOS & Infertility Treatment, Sophia, Bulgaria-2009, Invited Speaker


11. La nascita nel 2010: un evento non globalizzato. Siena, Italy 2009, Invited Speaker.
12. The 2nd Annual Congress of the Society of Ambulatory Gynecology, Eilat, Israel 2011, Invited Speaker
14. The 12th National Congress of Sterility, Contraception and Hormone Replacement Therapy, Borovetz, Bulgaria 2011, Invited Speaker
15. The 6th International Symposium on Diabetes and Pregnancy (DIP). Salzburg, Austria 2011, Invited Speaker
DEPARTMENT OF PEDIATRIC

Head of Department from October 2010
Prof Haim Bibi. MD
*Associated Professor of Medicine Ben-Gurion University*

haimb@barzi.health.gov.il

Head of Units

- **Prof Menachem Schlesinger MD** Head of Department up to August 2010.
  *Professor of medicine of Medicine Ben-Gurion University*

- **Aviner Shraga, MD** Head of Pediatric Day Hospital
  *Lecturer of Medicine BG University*

- **Dorit Ater, MD** Head of Pediatric Pulmonology Unit
  *Instructor of Medicine BG University*

- **Enda Kurtzbart, MD** Lecturer of Medicine BG University

- **Alina Evestein, MD** Pediatric Pulmonology
  *Instructor of Medicine BG University*

- **Jaffar Jaffry, MD** Pediatric Neurology
  *Instructor of Medicine BG University*

- **Yaron Razon, MD** Pediatric Cardiology

- **Nurit Amir, MD** Pediatric Gastroenterology

- **Yuri Zeldin, MD** Allergy and clinical immunology

Main Fields of Research Activities

Experimental

1. Evaluation of the apoptotic machinery in platelets of patients with acute and chronic ITP, the organisms that trigger ITP and the epitops for the corresponding antibodies, and the relation between these components and the clinical picture.

2. Immunologic chip for stratification of children newly diagnosed with ITP
List of Publications

A- Original Articles


24. - Yogev Bagio T, Bibi H, Dubnov J, Or hen K, Carel R, Portnov BA. Who is affected more by air pollution – Sick or healthy? Some evidence from a heath survey of schoolchildren living in the vicinity of the coal – fired power plant in Northern Israel. Health Place. 2010; 16(2): 399-408

B- Publications as investigator in multi-center trials

1. Busse WW, Pedersen S, Pauwels RA, Tan WC, Chen YZ, Lamm CJ, O'Byrne PM; START Investigators Group. Bibi H as investigator. The Inhaled Steroid Treatment As Regular Therapy in Early Asthma (START) study 5-year follow-up: effectiveness of
early intervention with budesonide in mild persistent asthma. J Allergy Clin Immunol 2008;121:1167-1174


3. Treatment with hypertonic inhalations in viral bronchiolitis: mechanism and rationale Medicine, Pediatric Medicine, 15: 22-25, December 2010, Dorit Ater, Avigdor Mandelberg

C- Case Reports


D- Editorial & Reviews Article

Active Participation in Scientific Meetings

A- Abstracts


23. **Bibi H**, Gavrieli N. Cough monitoring during bronchodilator administration in pediatric Asthma. s 239. ERS annual Meeting, Vienna, September 2009


31. A. Mandelberg, D. Ater, T. Zangen, E. Meiri, s. Frank and A. Levine. Simultaneous objective recording of pH Impedance and respiratory symptoms is crucial to establish the causality of reflux-cough events.


**Current clinical studies**

**Ongoing**

1. Adverse effect of prolonged Ritalin treatment on cardiac functions.
3. Evaluation of oral status as guide for pediatric hospitalization.

**Completed Projects**

Submitted for publication.

1. Evaluation of parental knowledge in updated recommendations on the treatment of gastroenteritis and examining the impact of educational intervention.
2. Septicemia Following Rotavirus Gastroenteritis - Two cases and a Literature Review
3. Posttraumatic fat necrosis presented as cellulitis of the shine.
4. Sinus tachycardia as a sign of tracheal foreign body.

**Manuscript**

5. Evaluation of the use of anti colic medications in the Ashkelon district.
7. Recurrent septic shock after common infectious diseases in a boy.
8. The effects of the sex of previous children in the family on sex of a subsequent child.
PEDIATRIC DENTAL CLINIC

Head of Department
Dr Uri Zilberman DMD, PhD
Senior Lecturer in Dental Medicine
ori@barzi.health.gov.il

Medical Team:
- Eliyahu Mass, DMD  Senior Lecturer in Dental Medicine
- Gizela Aizman-Berenstein, DMD

Description
The Pediatric Dental Clinic at Barzilai Medical Center was established in 1998. The clinic provides high level dental treatment to children suffering from genetic and hereditary disorders, health problems, dental phobia and dental trauma. The treatments are given using conscious sedation or under general anesthetics. In 2008 the clinic was accredited to start a three and a half years specialization program in pediatric dentistry, and in November 2008 the first 3 dentists were accepted to the program. Today there are six residents in the program.
Research Activities

The clinic is involved in clinical and basic research in pediatric dentistry and bioanthropology and more than 20 papers were published and 15 presentations (Oral or Poster) were given in local and international meetings during the last 5 years.

The staff and the residents are conducting several studies involving the use of local anesthetics in pediatric dentistry, the knowledge of pediatrics in the field of pediatric dentistry, and the use of iodoform paste for pulpotomies in primary molars.
List of Publications

Refereed articles in scientific journals

A-Original Articles


Active Participation in Scientific Meetings

A-Abstract


3. Zilberman U, Mass E: Amelogenesis Imperfecta- the earliest hereditary dental syndrome described and a case report with 20 years follow-up. (Poster). The 9th Congress of the European Academy of Pediatric Dentistry, Dubrovnik, Croatia


B- Lecture & Presentations

1. Keinan D, Zilberman U, Smith P: Chemical composition changes in deciduous teeth from two congenital disorders. (Oral presentation). The Annual Meeting of the International Association for Dental Research- Israel Division, Tel-Aviv, Israel 2005

3. Lev-Tov Chattah N, Smith P, Zilberman U: Differences in odontoblastic function between first and second permanent molars. (Oral presentation). The Annual Meeting of the International Association for Dental Research- Israel Division, Tel-Aviv, Israel 2005


**Current clinical studies**

**Ongoing**

Current clinical studies:

Two large Helsinki Committees' approved clinical researches are ongoing these days:

1. The use of new preformed, tooth colored acetal crowns for primary molars, sponsored by Dentsply Int. (USA).

2. The relation between caries activity in children and length of hospitalization due to child diseases, in collaboration with the pediatric department.

**Complete Project**

In July 2011, the last paper on a new method of pulp treatment in young permanent molars with carious pulp exposure will be published. This was a 10 years clinical project with a long follow-up period.
DEPARTMENT OF
GENERAL & VASCULAR SURGERY

Head of Department
Prof Boris Yoffe, MD, FACS
Associated Professor of Medicine Ben-Gurion University
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Medical Team

- Efim Harah, MD  Head of unit of vascular Surgery
  Instructor of Medicine Ben-Gurion University
- Youri Mnouskin, MD  Head of Trauma Unit
  Instructor of Medicine Ben-Gurion University
- Ben-Dor Dora, MD  Head of Department of Pathology

Research

- Ms. Tsarfati Becky  CRA and Research coordinator

Main Fields of Research Activities:
Experimental
1. Vascular medicine and surgery
2. Laparoscopic surgery
3. Gastrointestinal surgery
List of Publications

A- Original Articles


B- Case Reports


Active Participation in Scientific Meetings

A- Abstracts


27. Yoffe B, Hospital under Attack. World Congress for the advancement of surgery, november1-4, 2009 Jerusalem, ISRAEL

B- Lecture & Presentations

1. Endovascular delivery of nitric oxide in animal trials. Stuff meeting in Hilel - Yafe Hospital, June 2005, Israel.
New Technologies Used For Pulmonary Evaluation

1. Method and Device for Sutureless Vascular Anastomosis. Barzilai Medical Center & HDH Medical LTD.

2. Nitric oxide (NO) participates in vascular wall homeostasis Barzilai Medical Center & Ashkelon Technological Industries, Ashkelon, Israel.

3. A standard planned closure of trocar wounds plaque returning & microembolies occasion between a standard carotid stent and a sleeve wrapped carotid stent.

4. Multi gene vascular systems. MGVS, Barzilai Medical Center & TEVA. margin probe device the breast lump after lumpectomy Barzilai Medical Center and DUNE medical.

5. Articulated laparscopic devices for tacks insertion and resection. Barzilai Medical Center & Novo Lap Medical.


7. CardioFitTM for Heart Failure-Clinical Study. BIO Control Medical LTD & Barzilai Medical Center.
UROLOGY DEPARTMENT

Head of Department
Dr Shmuel Cytron, MD
Senior Lecturer of Medicine Ben-Gurion University
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Medical Team:
- Dr Kravchick Sergey, MD  Assistant professor of Medicine at Ben Gurion University
- Dr. David Kisari, MD  Lecture of Medicine at BG University
- Dr. Dimitry Shumalinsky, MD  Lecture of Medicine at BG University
- Dr. Adrian Paz, MD  Lecture of Medicine at BG University
- Dr. Leonid Lobic, MD  Lecture of Medicine at BG University
- Yevgeny Stepnov, MD  Urologist
- Yevgeny Yulish, MD  Urologist
- Uri Goralic, MD  Urologist
- Igor Bunkin, MD  Resident
- Leonid Loifman, MD
- David Bron, MD
- Imanuel Chotz, MD
- Michael Meloshevitzer, MD
Description

The Urology department includes 20 beds with the capacity of 25 beds (when needed). 12 Urologists are the medical staff, some of them in partial position.

The Urology department in the Barzilai Medical Center deals with all the Urological aspects such as: General Urology, Oncology, Pediatric Urology, Urodynamics studies, Female urology, Andrology, Endo-urology, Laparoscopic surgery, Cryoablation of tumors and organs, TRUS imagine and TRUS guided prostate biopsies, Cystoscopy and biopsies, Bladder chemotherapy irrigation and Out patient clinic for diagnosis and follow-up.
Main Fields of Research Activities

Experimental

- Comparison MMC level in blood and urine in two groups of patients who underwent TUR-BT followed by intravesical installation of MMC.
- Preliminary study in bladder cancer patient with disposable device thus preventing draining of the medicine out of the urinary bladder after mode of affective replication accompanied aneaploidy in pripher blood lymphocytes of prostate cancer patient.
- 3-D record of trans-rectal Prostatic biopsies medical device – "Navigo". combination trans rectal ultrasound / magnetic resonance imaging system for evaluation prostate tissue a clinical feasibility study. one-arm, single-center, prospective study to assess the safety and efficacy of BioProtect biodegradable implantable balloon in prostate cancer subjects undergoing radiotherapy.
List of Publications
Refereed articles in scientific journals

A-Original Article


12. S Kravchick, Stepnov E, Cytron S, Beb-Dor D, Kravchenko Y, Peled R: 7-10 years follow-up of 573 patients with elevated PSA (&gt;4 ng/ml) or/and suspected PRexam: Biopsies protocol and follow-up guides. J. Endourol, 23(6):1007-13; 2009. Impact factor 1.8


Active Participation in Scientific Meetings

A- Abstracts


8. S. Kravchick, E. Stepnov, V. Lebedev, S. Cytron. Non-Contrast Computerized Tomography (NCCT) and Dynamic Renal Scintigraphy (DRS) in the patients with refractory renal colic. The 24th World Congress of Endourology. Cleveland, USA, August 17-20, 2006


10. S. Kravchick, E. Yulish, E. Stepnov, S. Cytron. Long-Term results of Intravesical DMSO/Lidocaine for Idiopathic Overactive Bladder; Prospective pilot study. The 24th World Congress of Endourology, Cleavland, USA, August 17-20, 2006


DEPARTMENT OF OPHTHALMOLOGY

Head of Department
Dr Shmuel Levartovsky, MD
Senior Lecturer of Medicine Ben-Gurion University
shmuell@barzi.health.gov.il

Medical Team:

- Igor Kaiserman MD, MSc, MHA  Vice Chair of Ophthalmology
  Department, Head of Cornea
  & external eye disease service
  Associated Professor of Medicine
  Ben Gurion University

- David Hauser, MD  Lecturer of Medicine
  Ben Gurion University

- Ms. Dalia Levi  Head Nurse

Description
The department in Barzilai Medical Center deals with all fields of
Ophthalmology aspects both surgical and medical
Shmuel Levartovsky, MD

Head of Ophthalmology

List of Publications

A-Original Articles


2. G. Sholohov, S. Levartovsky: Retained ophthalmic viscosurgical device material in the capsular bag 6 months after phacoemulsification. J Cataract Refract Surg 31:627-9,2005


 Active Participation in Scientific Meetings

A- Abstracts

2. S. Levartovsky, G. Sholohov, E. Levinger, S. Levinger, H. Leiba: 2006; Binocular functions following monovision correction with excimer laser surgery. American Society of Cataract and Refractive Surgery Meeting. San Francisco, USA
3. H. Leiba, G. Sholohov, E. Levinger, S. Levinger, S. Levartovsky: 2008; the effect of monovision LASIK or PRK correction on binocular functions in presbyopic patients. Annual meeting of American Association for Pediatric Ophthalmology and Starbismus. Washington DC, USA (poster)
4. S. Levartovsky. Unpleasant experience with ReSTOR: 2008; American Society of Cataract and Refractive Surgery Meeting. Chicago, USA
Igor Kaiserman, MD, MSc, MHA
Vice Chair of Ophthalmology Department
Head of Cornea & External Eye Disease Service

Head of Department
Prof Igor Kaizerman, MD, MSc, MHA
Associated Professor of Medicine Ben-Gurion University
igork10@gmail.com

Main Fields of Research Activities
Experimental
1. The effects of corneal collagen cross-linking on IOP measurement in rabbit eyes
2. Harvesting donor corneas with OVD

Current clinical studies
1. Prognostic factors in Acanthameba Keratitis.
2. Improving the nomograms in PRK and LASIK
3. Evaluating the risk factors for cataract in a large cohort
4. The effect of donor age on corneal graft survival
5. IOL calculations after refractive surgery with Pentacam EKR
6. The association of blepharitis and keratoconus
7. Internal astigmatism after cataract surgery
8. Evaluation of the Gallilei Scheimflug camera
9. Evaluation of the results of pterygium surgery with glued conjunctival autograft
10. Treating viral conjunctivitis with iodine solution

New Technologies
1. Developed a new technique for corneal transplantation – the half top hat technique.
2. Developed a new chopper for cataract surgery – the viscochopper.
3. Developed a new technique for pterygium surgery – the visco-dissection of pterygium.

List of Publications

A-Original Articles


**B-Case Reports**


Active Participation in Scientific Meetings

A- Abstracts

1. Hazarbassanov R, Varssano D, Grinbaum A, Kaiserman I. Correlation Between Corneal and Total Wavefront Aberrations Measured at Various Optic Zones Pre- and Six Month Post-LASIK. Annual meeting of the association for research in vision and ophthalmology (ARVO). Fort Lauderdale, Florida USA. May 1-5, 2005


**B- Invited plenary lectures at conferences/meetings**


2. **Kaiserman I**. Neural network predictive modeling for melanoma. ARVO ocular oncology collaborative research course. Ft. Lauderdale, FL. USA. April 30, 2005.

DEPARTMENT OF PHARMACY SERVICES

Head of Department
Mgr Ahuva Lustig, MSc.Pharm.
ahuva@barzi.health.gov.il

Pharmacists Team:

- Rachel Sokol, BSc.    Deputy director
- Shahar Aflalo, MSc.Pharm    Clinical pharmacist
- Sigal Kerekesh Spirer, MSc.Pharm    Supervisor of Hemato-oncology service
- Oliana Rubanov, MSc.Pharm    Supervisor of Centralized IV admixture service:
- Nitzan Egozi, BSc.Pharm    Supervisor of services to Surgical Division
- Ifat Telker, BSc.Pharm    Supervisor of services to Internal Diseases Division

Additional Pharmacy team

- Ms. Rita Kuniver    Assistant pharmacist
- Ms. Lily Mil    Assistant pharmacist
- Ms. Evgenia Fisher    Assistant pharmacist

Additional logistic team

- Ms Edna Giassi
- Ms Dandy Izac
- Mr Levy Kapach
Description

The Department of Pharmacy Services is a service unit, which provides all pharmaceuticals required in the treatment of patients, teaching and research essential to the continued well being of patients.

The Head of Pharmacy Services, Mgr Ahuva Lustig is responsible for:

Management of personnel and financial resources; purchasing and inventory; handling of physical resources; administrative considerations of drug distribution and control systems; clinical and drug information services; quality assurance programs; development of safety and security procedures; participation in clinical and investigational drug trials.

Main Pharmacy Services focus in:

- **Drug Distribution** - The Pharmacy is the main logistical support for the distribution of pharmaceuticals for all inpatient patients and clinics. At present, all beds are covered by the traditional system (individual patient prescription and floor stock).

- **C.I.V.A. Services** - Provides a 36-hour supply of ready to use intravenous doses to all hospitalized patients.

- **T.P.N Service** - Provides consulting and monitoring services as well as aseptic preparations to all patients supported by T.P.N.

- **Ambulatory Care Pharmacy** - Prescription service is provided for soldiers, hospital employees and outpatients who require special medications.

- **Oncology Pharmacy** - Provides preparation of all parental cancer chemotherapy, drug information and monitoring of all patients receiving cancer therapy in hospital.

- **Perinatal Services** - Provides Unit Dose Distribution System to neonatal intensive care unit and pediatric department.

- **Drug Information Service** - Provides pharmaceutical, pharmacological and therapeutic information to all the medical staff of the Hospital.

- **Investigation Drug Service** - It is a Hospital mandated service, which provides support to clinical investigators involved in studies of drugs in humans. This includes acquisition, storage, preparation and dispensing of the drugs used in the study.

- **Tutorial Service** - Pharmacology lectures to nurses and other immigrant health care staff (physicians, microbiologists). Clinical instructors for pharmacy students at the "Ben-Gurion University of the Negev" Beer-Sheva, and the Hebrew University at Jerusalem. Instructors for internship over the sea pharmacy students
Active Participation in Scientific Meetings

**A-Abstract**


7. **Lustig A**, Sokol R, Peled R & David T. "Nurses' evaluation of clinical pharmacists' services - a hospital survey". 2005 ASHP Boston, USA


10. **Lustig A**, Kerekesh S. "Evaluation of pharmacy input to prevent drug errors in Barzilai Medical Center". Info 2008 Annual Conference. Tel-Aviv, Israel.
11. Lustig A. & Cohen T. "ensibly עליות תורפיט בדורי יתע" =comparison of clinical pharmacy services in Israel. Tel-Aviv, Israel

12. Lustig A. "Enhancement of Clinical Pharmacy Services in Israel" -2010. First National Meeting of clinically involved Pharmacists in Israel. Tel-Aviv, Israel

13. Aflalo S & Lustig A. "The pharmacist as initiator of a clinical study – from assembling a formulation to patient outcome TSCEM catheter lock in haemodialytic patients" 2010. First National Meeting of clinically involved Pharmacists in Israel. Tel-Aviv, Israel


Competitive Research Grants


1995  Project: Evaluation of an educational program to prevent Nosocomial methicillin resistant Staphylococcus Aeroginosa Infection. Awarded by the Chief Scientist of the Ministry of Health Principal Investigators: Mishal I. & Lustig A.

1998  Project: Prescribing errors of drugs in a general hospital in Israel. Awarded by the Chief Scientist of the Ministry of Health Principal Investigators: Scharf S. & A Lustig
ALLERGY AND CLINICAL IMMUNOLOGY SERVICE

Head of Service
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Medical Team:
Yuri Zeldin, MD  Allergy & Clinical Immunology
Outpatient Clinic
Instructor of Medicine Ben Gurion University

Cohen Ziona, MSc  Clinical Immunology Laboratory
**Description**

The Allergy and Clinical Immunology Service offers consultation and referral for all patients with immunologic/allergic disorders. In addition to disorders such as allergic rhinitis (hay fever), asthma, sinusitis, insect allergy, food allergy, vasculitis syndromes, skin allergic and immunological disorders (special expertise in chronic urticaria and contact dermatitis), penicillin and other drug allergies, the staff has particular expertise in adult immunodeficiency disorders (including HIV/AIDS). In collaboration with the Clinical Immunology laboratory, children with suspected immunodeficiency are also evaluated and treated. Immunologic evaluation includes studies such as antibody and complement levels, IgG subclasses, lymphocyte and neutrophils function, and delayed hypersensitivity skin testing.

As a referral Immunology laboratory, we perform full complement tests, (C1 inhibitor, C2, C3, C4, C5-C9, a total complement activity (CH50 or CH100). Other complement components are also evaluated as needed to look for complement deficiencies. We carry out complement laboratory evaluation for all Israeli Medical centers in cases of recurrent microbial infections, autoimmune diseases, hereditary and acquired angioedema, and various types of kidney immune diseases.

**Research Activity**

Our research focus is multidisciplinary and spans basic immunologic studies and clinical trials. Translational research studies are aimed at uncovering the mechanisms of endothelial/mesenchmal progenitor cells and complement interaction in immune inflammation, on discovering pathophysiologic processes involved in the initiation and propagation of allergic responses in the lung (asthma), skin (eczema), upper respiratory tract (allergic rhinitis), and vascular immunopathology (especially in arterial hypertension).

Clinical research studies focus on uncovering clinical, epidemiologic and therapeutic principles concerning chronic idiopathic/autoimmune urticaria and skin allergic diseases. For this purpose we intend in the near future to establish allergic dermatology unit.
List of Publications


**Case reports and reviews**
