

# AMERICAN LEBANESE GENERAL HOSPITAL

المستشفى اللبناني الأمريكي



## WHY?

### OBJECTIVES:

1. To bring the **American experiences** to Lebanon with the highest standards of care in collaboration and affiliation with US hospitals.
2. To focus on 2 major specialties that we are lacking in Lebanon and in the region (Middle East):

Multiorgan Transplantation and Diabetes.

#### a. Multiorgan Transplantation Center:

- . There is No Multiorgan transplantation Center in the hall region
- . Transplantation is currently been done in different hospitals, some of them not fully equipped nor have the infrastructure or the experienced personals to perform these highly advanced and demanding procedures.
- . More than 5000 people die every year (in Lebanon only) in MVA (Motor Vehicle Accident) while the organ donation does not reach 10-20 cases per year (0.2-0.4 %). This is extremely low which indicates the need for large public awareness program to maximize the usage for these organs. The potential in similar cases in different countries is to increase this number by 30-40 folds.
- . Only Kidney transplant is been performed in Lebanon (Except few anecdotal cases of liver or heart transplant). Most of these cases (more than 95%) are living UNRELATED cases which poses great concern about the ethical and moral issues (People buy their organs!).
- . Starting this program would include a vision to expand from kidney transplant to liver and heart transplant in the near future.
- . Islet cell Transplant would be also part of the plan for Type I Diabetes (see in the section b).
- . Establishing Multiorgan Transplantation in Lebanon would be a referral center for the entire region. In addition, this program would bring large load of patients to all the other Medical and Surgical Services.

#### b. Diabetes Center.

##### Brief History:

Diabetes mellitus is a devastating chronic debilitating disease: it is the commonest cause of blindness, chronic renal failure (renal dialysis transplantation), neuropathy and lower limb amputations. It also causes a marked increase in heart attacks and strokes. It thus leads to a very significant decrease in life expectancy and quality of life.

While the majority of diabetic patients suffer from type 2 diabetes, a minority have type I diabetes. Type 1 diabetes starts earlier in life and is due to an autoimmune destruction of insulin producing B cells in the pancreatic islets, therefore, it is associated with an absolute deficiency of

insulin. Thus, insulin is the only treatment for the high blood glucose levels in type 1 diabetes. Type 2 diabetes is the result of insulin resistance and a relative deficiency in insulin secretion by the B cells. While oral medications can be used to treat type 2 diabetes, although insulin may become necessary for treatment if blood glucose remains elevated. Over the past five decades, it has been established that insulin has to be delivered in a fashion that closely mimics the natural circumstances, i.e., the plasma concentrations of insulin rise in parallel with the glucose concentrations following meals during the day, while they stay low but are sufficient to suppress hepatic glucose production during the night. To this end, several strategies have been developed: 1) highly purified insulin's and recombinant human insulin's to prevent antibody formation: 2) synthesis of insulin analog to obtain custom made insulin's, which would provide preparations suited to specific metabolic demands: 3) insulin pens which make multiple injection regimens easier to administer: 4) insulin pumps, which delivers insulin continuously, but with a facility to deliver "boluses" prior to and with meals: 5) glucose measuring devices which allow the convenience of multiple glucose measurements during the day, so that the insulin doses can be tailored to the requirements in a specific patient to achieve a good control of blood glucose concentrations. While those innovations have improved the quality of blood glucose control dramatically, the results are far from perfect.

These imperfections in blood glucose control are reflected in the fluctuations of blood glucose levels (low to high) and neuropathy (foot ulcers and amputations). The life expectancy of a type 1 diabetic is at least 20 years less than that of a non-diabetic person. It is therefore important to consider further innovations in the treatment of diabetes type I. Pancreatic transplantation was started in the late 1960's. The results were excellent in the case of live donor transplants. However, cadaveric transplants from unrelated donors had the problem of transplant failure in the majority of patients. Apart from immunological rejection and immunosuppressant (infection) problems, those transplants had the complications largely related to the exocrine pancreatic tissue, which is rich in digestive enzymes and which could cause local tissue damage, inflammation and related complications, like fistulae.

However, improvements in patient selection, surgical techniques and immunosuppressive regimes have led to remarkable improvements in outcomes: over 80% of transplanted diabetic patients are insulin independent at one year. Still, this major surgical procedure has a mortality of 10% at one year. Since the pancreatic islets contain the B cells responsible for the insulin secretion, Paul Lacy at Washington University had the vision of isolating pancreatic islets and transplanting them to "cure" type 1 diabetes. Islet transplants were initially "seeded" under the splenic capsule. But are now infused through the portal vein to "seed" in the liver. The liver appears to somewhat immuno-protect the islet and thus improve their survival. The leaders in islet cell

transplantation in the U.S. are the Miami group led by Dr. Camillo Ricardo, who has made several innovative advances related to islet cell transplantation.

The real major quantum leap in the area of islet came from the Edmonton group in Alberta, led by Dr. James Shapiro. Using very freshly prepared islets and a novel immunosuppressive regime, they have had a remarkable success in islet transplantation.

In 2002 they achieved success in eight out of eight transplant patients: more recent communications show a success rate of 20 out of 20 patients in their series. In their immuno-suppressive regime, they avoided using steroids and cyclosporine, both of which are known to be toxic to the pancreatic B cell producing insulin. This method of transplantation avoids major abdominal surgery, and obviates complications arising out of transplanted exocrine pancreatic tissue. Those patients are free of insulin injections and have perfect blood glucose levels (HbA1c: 6.0 %), and do not have hypoglycemia. Clearly therefore, pancreatic islet cell transplantation is the way to go in the future to "cure" type 1 diabetes. Currently, there are nine centers worldwide that are specialized in isolating islet cells for therapeutic use. Three hundred fifty cases have been done so far. The success ranges from 70 to 90 %. This variability is mostly related to the isolation technique which is very delicate, demanding and requires highly trained and expert people in this field. The infusion also carries lots of risks if done by inexperienced people.

- 1. If we consider the incidence of type I Diabetes to be around 3 in 100.000, I would estimate the prevalence of diabetes in the Middle East to be around 24000 patients. This incidence is higher in the gulf region.**
- 2. Establishing an islet transplantation program is an important opportunity to bring state of the art medical therapy to this region.**
- 3. Moreover since there is no active human islet transplant programs in the entire Middle East , our program will be a unique referral center for these areas and can absorb thousands of diabetic patients seeking this treatment option.**
- 4. Future research efforts in islet transplantation will focus on creating a state of "immune tolerance" In which patients do not require long-term immunosuppressive therapy. The Xenotransplantation ( Organ from different species) is currently being tested in the USA and would be definitely an alternative source of organ supplies in the near future.**
- 5. Thus islet transplantation will open a new avenue, not only at the clinical level but also on the research front at the Middle East Institute of Health and will involve the departments of medicine, physiology, pharmacology, biology, immunology, surgery, endocrinology, pediatrics, and transplantation.**

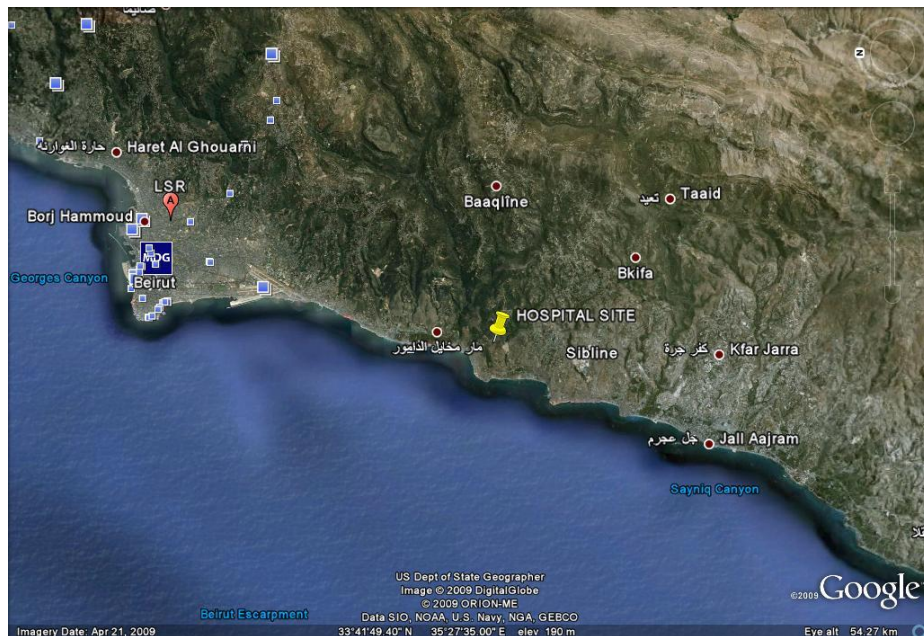
The past few years have witnessed a general deterioration of medical services, the morale of doctors, the actual departure of doctors, and the inability of our institutions to recruit talent from outside. It is important, therefore, to start the process of regeneration by building upon the foci of excellence and strength.

3. This Hospital as a provider of care at the **highest Standards and at the cutting edge will bring** all the committed members and all the talented Lebanese and Arab Doctors and scientists who would strive, by bringing the American experience to our region, to build our **Center Of Excellence**.
4. To create jobs in **suburban areas** in order to minimize the displacement of suburban and rural Lebanese to big cities and abroad. It would bring Health care as well as job opportunities to these areas so people would appreciate better their roots and value their lands.
5. Create all the facilities to make this hospital the center of **Health Tourism in Lebanon**. In addition to general hospital departments The following specialties will be very well developed and represented:
  - A. Transplant Center
  - B. Diabetes and Islet Cell transplant Center
  - C. Laparoscopic Center
  - D. Obesity and cosmetic Center
  - E. Cancer Center
  - F. Dental and Dental Implant Center
  - G. Imaging and Radiology Center
  - H. Others
6. This Hospital would be inspired by and would be the application of all the aspect of the **WLCU Medical Society** mission statement: professional, educational, humanitarian and cultural activities.

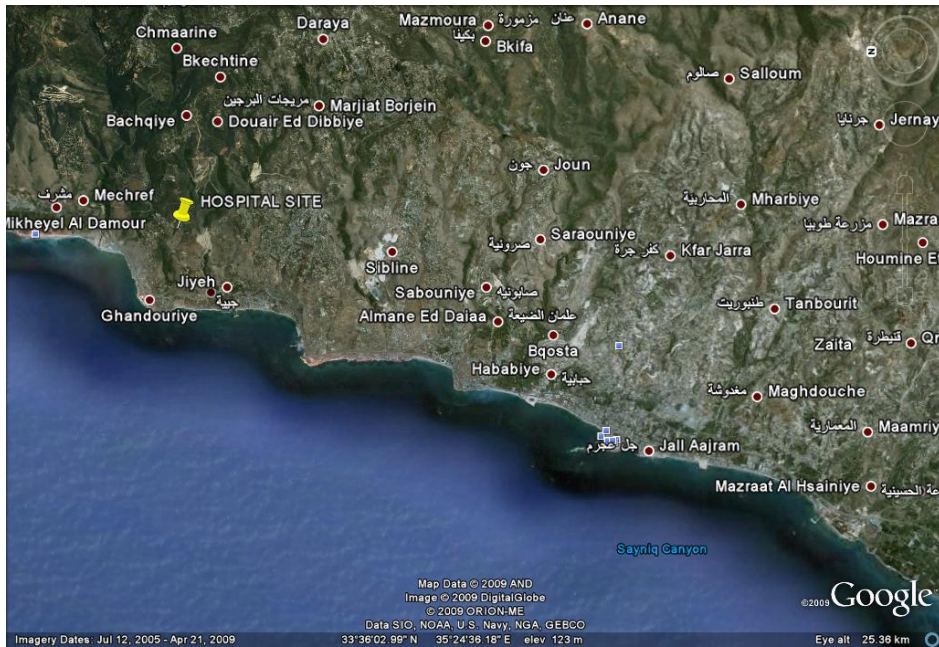
## WHERE?

### MISSIAR:

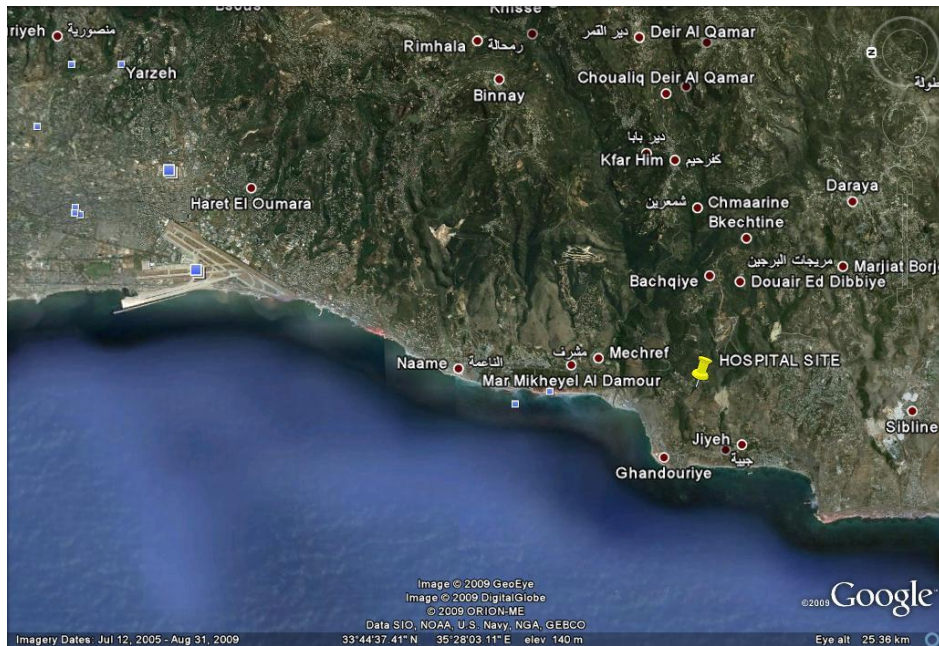
1. 20 Km from **Beirut**
2. 20 Km from **Saida**
3. 2 km from **Beirut-Saida Freeway**
4. 200 m above sea level. Panoramic View of **Mediterranean Sea**.
5. **Absence of any Hospital or Health care facility** within 20 Km Radius.
6. **Central Area** to South Mount Lebanon and South Lebanon.
7. Very **Easy access** from ALL DIRECTION. Minimal Traffic.
8. **LAND** has been already acquired. **14000** square meters



## 20 Km from Beirut



## 20 Km from Saida



## Central Area between South Mount Lebanon and South Lebanon

# WHEN?

Construction to start summer 2010.

Equipments 2011

Personal 2011

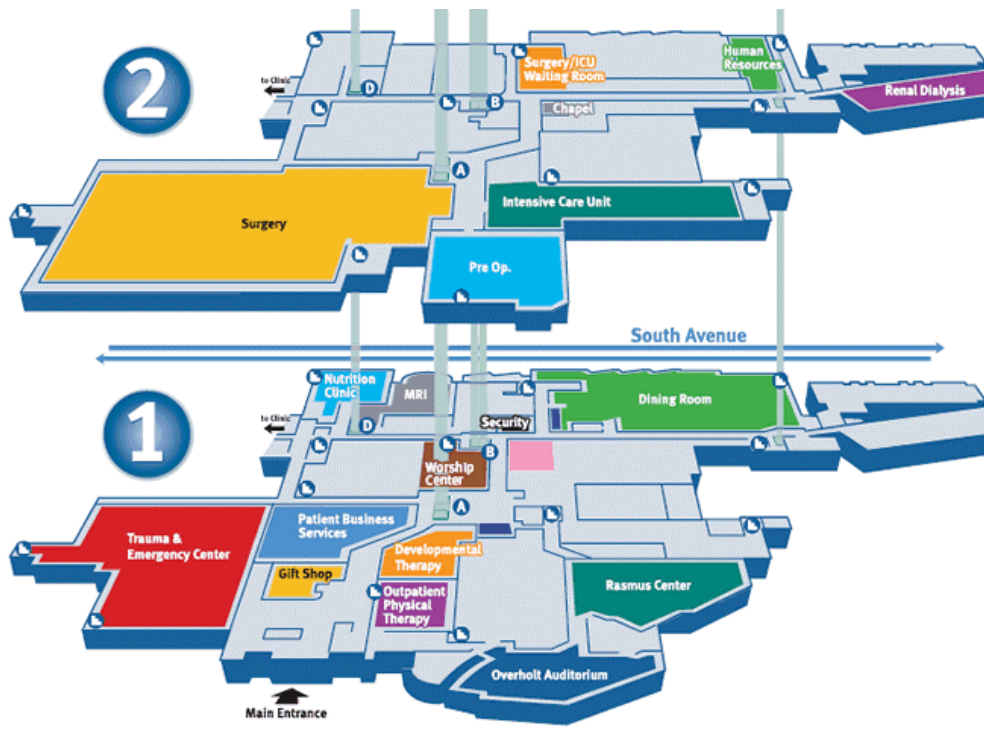
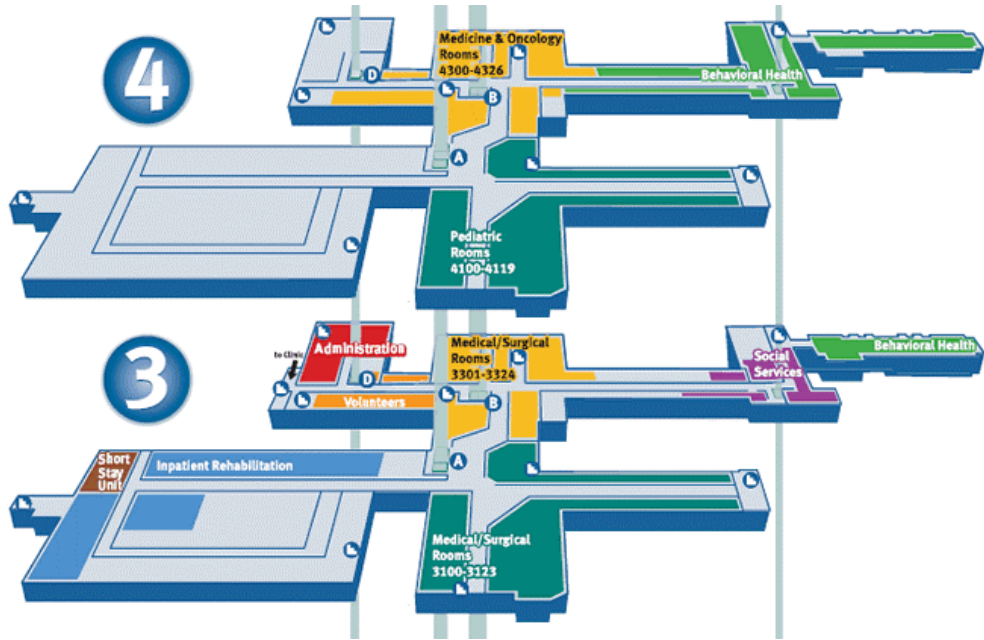
**Inauguration 2012**



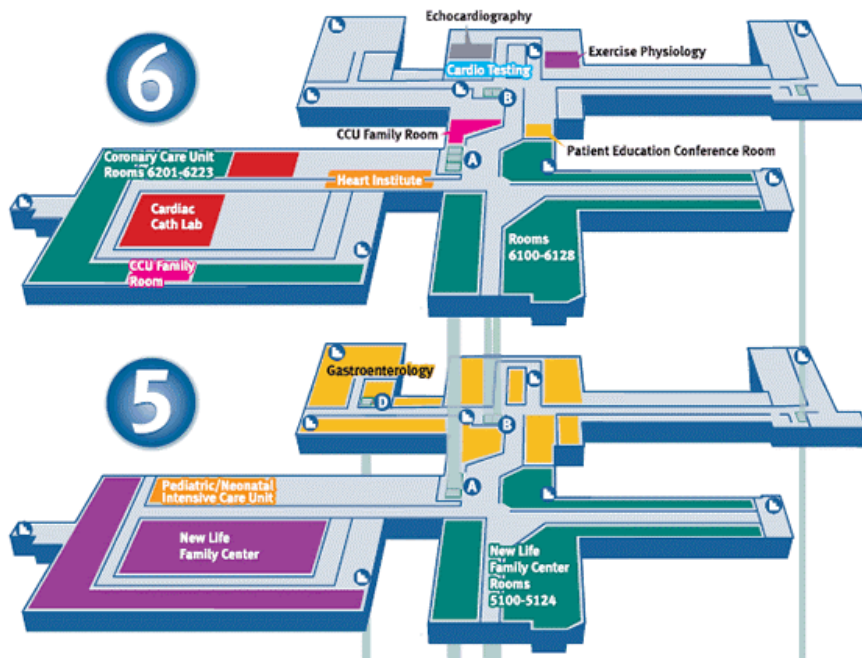


# PRELIMINARY PLANS





- Public Restrooms
- Vending Machines
- Elevators
- Stairs



# FOUNDERS

FADI DAGHER, MD, FACS

AKRAM TALHOUK, MD, FACS

CHRISTIANE DAGHER, MD

GEORGES FERZLI, MD, FACS

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