1st MA-PI DIABETES PROJECT IN PALESTINE

a cooperation between
UPM – International Association and
PALAST – Palestine Academy for Science and Technology

SHORT-TERM EFFECTS OF MA-PI DIET IN TYPE 2 DIABETIC PATIENTS

Preliminary data
Diabetes: a growing Epidemic

1985: 30 million
1995: 135 million
2000: 177 million
2010: 350 million
2030: Over 700 million

Source: WHO, 2012
THE GLOBAL BURDEN

• 371 million people have diabetes in 2012;
• 185 million people (50%) with diabetes are undiagnosed yet,
• The number of people with DM2 is increasing in every country (also in Palestine)
• Diabetes caused at least USD 600 billion dollars in healthcare expenditures in 2012;
The Ma-Pi Diabetes Project

It is an experimental clinic project of a food therapy based on Ma-Pi diets (conceived by Prof. Mario Pianesi), applied on diabetic patients.

The involved Scientific Commissions have argued that the Ma-Pi diets represent a very simple, effective and economical therapeutic alternative for patients affected by type 2 Diabetes Mellitus.
Simple: it requires only to administer a vegetarian diet (cereals, vegetables and beans) for a 21-day period under clinical control.

Effective: as documented by different scientific publications on the “Ma-Pi Diabetes Project” carried out in several Countries, a normalization of pathologic values has been observed.

Economical: in all the countries, where the project has been carried out, a strong decrease in drugs consumption has been observed: 40% at short term clinical studies (21 days), 60% at medium term (3 months) and 100% at long term period (after 6 months). Therefore these data have even a strong impact on economic matters.
THE 5 MA-PI DIETS
(conceived by prof. Mario Pianesi)

• Diet 1: Therapeutical
• **Diet 2: Therapeutical**
• Diet 3: Therapeutical
• Diet 4: Therapeutical, preventive and health promoting
• Diet 5: Preventive and health promoting
“This diet has a big therapeutic power and is recommended for diabetes mellitus, osteoporosis, tumors, autoimmune diseases and, in principle, for any uncontrolled metabolic disease or disorder and ailments requiring a longer treatment with higher alkalinity. It can also be used for limited periods, depending on the patient’s evolution.”

Dr. Carmen Porrata Maury

II Degree Specialist in Physiology, Doctor in Medical Sciences, Senior Researcher, Head of Ma-Pi Macrobiotics Project, Finlay Institute, Havana, Cuba
# THE MA-PI 2 DIET: NUTRITIONAL COMPOSITION

<table>
<thead>
<tr>
<th>NUTRIENT</th>
<th>PER CAPITA RECOMMENDATION</th>
<th>MA-PI 2 DIET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (kcal)</td>
<td>2000 – 2400</td>
<td>2196</td>
</tr>
<tr>
<td>Proteins (g)</td>
<td>60 - 72</td>
<td>65</td>
</tr>
<tr>
<td>Fats (g)</td>
<td>33 - 40</td>
<td>37</td>
</tr>
<tr>
<td>Carbohydrates (g)</td>
<td>360 - 408</td>
<td>414</td>
</tr>
<tr>
<td>Fiber (g)</td>
<td>30 - 55</td>
<td>57</td>
</tr>
</tbody>
</table>
THE MA-PI 2 DIET: INGREDIENTS

Cereals

Beans

Vegetables
DESIGN OF THE 1° MA-PI PROJECT IN PALESTINE

2008 AGREEMENTS
Prof. Pianesi and prof. Khatib signed the agreements to implement the project

2009-2012 ARRANGEMENTS
Prof. Mario Pianesi donated to PALAST seeds, food and all the cooking equipment for the project.

2012 ENROLLEMENT
PALAST provided the enrollment of volunteers

2013 TIME 0 (Feb 26)/TIME END (March 20) DATA
Clinical evaluation, Anthropometric measures, Biochemical and Endocrinological analyses
Every day blood glucose profile: (fasting, 2hrs after meals)
METHODS

- **23 SUBJECTS:** 6 F, 17 M; 36 < AGE < 67; BMI < 40; 6 IGT; 17 0HA

- **PLACE OF STUDY:** Ramallah (PALESTINE)

- **MA-PI DIET:** 3 WEEKS
PRELIMINARY RESULTS

BEFORE AND AFTER

21 DAYS OF MA-PI 2 DIET
# Development of Anthropometric Average Measures

<table>
<thead>
<tr>
<th>OBJECT</th>
<th>TIME 0</th>
<th>TIME 21</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (kg)</td>
<td>86,13</td>
<td>78,97</td>
<td>- 8,31</td>
</tr>
<tr>
<td>BMI (kg/mq)</td>
<td>30,14</td>
<td>27,50</td>
<td>- 8,76</td>
</tr>
<tr>
<td>Fat mass (kg)</td>
<td>28,02</td>
<td>22,38</td>
<td>- 20,12</td>
</tr>
<tr>
<td>Muscle mass (kg)</td>
<td>55,50</td>
<td>53,77</td>
<td>- 3,12</td>
</tr>
<tr>
<td>Total water (%)</td>
<td>48,25</td>
<td>50,07</td>
<td>+ 3,77</td>
</tr>
</tbody>
</table>
Blood Pressure Average Measures

BEFORE

AFTER 21 DAYS MA-PI DIET

Systolic

131

114

Dyastolic

86

73
Blood Glucose and HbA1c Average Measures

BEFORE AFTER 21 DAYS MA-PI DIET

Blood glucose

-48.3%

HbA1c

-16.4%

Extreme value HbA1c: Pat. Code 12MSAAS Before: 9.1% After: 5.7%
Blood Glucose Profile Average Measures

BEFORE AFTER 21 DAYS MA-PI DIET

<table>
<thead>
<tr>
<th>Time</th>
<th>BEFORE</th>
<th>AFTER 21 DAYS MA-PI DIET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting</td>
<td>149 mg/dl</td>
<td>110 mg/dl</td>
</tr>
<tr>
<td>2 hrs after BF</td>
<td>252 mg/dl</td>
<td>180 mg/dl</td>
</tr>
<tr>
<td>2 hrs after lunch</td>
<td>200 mg/dl</td>
<td>140 mg/dl</td>
</tr>
</tbody>
</table>
Blood Glucose Profile Average Measures

BEFORE

AFTER 21 DAYS
% of Patients with Blood Glucose at Target Before and After the Ma-Pi Diet

BEFORE

AFTER 21 DAYS MA-PI DIET

100%

100%

100%

Fasting 2 hrs after BF 2 hrs after lunch

0 4% 13% 9%
Plasma Lipids Average Measures

Before vs After 21 Days MA-PI Diet

- Cholesterol: -21%
- LDL: -31%
- TG: -47%
Kidney Function Average Measures

- **Azotemia**
  - Before: 15 mg/dl
  - After 21 days MA-PI diet: 10 mg/dl (−43%)

- **Creatinine**
  - Before: 1.2 mg/dl
  - After 21 days MA-PI diet: 0.8 mg/dl (−5%)

- **Microalbuminuria**
  - Before: 48 mg/l
  - After 21 days MA-PI diet: 32 mg/l (−44%)
AND SOMETIMES...

PICTURES ARE BETTER THAN WORDS
MA-PI 2 DIET

BEFORE and... AFTER
MA-PI 2 DIET

BEFORE and... AFTER
BEFORE AND AFTER 21 DAYS OF MA-PI 2 DIET
MA-PI 2 DIET

BEFORE and...  AFTER
MA-PI 2 DIET

BEFORE and...  AFTER
MA-PI 2 DIET

BEFORE and... AFTER
MA-PI 2 DIET

BEFORE and...  AFTER
MA-PI 2 DIET

BEFORE and…

AFTER
MA-PI 2 DIET

BEFORE and... AFTER
MA-PI 2 DIET

BEFORE and... AFTER
CONCLUSION 1

Compliance for short-term MA-PI diet was very good.

Short-term MA-PI diet was able to improve:

• Carbohydrate and lipid metabolism (blood glucose, HbA1c, plasma insulin and HOMA IR, cholesterol, LDL, TG)

• Kidney function and blood pressure values

• All anthropometric measures studied improved
CONCLUSION 2

These results obtained with the Ma-PI diet over a limited time period for well defined type 2 diabetic sample of 23 persons that impressively committed to continue to using MA PI diet and encourage others to use it and to disseminate the knowledge in PALESTINE.

It is in the hand of PALAST, and those committed, to spread the knowledge for a better Palestinian public health.
THANKS

- **THE MINISTRY OF HEALTH** FOR ITS SUPPORT
- **UPM:** Prof. Mario Pianesi (Founder and President)
- **PALAST:** Board of Directors, and
  Professor Dr. Imad Khatib (Secretary General)
  Dr. Ayman Al Haj Daoud (Scientific Dir.)
- **All Volunteers**
- **and all the Palestinian people for the warm welcome**
“The autonomous Human Being lives and creates sustainability”

Mario Pianesi
1st MA-PI 2 DIABETES PROJECT IN PALESTINE

شكرا لك!