

History of MASU  
By Hassen A. Gharbi

\*\*\*\*\*

Give to the world  
The best you have  
And the best  
Will come back to you





The 13th International Congress of  
Mediterranean & African Society  
of Ultrasound (MASU)  
in association with  
Kenya Society for Ultrasound in  
Medicine & Biology (KESUMB)

DATE: 17th - 19th October, 2012

VENUE: AGA KHAN UNIVERSITY HOSPITAL, NAIROBI,

WITH WORKSHOPS AT KENYATTA NATIONAL HOSPITAL.

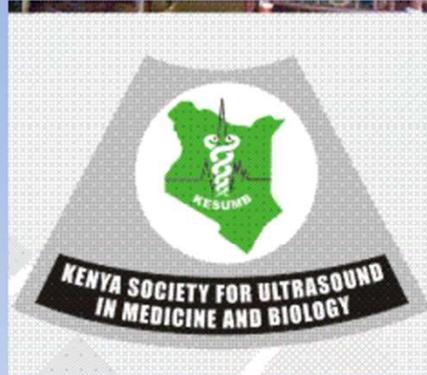


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## The 13<sup>th</sup> International Congress of MASU



### Promotion of Ultrasound use in Africa

or

### *MASU perspective*

Hassen A. Gharbi

Wiem Douira, Najia Ben Moussa, Azza Hammou,

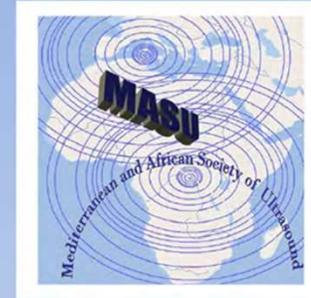
Ferid Ben Chehida, Ibtissem Bellagha

Tunis- Tunisia

Nairobi, 17-19 October 2012



*MASU at the beginning 1985*



*MASU today*

**MASU at the beginning, Mediterranean source of the  
science and knowledge**

**Today, complementarity and cooperation between  
Africa and the world**

***The 4<sup>th</sup> time MASU in Nairobi Kenya***

***1991-2000-2006-2012***



**In 1991, august , 21 years ago , in the same place  
the same Hospital Agha Khan, MASU course**



**December 2006**

**INTERNATIONAL ULTRASOUND CONFERENCE**  
4<sup>th</sup> - 15<sup>th</sup> DECEMBER 2006  
A JOINT MEETING OF

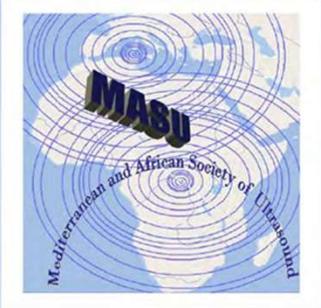
 **WORLD FEDERATION FOR  
ULTRASOUND  
IN MEDICINE AND BIOLOGY**

**AND**

**THE KENYA  
ASSOCIATION OF  
RADIOLOGISTS** 

**VENUE**

**AGA KHAN UNIVERSITY HOSPITAL & UNIVERSITY OF NAIROBI (KNH)**



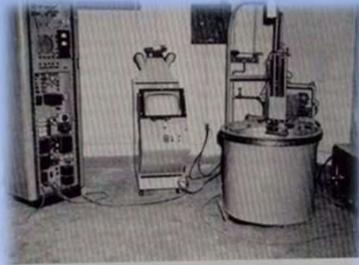


# Plan

*My choice , no physics, no science but some stories, some souvenirs ...*

- *US in the world*
- US in Africa
- US in Tunisia , as example
- The future : promotion and MASU perspectives and my conclusion.....

- **Erlangen 1949:** 1<sup>st</sup> International Congress US medicine, first time US is described as potential imaging possibility by transmission
- K Dussik, Austrian, described for the first time the reflection imaging
- **US widely used in therapeutic, since 1920**
- In fact, the first images date from **1953** but in very few places in the world.. The first pioneers were as prophets... Impressive imagination
- **The true clinical onset in 1974-75**



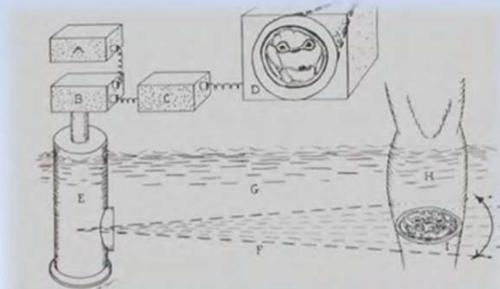
1. An experimental ultrasonic two-dimensional compound scanner constructed by Joseph H. Holmes. The patient was immersed in the water-filled tank seen on the right of the photograph.



Joseph H Holmes  
1902 - 1982



The pan-scanner in 1957



1978 Professor Marinus de Vlieger Book 1<sup>st</sup> WFUMB President 1967-1973

**Georges Kossof 1962**



**Figure 11.** An abdominal echoscope constructed in 1962 by G. Kossoff, who is seen in this picture. The transducer is attached to the rack on the right of the photograph, and in clinical use it is immersed in a water tank; the patient is positioned with her back supported by an inclined couch, with her anterior abdominal wall in contact with a flexible membrane that forms one of the walls of the water tank.



**2011 in Chicago  
50 years later**

**Abdominal echoscope constructed in 1962 by Georges Kossof-  
*Australia***

**1978 Professor Marinus de Vlieger Book , the WFUMB 1<sup>st</sup> President 1967-1973** 9



Figure 4. A two-dimensional ultrasonic scan made around 1955 by D. H. Howry, showing a horizontal section through the neck. The skin surface, trachea, carotid artery, internal jugular vein, vertebra, and other structures can be identified (53).

Transverse ultrasonic cervical scan (DH Howry 1955) showing internal jugular vein, carotid artery, trachea and vertebrae

Transverse ultrasonic scan of a normal breast and breast cancer. 1955 JJ Wild and JM Reid with water basin

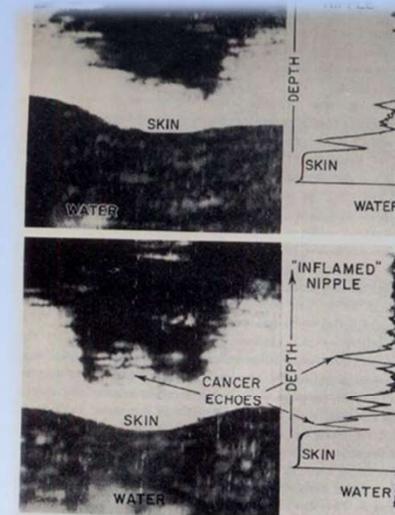


Figure 6. Two of the first two-dimensional scans, published by J. J. Wild and J. M. Reid in 1955, also showing A scans of a normal nipple (top), and (bottom) the first direct visualization of breast cancer in a living intact patient (57).

1978 Professor Marinus de Vlieger Book , the WFUMB 1<sup>st</sup> President 1967-1973

Attention please don't forget .....the pioneers

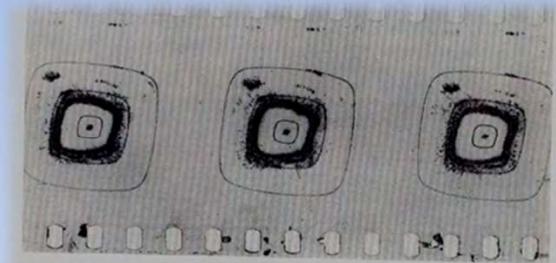
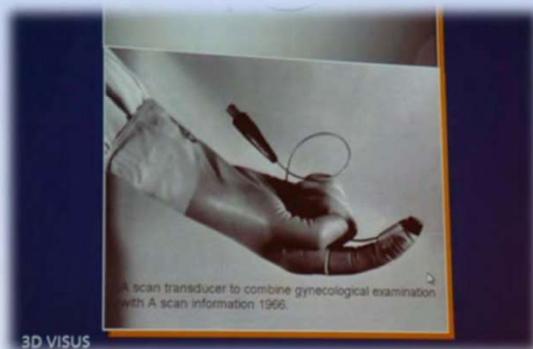


Figure 7. Three consecutive frames of scans published by J. J. Wild and J. M. Reid in 1955, showing the normal rectum 245 mm from the anus. The central black dot is the axis of the transducer. The clear area in the center is a water-filled balloon: it is square because of a technical imperfection, not an anatomic peculiarity! The range marks are 10 mm apart, and the inner ring of echoes is probably from the rubber membrane and the mucosa, the second ring is from the circular muscle coat, and the third is from bands of longitudinal muscle (57).

**Endorectal probe** scan with water-filled balloon, published by JM Reid and JJ Wild in **1955**

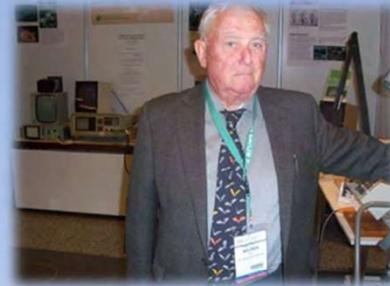


**A scan transducer** to combine gynecological examination with A scan information **1966**

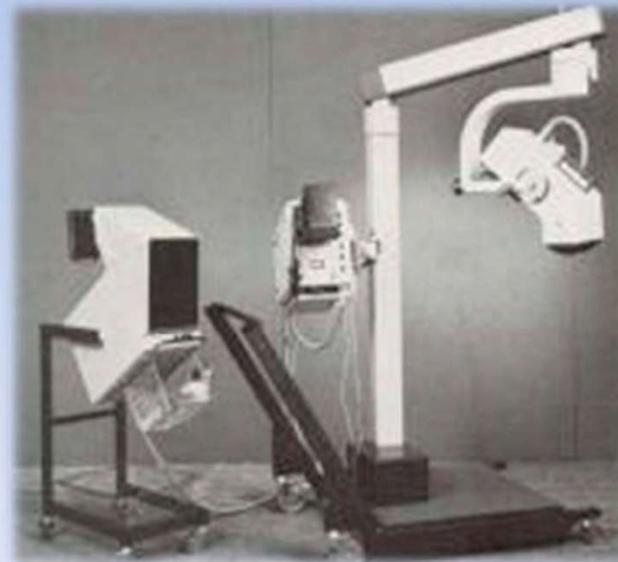
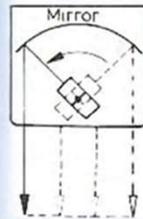
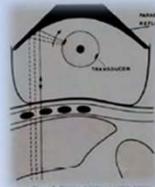
3D VISUS



**Vidoson**  
**First live**  
**Siemens 1973**  
**Richard Soldner**  
**its inventor 2011**



**H. Lutz, one of the**  
**pioneers. Germany**  
**2011, Vienna**



## In fact, the real history of ultrasound is that of WFUMB,...

**WFUMB:** World Federation for Ultrasound in Medicine in Biology

- Created by ophthalmologists and physicians, become multidisciplinary in **1969 in Vienna, Austria**
- **Real memory and brain** of ultrasound
- **Led by the pioneers** and experts of ultrasound in the world, with representatives of associations from all continents
- **With respect to international authorities** in the field of ultrasound: **WHO,...**
- **Ensures the good applications** of ultrasound, danger, good rules of use, training of sonographers **in the world... watchdog role**
- Maintain **records of the history** of ultrasound in the world



The pan-scanner in 1957

**WFUMB office , Board, museum , september 2012  
Washington DC**



**WORLD FEDERATION FOR  
ULTRASOUND  
IN MEDICINE AND BIOLOGY**



**WFUMB, non profit scientific organization,  
its constitution adopted in 1973, revised several times**

**First recorded international Congress,  
1976, San Francisco, USA**

**More than 45 000 members from all the world, 6 affiliated  
associations today**

**1632 from Africa in 2011**

## WFUMB main objectives

- Education for medical Ultrasound +++
- Safety of Ultrasound, watchdog
- Standards and information technology
- Archives and history of Ultrasound
- Echoes newsletter, publication
- **Journal:** Ultrasound in Medecine and biology
- See web site [www.wfumb.org](http://www.wfumb.org)

# **WFUMB educational programs**

- **Education projects, COE, centers of excellence**
  - African education project
  - Asian education project
  - Latin American education project
  - European education center
  
  - This program provides speakers scholarships and donations
  - Center of excellence in ultrasound, COE
  - Promoting good ultrasound in the world
  - Many thousands of doctors, technicians and midwives have been trained since a decade

## Committee on Education for Medical Ultrasound WFUMB board: 2006-2009

- **B. Goldberg, Chairman**



- **Elisabetta Buscarini**



- **Leandro Fernandez**

- **Hassen A. Gharbi**



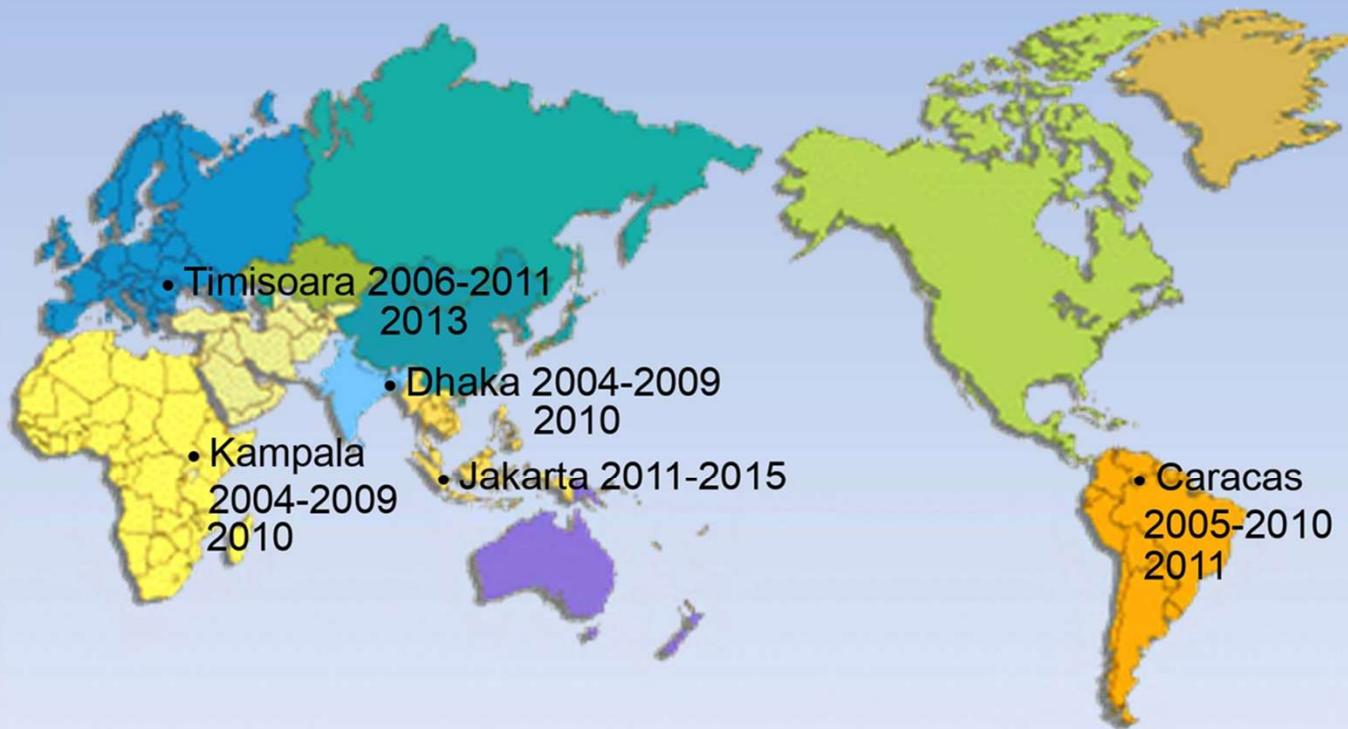
- **Byung Ihn Choi**

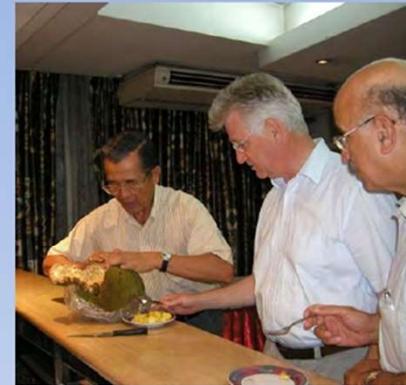


- **Harald Lutz, founder of the African Project**

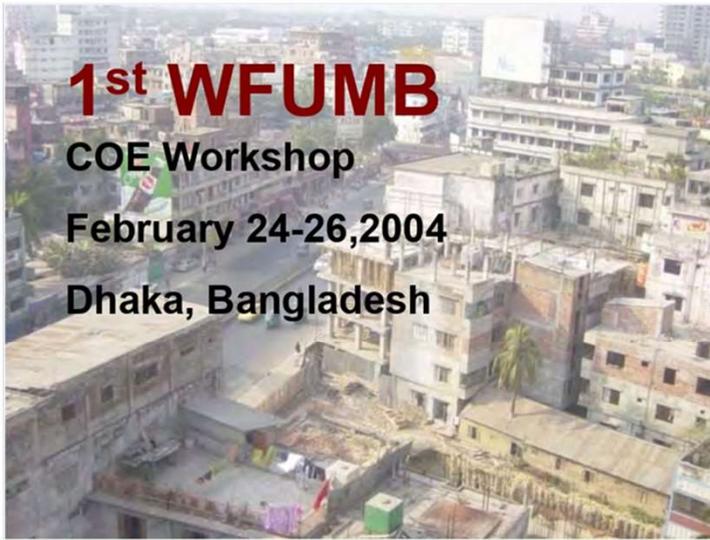


## WFUMB COE





**Dhaka 2002**  
***Courses and exotic fruits***



## COE Kampala 2004



**Uganda Minister  
of Health  
Jim K. Muhwezi**



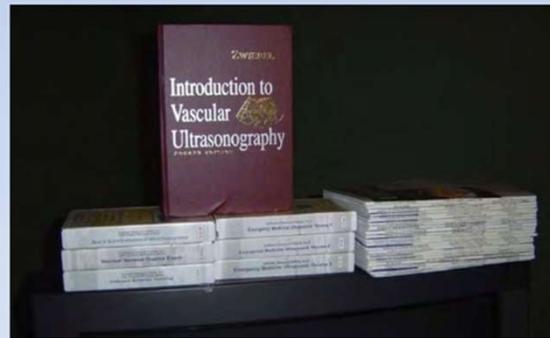
**Elisabetta Buscarini  
MASU GI Sec  
and Prof. Kasozi,  
Medical imaging pioneer  
sign the contract**

**Prof. Kawooya  
Directeur COE  
of Kampala Ouganda**





Barry Goldberg



Charles Gooding

## ROF donation to Kampala



## MASU and WFUMB years in Africa

- Oct. 2000 Visit in Kenia and Uganda
- Feb. 2002 Course in Moshi/Tanzania
- Oct. 2002 Course in Kampala/Uganda
- Jan. 2004 Meeting in Tripoli: SinSad
- Feb. 2004 Course in Sierra Leone
- Oct. 2004 CEO Kampala/Uganda
- Jun. 2004 MASU-Meeting Damascus
- Mai 2005 Sudan/Khartoum
- Mar. 2006 Tunisia/Djerba MASU-Conf. Course
- Dec. 2006 Kenya/Nairobi
- Mar. 2008 Tanzania/Dar es Salaam
- Aug. 2009 Kenya/Nairobi 2008
- Feb. 2010 Zambia, Lusaka
- Dec. 2010 Rwanda, Kigali





# WFUMB COE: Africa

**1<sup>st</sup> WFUMB  
COE workshop  
Kampala, Uganda**





# WFUMB COE: Latin America

2nd WFUMB COE Maracaibo



3rd WFUMB COE, Porlamar



4th WFUMB COE, Caracas, Venezuela





## **WFUMB COE: Future Plan**

- **New projects COE in 2012, 2013**
  - **Asia – Ulaanbaatar, Mongolia?**
  - **Africa – Lagos, Nigeria?**
    - **Lome, Togo, Madagascar..**
  - **Latin America – Costa Rica?**
    - **Paraguay**
  - **Australasia – Fiji?**
  - **Eastern Europe – Russia?**

# Coordination with WHO

- **Promoting good ultrasound** within radiology for all
- **Establishing courses** for technicians, general practitioners and specialists
- Late **Dr. Ostensen**, great ambassador of good medical imaging, unfortunately without a successor till today
- **Listing of existing programs** in the country, to get ideas on the possibilities existing human and material resources in each country as well as the list of existing cooperation programs: make an **updated inventory**



## WHO and WFUMB cooperation

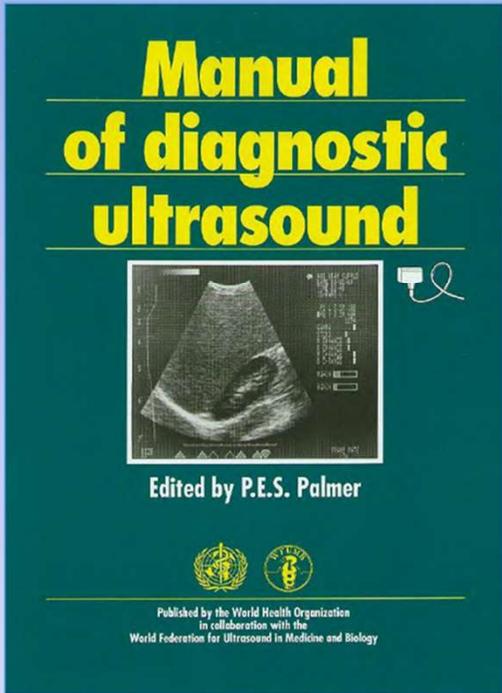
Harald Østensen (WHO) : 2/3 of the world's population do not have access to an imaging modality



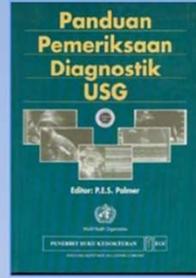
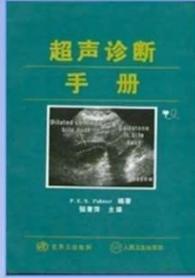
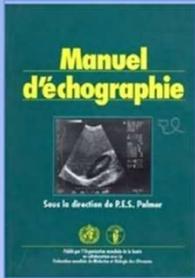
Conditions for suitable methods in this situation are

- Less expensive
- Low infrastructure
- Less service
- Easy to transport
- Universal to use

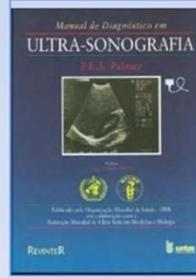
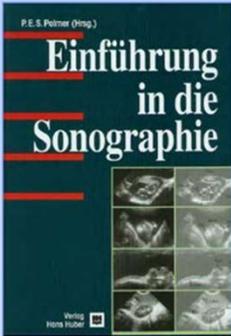
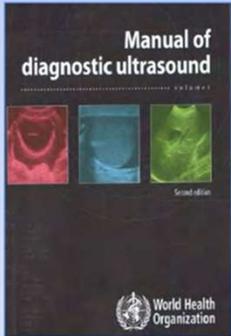
Ultrasound meets these conditions,  
But a proper education is needed



**Manual WHO – WFUMB**  
**New Project, vol I published in July 2011, edit Harald Lutz and Elizabeth Buscarini**



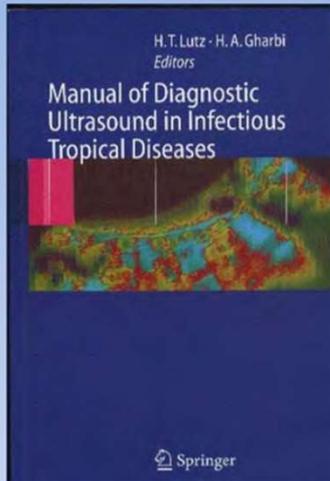
WHO manual published in  
 More than 15 languages



**First ultrasound Manual published by the WHO,  
 writing begun in Tunis... translated into more than 15 different languages... Arabic, Chinese ...**

## Ruins of Carthage, Sidi Bou El Mechtel... Manual Preparation WHO / WFUMB 1993



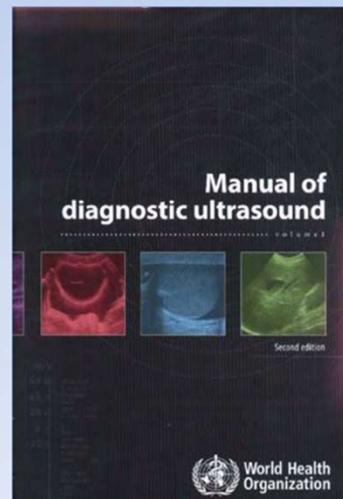


## Other books published by our group

### Ultrasound in infectious and parasitic diseases

#### Authors:

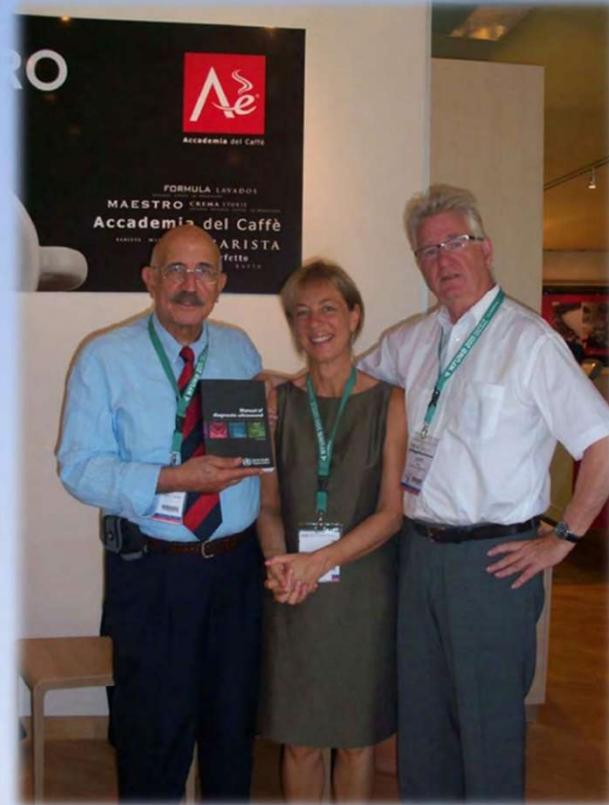
- Africa: *H. Gharbi, I. Bellagha*
- Asia: *Joon-Koo Han*
- Europe: *M. Caremani, M. Claudon, H. Lutz*
- Latin-America: *G. Cerri, G. Dreyer, J. Fernandez*



### Manual of diagnostic ultrasound

**Editors:** Elisabetta Buscarini  
Harald Lutz 2011





Vienna, September 2011, Volum I of the new manual was published and soon **Inshallah Volume II**, the joy of the Editors .....

## WFUMB PRESIDENTS ... SINCE 1967...

WFUMB	1967-1973	1973-1976	1976-1979	1979-1982	1982-1985	1985-1988	1988-1991	1991-1994
Président	Marinus de Vlieger, MD, ophthalmologist, from Holland, Protem President	Gilbert Baum, MD, ophthalmologist, from USA	Wagai Gastroenterologist	Hans Mueller, MD, neurologist, Switzerland	George Kossoff, Physicist-Australia.	Horace E. Thompson, MD, obst-gynecologist, from USA	Francis Weil, MD, radiologist, from France.	Morimichi Fukuda, MD, gastro-enterologist, from Japan.
	1994-1997	1997-2000	2000-2003-	2003-2006	2006-2009	2009-2011	2011-2013	2013-2015
Président	Barry Glodberg, MD, radiologist, from USA.	Harald Lutz, MD, internist, from Germany.	Hiroki Watanabe, MD, urologist from Japan.	Marvin Ziskin, MD, radiologist, from USA.	Giovanni Cerri, radiologist from Brazil	Michel Claudon, radiologist from France	Masatoshi Kudo, gastro-enterologist from Japan	Hassen A. Gharbi radiologist from Tunisia

## **WFUMB history**

- **I am a board member of the WFUMB for over 20 years...**
- **I had the opportunity to meet and work with many of these pioneers who became for many of them true friends**
- **I present to you some remembrances pictures**

## Sheraton Hotel Chicago November 30, 2011

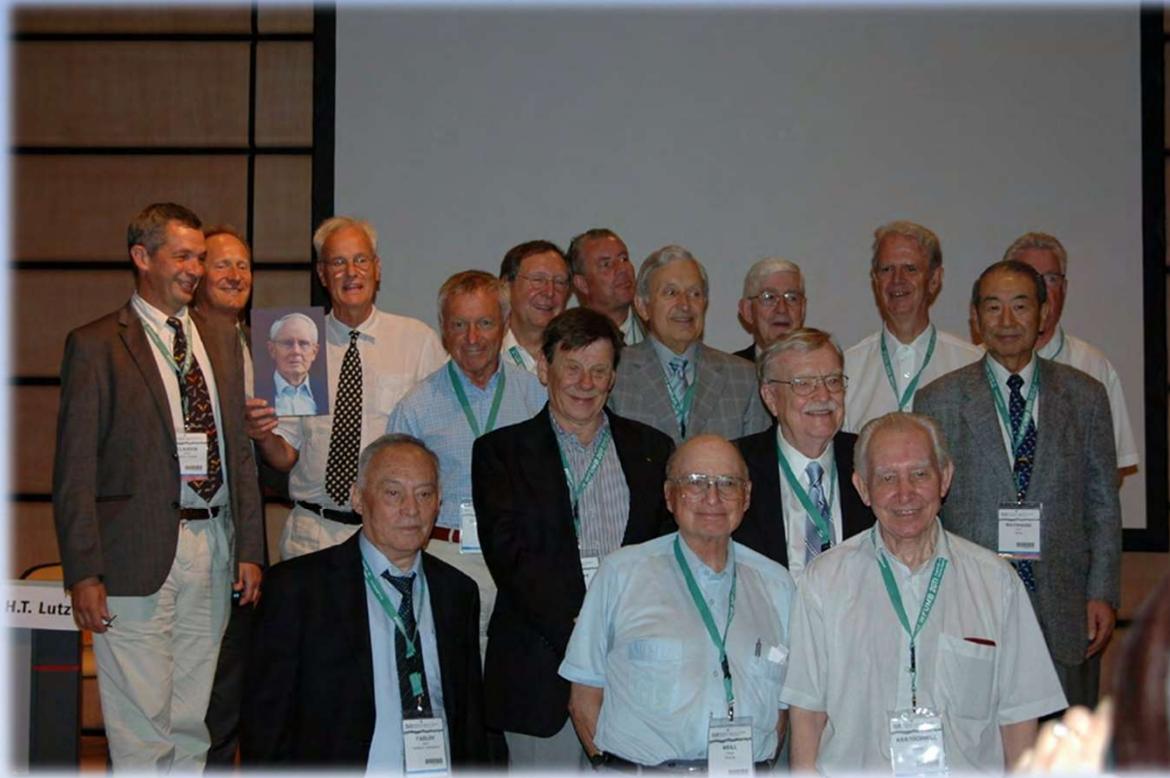


**Writing : WFUMB history...the pioneers : Barry Goldberg, Georges Kossof  
Michel Claudon and Hassen Gharbi**



With Nolsoe Lutz, and other friends, we planed to **update the Archives WFUMB** and to **make them** accessible to the **public**, on the web site and other modalities...

## Pioneers Vienna August 2011 WFUMB congress





Wfumb president  
diner

masu, isr

5 and 7th june 2008

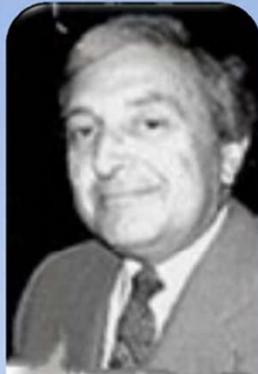
*Best of...*

DAR YAKOUT

Marrakech 2008



Peter NT Wells



Barry Goldberg



George Leopold



George Kossoff  
c. 1975



Horace Thompson

**A few years ago..**



Sturla Eik-Nes



(top row) Rudy Sabbagha, John Hobbins, Peter Cooperberg.  
(bottom row) Roger Sanders, Alfred Kurtz, Charles Hohler.  
producing important work in biometry from the U.S.



Beryl Benacerraf

**A few years ago..**

**Mother of  
nuchal translucency  
and others great achievements**



Asim Kurjak

**From Croatia**



**Giovanni Cerri**  
2006-2009



**Francis Weil**  
1988-1991  
Paris , seine 2011



**Hiroki Watanabe**  
2000-2003



**Office of WFUMB**

**Sydney in 2009**



**Santiago, Chile 2005**





# Plan

*My choice , no physics, no science but some stories, some souvenirs ...*

- *US in the world*
- **US in Africa**
- **US in Tunisia , as example**
- **The future : promotion and MASU perspectives and my conclusion.....**



**In Cairo, Kasr El Aini Hospital, seminar teaching the basics of ultrasound in 1977, Dr. Jalel Essaied, cardiologist ,Dr. Nebil Arafa, radiologist, pioneer of ultrasound in Egypt**

# AFRICA PROFILE

- **950 M. people**
- **53 different countries**
- **Veritable mosaic**
- **Diversity multiple**
  - Socio-economic : PNB 90USD more than 20000 USD
  - Different cultures, language, but French, Arabic, English and Portuguese are widely used...fortunately
- **Human Resources very variable**

*Ref : H. A. GHARBI in UMB – Vol 26 Sept 1 page S150 – S153 – 2000, updated*

# AFRICA, mosaic

Medical situation varies from one country to another or between regions within the same country

**Tunisia** 11 M people, MD 17500.500 radiologists, 26 MRI, 0.5 to 3 Tesla, more than 2.500 US machines, 146 CT scans (NCRP, A. Hammou)

**Ethiopia**, 85 M people, 100 radiologists

**Nigeria**, 185 M people, 35000 MD

**Kenya**, 38 M people, 2200 MD, 150 radiologists, PNB 1780 USD  
(S..Vinayak 2012)

But the **problems are everywhere**, but not of the same nature... Do not require the same solutions....So we decided to create **MASU** in 1986...

# MASU

- Mediterranean and African Society of US
- Registered under French law in November 1987-Marseille France
- Objectives
  - Promotion of ultrasound in Africa and in Mediterranean area, knowledge transfer from north to south at the beginning and now north-south, south-south...
  - Increase trade between countries, scholarships, donations,...
- MASU
  - 1632 members in 2011
  - From 27 different countries

# Masu Congress Fondation April 1987 MASU founders



<p>President: <b>Paul L. SAVA</b>          Director of Echography Research          (Lyon, France)</p>	<p><b>INTERNATIONAL SCIENTIFIC COMMITTEE</b></p> <p>M. BIRNBOIM (France)          D. G. BIRNBOIM (France)          D. BIRNBOIM (France)          D. BIRNBOIM (France)          D. BIRNBOIM (France)</p> <p>L. SAVA (France)          M. F. SAVA (France)          M. F. SAVA (France)          M. F. SAVA (France)          M. F. SAVA (France)</p>
<p><b>PRELIMINARY SCIENTIFIC PROGRAM          MAIN TOPICS AND LECTURERS</b></p>	
<p><b>SCIENTIFIC TOPICS</b></p> <ul style="list-style-type: none"> <li>1. BIRNBOIM (France)</li> <li>2. BIRNBOIM (France)</li> <li>3. BIRNBOIM (France)</li> <li>4. BIRNBOIM (France)</li> <li>5. BIRNBOIM (France)</li> <li>6. BIRNBOIM (France)</li> <li>7. BIRNBOIM (France)</li> <li>8. BIRNBOIM (France)</li> <li>9. BIRNBOIM (France)</li> <li>10. BIRNBOIM (France)</li> <li>11. BIRNBOIM (France)</li> <li>12. BIRNBOIM (France)</li> <li>13. BIRNBOIM (France)</li> <li>14. BIRNBOIM (France)</li> <li>15. BIRNBOIM (France)</li> <li>16. BIRNBOIM (France)</li> <li>17. BIRNBOIM (France)</li> <li>18. BIRNBOIM (France)</li> <li>19. BIRNBOIM (France)</li> <li>20. BIRNBOIM (France)</li> </ul>	<p><b>LECTURERS</b></p> <ul style="list-style-type: none"> <li>1. BIRNBOIM (France)</li> <li>2. BIRNBOIM (France)</li> <li>3. BIRNBOIM (France)</li> <li>4. BIRNBOIM (France)</li> <li>5. BIRNBOIM (France)</li> <li>6. BIRNBOIM (France)</li> <li>7. BIRNBOIM (France)</li> <li>8. BIRNBOIM (France)</li> <li>9. BIRNBOIM (France)</li> <li>10. BIRNBOIM (France)</li> <li>11. BIRNBOIM (France)</li> <li>12. BIRNBOIM (France)</li> <li>13. BIRNBOIM (France)</li> <li>14. BIRNBOIM (France)</li> <li>15. BIRNBOIM (France)</li> <li>16. BIRNBOIM (France)</li> <li>17. BIRNBOIM (France)</li> <li>18. BIRNBOIM (France)</li> <li>19. BIRNBOIM (France)</li> <li>20. BIRNBOIM (France)</li> </ul>
<p><b>ORGANIZING COMMITTEE</b></p> <ul style="list-style-type: none"> <li>1. BIRNBOIM (France)</li> <li>2. BIRNBOIM (France)</li> <li>3. BIRNBOIM (France)</li> <li>4. BIRNBOIM (France)</li> <li>5. BIRNBOIM (France)</li> <li>6. BIRNBOIM (France)</li> <li>7. BIRNBOIM (France)</li> <li>8. BIRNBOIM (France)</li> <li>9. BIRNBOIM (France)</li> <li>10. BIRNBOIM (France)</li> <li>11. BIRNBOIM (France)</li> <li>12. BIRNBOIM (France)</li> <li>13. BIRNBOIM (France)</li> <li>14. BIRNBOIM (France)</li> <li>15. BIRNBOIM (France)</li> <li>16. BIRNBOIM (France)</li> <li>17. BIRNBOIM (France)</li> <li>18. BIRNBOIM (France)</li> <li>19. BIRNBOIM (France)</li> <li>20. BIRNBOIM (France)</li> </ul>	<p><b>SCIENTIFIC SECRETARIAT</b></p> <ul style="list-style-type: none"> <li>1. BIRNBOIM (France)</li> <li>2. BIRNBOIM (France)</li> <li>3. BIRNBOIM (France)</li> <li>4. BIRNBOIM (France)</li> <li>5. BIRNBOIM (France)</li> <li>6. BIRNBOIM (France)</li> <li>7. BIRNBOIM (France)</li> <li>8. BIRNBOIM (France)</li> <li>9. BIRNBOIM (France)</li> <li>10. BIRNBOIM (France)</li> <li>11. BIRNBOIM (France)</li> <li>12. BIRNBOIM (France)</li> <li>13. BIRNBOIM (France)</li> <li>14. BIRNBOIM (France)</li> <li>15. BIRNBOIM (France)</li> <li>16. BIRNBOIM (France)</li> <li>17. BIRNBOIM (France)</li> <li>18. BIRNBOIM (France)</li> <li>19. BIRNBOIM (France)</li> <li>20. BIRNBOIM (France)</li> </ul>





**F. Cicero, Grece 1986**



**A. Bonifacino, Tunis 1988...**



**C. Felici, Y. Golvan..., Tunis 1988**



**Kalthoum, Azza and Ferid, Constantine 1985**



# MASU ACTIVITIES

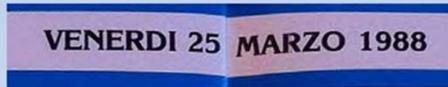
- **International Congress every 2 years : Fondation Greece**  
1986- Tunis 1998- Cairo 1990- Istambul 1992- Rabat 1994- Hammamet 1996- Izmir 1998 - Florence 2000 - Kampala 2002- Damascus 2004- Jerba 2006- Marrakech 2008- Tripoli 2010- Nairobi 2012
- **Courses: Africa and middle-East > 40 US courses**
- **Donations**
- **Scholarships**
- **Research project : hydatidosis, bilharziosis...**



**MASU CONGRES MARRAKECH 1994**

**Pr Francis WEIL working very hardly to promote US and couscous...in Africa**

## Buscarini family, father and daughter have greatly contributed to the promotion of US in Africa



16,05 US-guided percutaneous treatment of echinococcal cysts and amebic abscesses  
**H.A. GHARBI**

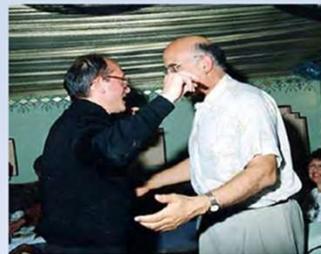


MASU congress, Marrakech 1994



Luigi Buscarini MASU Vice President 1992-98  
Elizabeth Buscarini MASU GI Sec 1998-2004

# MASU, Cairo, Kasadashi, Marrakech, the pioneers of MASU.....





**Gigi Oliva, Tito Livragui never tired**

**Cairo on the Nile, MASU 1990**



**Ferid, always ready,....**



**Montreal, WFUMB 2003, our atlas published**

## Khartoum may 2005



## **MASU Train-the-trainers: follow-up stage**



**Train the trainers ....MASU and WFUMB objectives**

**Dr Salma Modawi Barakat has just had a 1 month-stage for  
advanced US and EUS in Crema, Italy**



**TANZANIA FEV 2002 KCMC**

**Lecturers and Participants**

**Moshe**

**Cours MASU WFUMB FEV 2002**

**Practice session TANZANIA important**

**ascitis**

**Moshe**



## Italian and German experts in Tozeur desert





## Plan

- US in the world
- US in Africa
- ***US in Tunisia***
- The future and my conclusion.....

- My story with ultrasound, **a long history of passion and luck**
- First contact, during my residency in the Hotel Dieu, with Professor Elie, biophysicist, I was responsible for **processing by the ultrasound and the echo A in 1964**
- My first echo request in Tunisia was in 1974, it was a gift from General Electric, at that time the CGR, and then a cooperative program with France 500000 FF/year for 5 years, the source for the purchase of equipment to Children's Hospital... 3 rooms operating simultaneously, the only ultrasound Center in the country for years: echovideorex, Sonia, Scanel 200 then Scanel 400....
- My real luck was my meeting **with hydatid disease** on radiographs then on ultrasound, which led to the description of the semiology of cysts and description of our classification... which get around the world and remains valid until today
- **I owe much to my friends** who surrounded me, to my colleagues who have trusted me, to my friends in France, Italy, Belgium, Canada... to whom I owe everything...
- **The STED was created in late 1999**, Tunisian Sty of US , MASU filiale
- Let's see some pictures....



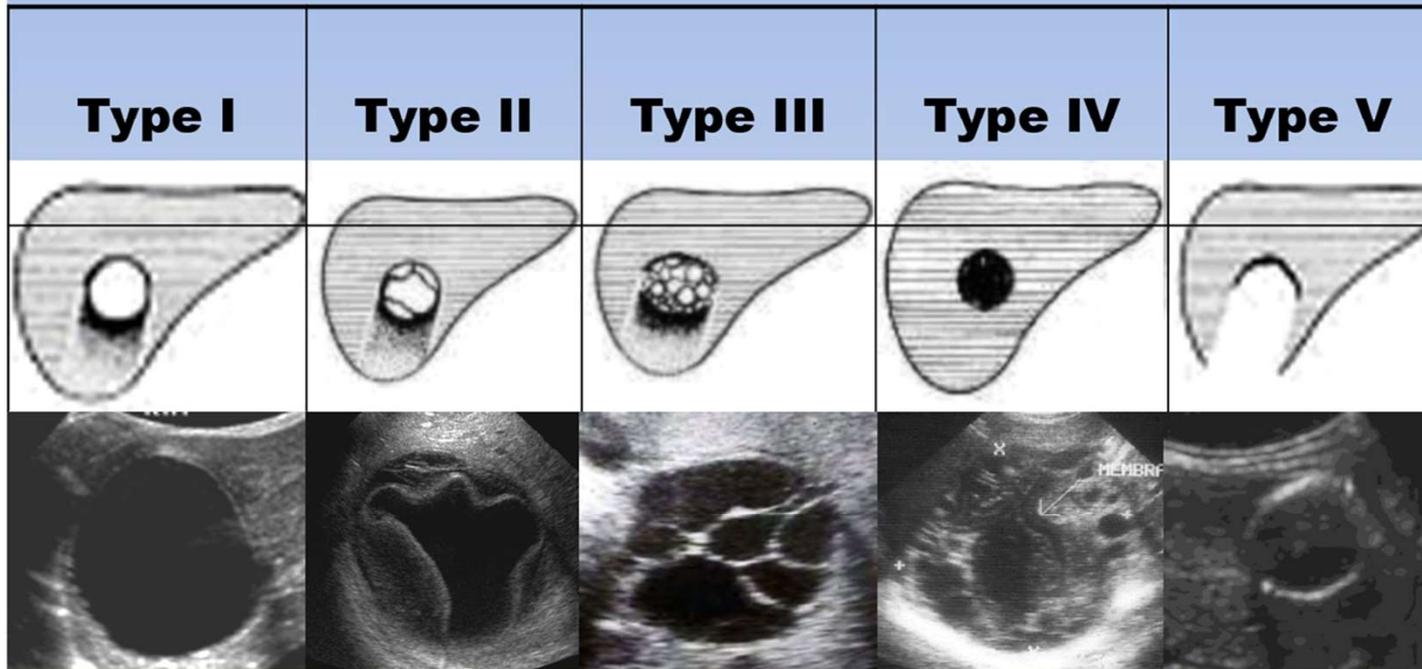
**My father, my mother  
Prof. André Journo who taught me everything especially humanism....The day of  
my thesis in December 1967 Saints Peres street in Paris , it was him who arranged  
the siphoning of the cylinder of red win .....**



**The 5 brothers Gharbi, real Ferchichis,  
Thala summer of 1965, accustomed to fight and never stop**

## GHARBI CLASSIFICATION: 5 TYPES: 1980

The natural spontaneous evolution



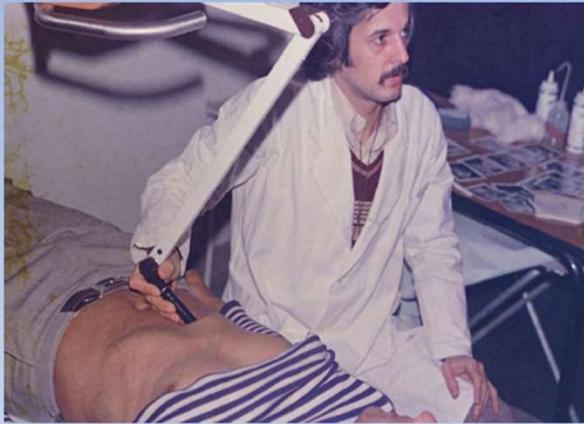
*Drawing by F. Ben Chahida*

Performed in 1980, published in Radiology in May 1981...



**Different aspects of HC: we have to visualize by US**

**Dr Wahid Hassine pioneer .. Echovideorex .. No real-time 1979**



**Children's Hospital, Department of Radiology**



**Pr Ali Bousnina,  
pioneer of cardiac  
ultrasound  
(1980)**

**Pr Faouzia Zouari,  
pioneer of ObGn  
ultrasound  
(1981)**

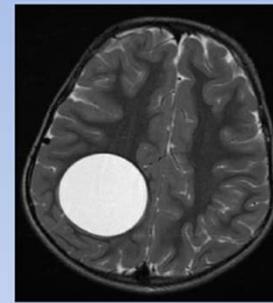
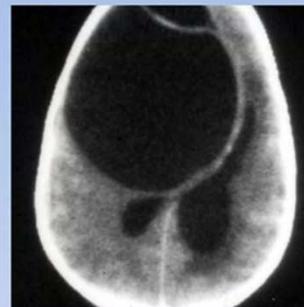




From the foot to the brain

## I was struck by this terrible scourge

All imaging techniques are needed



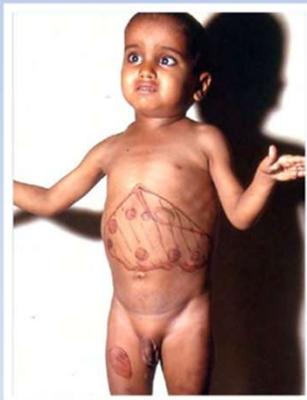
### % HC LOCALIZATION

	Adult	Children
Chest	30 – 40%	40 – 55 %
Liver	50 – 60%	35 – 50 %
Others	10%	10 %

**Abdominal > 70%**

Brain, spleen, kidney, heart ,skeleton, muscles, glands...any where.....after 1 year old





**Worldwide  
Calamity !!!**

**Terrible example of this child came to die  
in the hospital, locations hepatic, splenic,  
orbital thigh... Ascites,.....**



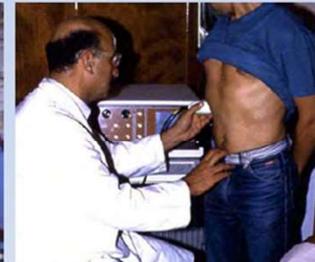
*Collection HET -Tunisia and Dr Zeyhle, Turkana Kenya*

## Hydatid disease...Our fight

- After the hydatid cyst **classification** in 1980....There was
- **The epidemiology** with more than 20,000 asymptomatic individuals explored, upheaval knowledge in epidemiology based on hospital statistics (WHO), sheep, dogs...
- Technique adopted by WHO as validated screening method recommended for schistosomiasis example...
- **PAIR**, the revolution in the development of the hydatid cyst treatment has since become commonplace...puncture technique banned for decades became possible, the dogma of anaphylactic shock demystified....

### *Technique of Moncef Gargouri*

- Thousands of patients treated with PAIR in the world today ...



**Screening campaign in Korba and Boulahneche**



**Epidemiology in dogs from purchase to the sacrifice at the Veterinary School**

## The father of PAIR and Co



**Y. Glovan**



**M. Gargouri et N. Ben Amor**



**Project Tunisian-French and Tunisian-Italian :  
Cooperation extraordinary work, friendship, dedication, and leisure...**



## STED Tunis June 2012



**400 participants  
Hand son session  
obgyn Dr G. Haddad**





## Plan

- US in the world
- US in Africa
- *US in Tunisia*
- **The future and my conclusion.....**

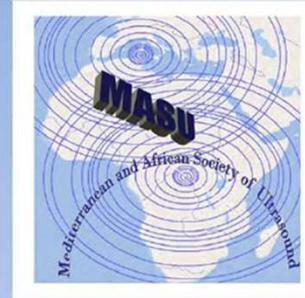
# Conclusion

- **Ultrasound, an extraordinary story**, we had the chance **to experience** it and **to participate** in its performance...
- We have today the tools for the promotion of US in Africa
- We had the chance to participated with our small means to establish the **ultrasound semiology** for all humanity: Hydatid disease, cystic lymphangiomas, osteomyelitis,...
- We have the **body, MASU** and filiales to participate in the **promotion in underdeveloped areas in Africa**
- We have **the manpower** as Sudhir Vinayak , Henri Wanga and Co in Kenya, Michael Kawooya in Uganda ..***we can and we will win***
- Yesterday echo A, echo TM, echo B, real time, 3D and 4D...
- Tomorrow elastography, fusion and more, and more... I hope Africans doctors will be actively present
- ***It is Your job my young friends and our duty***



*MASU at the beginning 1985*

*MASU today*



**Africa at the beginning, recipient Mediterranean  
source of the science and knowledge**

**Today, *complementarity* and cooperation between  
Africa and the world**

**We are not the center but even not only recipient of  
US knowledge's**

***Thanks***