Fifth Planning Meeting *,**
Of the Steering Committee of
The Middle East Association for Managing Hearing Loss (MEHA)***, ****

FINAL REPORT

October 23 and 24, 2003
Aqaba, Jordan

* Supported in part by the Canadian Institutes of Health Research (CIHR)

** Supported by a generous grant from the Peter A. Silverman Centre for International Health, Mount Sinai Hospital, Toronto, Canada

*** MEHA is an integrated program of the Canada International Scientific Exchange Program (CISEPO), based at the University of Toronto and Mount Sinai Hospital, Toronto, Canada.

**** His Royal Highness Prince Firas Raad of Jordan is Patron of MEHA

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Executive Summary

The Fifth Planning Meeting of the Steering Committee of the Middle East Association for Managing Hearing Loss (MEHA) took place on October 23rd and 24th 2003 in Aqaba, under the patronage of His Royal Highness, Prince Firas of the Royal Court of Jordan. Hosted by the Royal Medical Services of Jordan (RMS), the meeting was supported by the Canada International Scientific Exchange Program (CISEPO), based at the University of Toronto and the Peter A. Silverman Centre for International Health at Mount Sinai Hospital and the Canadian Institutes of Health Research (CIHR).

The meeting brought together, in the region, more than 60 Canadians, Israelis, Jordanians and Palestinians, from their respective institutions. The purpose of the meeting was to conduct the business of MEHA, to approve new joint projects and related policies, to continue ongoing people-to-people planning and implementation activity and further develop cross-border, Arab-Israeli cooperative MEHA and CISEPO-linked health sector activities and projects. Thus a variety of medical and public health disciplines, such as genetics, infectious diseases, otologic surgery (including cochlear implant surgery), mother and child health, curriculum development, audiology and habilitation were brought to the table.

Institutional representation included all four of Israel's medical schools, namely Tel Aviv University, The Hebrew University of Jerusalem, Ben Gurion University of the Negev and the Technion – Israel Institute of Technology, and also the University of Haifa and senior representation from the Arab-Israeli medical establishment; Al Quds University and Bethlehem University, and other Palestinian organizations; and the Royal Medical Services of Jordan, Jordan University of Science and Technology and the University of Jordan.

There were also participants in the field of hearing loss from the Ministries of Health of Jordan and Israel.

Details of the proceedings and outcomes of the meeting are provided in the minutes which follow. Highlights include, and are listed without priority:

- Creation of the Dr. Mohammed Al Omari Memorial Scholarship, devoted to supporting cross-border training in otolaryngology and communication disorders.
- Report on the success of MEHA Project 1, involving the screening and habilitation of 15,000 Arab and Israeli newborns and its linkage to the proposed initiation of universal newborn hearing screening in Jordan.
- Approval (conditional on funding) of two new collaborative MEHA projects.
- Approval of two new policies concerning gender and the environment.
- Creation of CISEPO-linked cross-border Arab-Israeli groupings and task forces to initiate projects and activities involving regional public health issues.
- Breakout groups identified and undertook initial steps for further cross-border research and training initiatives.
- Participation of dignitaries including Ambassador John Holmes, Canadian Embassy in Amman and Ambassador Benjamin Abileah, MASHAV (The Centre for International Cooperation of the Ministry of Foreign Affairs of Israel).
- Participation (by teleconference) of HRH Prince Raad of the Royal Court of Jordan.
- Review of MEHA's financial status and the commitment of the Patron of MEHA to continue his efforts to raise the necessary funds to complete the approved projects to sustain MEHA's infrastructure, with assistance provided by CISEPO.

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FINAL REPORT

1. OPENING OF THE MEETING (Agenda item 1)

1.1 His Royal Highness, Prince Firas Raad, Patron of MEHA designated Dr Arnold Noyek, Chair CISEPO as Acting Chair of this meeting in his stead.

1.2 The Acting Chair opened the meeting at 12:00 Noon and on behalf of Prince Firas, welcomed the Canadian, Israeli, Jordanian and Palestinian Steering Committee and Operating Committee members, all participants, dignitaries and observers to the Fifth Planning Meeting of the MEHA Steering Committee held at the Radisson SAS Hotel, Aqaba, Jordan. All were invited and encouraged to participate fully in the meeting.

1.3 The list of participants is given in Appendix 1

1.4 His Royal Highness, Prince Firas Raad, addressed the meeting by teleconference, bringing the following message:

"I take great pride in welcoming you all, albeit from afar, to the 5th annual MEHA Steering Committee Meeting in Aqaba, Jordan. Over the last year, we have pressed on with our cross-border programming in the areas of hearing loss (i.e., newborn screening) and academic exchange in spite of the ever present political difficulties facing our peoples in the region. This programming is deepening and expanding and we are continuously searching for resources to keep the activities alive.

In this vein, I would like to acknowledge the ever generous support of our Canadian benefactors for this meeting, the Peter A. Silverman Centre for International Health at Mount Sinai Hospital, Toronto, and the Canadian Institutes of Health Research. Our thanks as always go to CISEPO and the Canadian government through the ongoing support of the Department of Foreign Affairs and the Minister of Foreign Affairs, the Honorable Bill Graham. We are grateful to all the active participants and supporters, in the Region and abroad, who have been with us since MEHA's formation five years ago, and without which none of our achievements would have been realized."

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1.5 SPECIAL AGENDA ITEM

Minute of Silence
In memory of Dr Mohammed Al Omari
Announcement of Scholarship to honour the memory of Dr Mohammed Al Omari
Presentation of Scholarship Certificate to Mrs Maria Al Omari by Dr Catherine Chalin, Vice-Chair, CISEPO.

The text of the Certificate reads:

Dr. Mohammed Al Omari Memorial Scholarship

presented by
The Isabel Silverman Canada International Scientific Exchange Program (CISEPO)
with the support of MASHAV (Center for International Cooperation of the Ministry of Foreign Affairs, Israel):

- *to honour the memory of Dr. Mohammed Al Omari;*
- *to support cross border training in otolaryngology and communication disorders consistent with his professional commitment;*
- *to advance his vision of and commitment to building bridges of understanding and cooperation between Arabs and Israelis*

1.6 On behalf of HRH Prince Firas, Dr Noyek expressed appreciation of MEHA participants' continuing commitment to MEHA and the importance of the MEHA presence as one means of keeping hope alive and demonstrating inter-community and cross border cooperation during difficult times. He reported that HRH Prince Firas had presented the work of MEHA and CISEPO at a special dinner at the Canadian Embassy in Washington, on September 10th 2003, in the presence of the Canadian Minister of Foreign Affairs, the Honourable Bill Graham, and several senior members of the Diplomatic Corps from the Region as well as influential North Americans.

1.7 The Acting Chair acknowledged the ongoing support for MEHA of the Isabel Silverman Canada International Exchange Program (CISEPO), based at Mount Sinai Hospital and the University of Toronto; the Canadian International Development Agency (CIDA), as part of its development assistance program; and the Department of Foreign Affairs and International Trade, Canada, through its Human Security Program and its Embassies in Israel, Jordan and its Canadian Representative Office in Ramallah.

1.8 He also acknowledged with appreciation the ongoing donations to CISEPO for MEHA from Unitron, Canada, of hearing aids and the recent donation from Phonic Ear Oticon of FM transmitter/receiver units [in the value of $30,000 CDN] to facilitate habilitation of deaf and needy infants.

1.9 He further acknowledged Unifind (Canada) for donating to CISEPO, for the use of MEHA and allied programming, computer software to enable multilanguage simultaneous searches of the scientific literature to further enable research capacity.

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1.10 Many universities, medical schools and institutions in the Region are also invaluable for their representatives present at the meeting and for support, including:

Al Quds University,
Ben Gurion University of the Negev,
Bethlehem University,
Edith Wolfson Medical Center,
French Nazareth Hospital,
Jordan University of Science and Technology (JUST),
Hillel Yaffe Medical Center,
Rabin Medical Center,
Royal Medical Services of Jordan, (RMS) [hosts for Steering Committee 5]
Schneider Children's Medical Center of Israel,
Sheba Medical Center,
Technion - Israel Institute of Technology,
Tel Aviv University,
The Hebrew University,
Hadassah Medical Organization/The Hebrew University of Jerusalem,
The Holy Land Institute for the Deaf, Salt, Jordan,
The University of Haifa
University of Jordan.

1.11 The Center for International Cooperation (MASHAV), Ministry of Foreign Affairs of Israel was thanked for its ongoing support.

1.12 All new and continuing donors were sincerely thanked for financial support of CISEPO/MEHA, including Fieldgate Homes, Canada, in recognition of their support of a healthy environment and their specific contribution in support of this meeting..

1.13 Greetings were conveyed by Professor Arnold Noyek on behalf of colleagues from:

1.13.1 Mount Sinai Hospital:
Mr Joseph Mapa, President and CEO of Mount Sinai Hospital, Toronto;
Mr Nicholas Offord, President, Mount Sinai Hospital Foundation;
Ms Krista Riko and Dr Martyn Hyde, Otologic Function Unit, Mount Sinai Hospital and CISEPO Consultants in Hearing Health

1.13.2 University of Toronto:
Professor Robert Birgeneau, President, University of Toronto;
Professor David Naylor, Dean, Faculty of Medicine, University of Toronto;
Professor Dave Davis, Associate Dean, Continuing Education, University of Toronto;
Professor Patrick Gullane, Chair, Department of Otolaryngology, University of Toronto;
Professor Harvey Skinner, Chair, Public Health Sciences, University of Toronto and CISEPO Director of Research;
Professors Dan Farine, Lawrence Spero, Paul Williams, University of Toronto

1.13.3 Mr Phil Aber, MEHA Project Manager, CISEPO Policy and Planning Adviser

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1.14 Professor Noyek also reported that he had received greetings from the Honourable Bill Graham, Minister of Foreign Affairs, Canada for the MEHA Steering Committee meeting and read on behalf of the Minister:

"Greetings to all participants at the Fifth MEHA Steering Committee meeting.

I have had the privilege to visit the MEHA Centre in Amman and also recently joined His Royal Highness Prince Firas and the CISEPO team for an evening at the Canadian embassy in Washington. I am thus very familiar with the strength of the people-to-people CISEPO/MEHA programming which you are all undertaking.

The Department of Foreign Affairs strongly supports your cooperative efforts, and I send best wishes for a successful meeting and all your future endeavours.

I would like to thank everyone for taking the necessary bold and creative steps together over these past years. I encourage each of you to continue building these much-needed, forward-looking and important Arab-Israeli bridges of cooperation in the health sector"

1.15 Ambassador John Holmes, Canadian Ambassador to the Hashemite Kingdom of Jordan, was invited to address the meeting. He brought greetings from the Government of Canada, extended thanks to CISEPO, and expressed his satisfaction with the Canadian contribution to the continuous professional and program development of MEHA. He warmly expressed his appreciation of the important contribution MEHA makes to improve the quality of deaf children's lives in the region while building meaningful cooperative relationships among Israelis, Jordanians and Palestinians.

1.16 Ambassador Benjamin Abileah, MASHAV (Center for International Cooperation of the Ministry of Foreign Affairs of Israel) was invited to address the meeting. He brought greetings from MASHAV, and expressed satisfaction in seeing the outcomes of MEHA training programs to which MASHAV had provided support with other partners. These programs serve MEHA's habilitative projects on the ground, build human resource capacity and create a much needed cooperative spirit across frontiers among all participants. He wished continued success to all participants and stated his warm admiration for their collective work.

1.17 His Royal Highness, Prince Raad joined the meeting by teleconference, expressing his strong support for and long-standing interest in MEHA. He identified happily with MEHA's scientific and service capacity, and its special capability of building Arab-Israeli goodwill on a people-to-people basis. He wished all present every continued success.

1.18 Greetings were received from Professor Abdullah Al Musa, President of the University of Jordan, Amman, as represented by the Dean of the Faculty of Medicine, Professor Samih Abu Raghib

1.19 On behalf of Professor Wajih Owais, President of Jordan University of Science and Technology in Irbid, Professor Ziad Elnasser, Dean, Faculty of Applied Medical Sciences brought a message of support which he read into the record.

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1.20 Professor Dov Lichtenberg, Dean of the Sackler Faculty of Medicine, Tel Aviv University, brought a message from President Itamar Rabinovitch which he read into the record. He also brought greetings and good wishes from the Deans Council of Israel's medical schools

1.21 Professor Hillel Pratt brought greetings on behalf of Professor Rafael Beyar, Dean of the Faculty of Medicine, the Technion – Israel Institute of Technology, Haifa. Professor Pratt, who has been an adviser to the MEHA operating committee since its inception and has worked closely with Dr Mohammed Al Omari in MEHA activities, also reflected the views of the entire group when he spoke of our collective fondness and admiration for Mohammed, as a wonderful human being, always smiling and positive, and as the consummate professional, always efficient, creative and productive in everything he undertook.

1.22 Greetings were received from Professor Daniel Shouval, Dean of the Hadassah Faculty of Medicine, The Hebrew University of Jerusalem

1.23 Professor Miki Karplus brought greetings from Professor Rivka Carmi, Dean of the Faculty of Health Sciences, Ben Gurion University of the Negev.

1.24 Professor Joseph Attias brought greetings from the President of the University of Haifa, Professor Yehuda Hayuth, and from the Dean of the Faculty of Social Welfare and Health Studies, Professor Zvi Eisikovits

1.25 Professor Hani Abdeen, Dean of Medicine, Al Quds University, presented greetings from the President, Al Quds University, Professor Sari Nusseibeh and from Professor Ziad Abdeen, Director, Institute for Health and Nutrition and Dean of Research, Al Quds University.

1.26 Professor Moien Kanaan brought the greetings of Brother Vincent Malham, Chancellor of Bethlehem University

1.27 Professor Mohammad Shaheen (formerly Dean, School of Public Health, Al Quds University) brought greetings as the Director, Center for Development in Primary Health Care, Al Quds University

1.28 Brother Andrew brought greetings from the Holy Land Institute for the Deaf, Salt.

1.29 Greetings were received from Mrs Gerry (Geraldine) Shawa, Director of the Atfaluna Society for Deaf Children, Gaza

1.30 All participants at the table were invited to share greetings and to introduce themselves

2 ADOPTION OF THE AGENDA (Agenda item 2)

2.1 The Meeting was invited to comment on the Provisional Agenda

2.2 The Agenda was adopted as reproduced in Appendix 2.

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3 INTRODUCTION OF STEERING COMMITTEE (Agenda item 3)

3.1 The Acting Chair and Canadian representative to the Steering Committee, Prof Arnold Noyek, introduced fellow members of the Steering Committee: Prof Hani Abdeen, representing Prof Ziad Abdeen as the Palestinian representative; Major General Dr Manaf Hijazi, as the Jordanian representative and the host of the meeting; and Prof Dov Lichtenberg representing Prof Rivka Carmi as the Israeli representative.

4 STEERING COMMITTEE PRESENTATIONS (Agenda item 4)

4.1 The Chairman invited the members to address the meeting.

4.1.1 Major General Dr Manaf Hijazi, as host to the meeting, offered a warm, personal welcome.

4.1.2 Professor Hani Abdeen brought a message of encouragement from Prof Ziad Abdeen.

4.1.3 Professor Dov Lichtenberg presented a message from Prof Rivka Carmi who was on University business overseas.

4.1.4 Professor Arnold Noyek expressed his delight that so many had found it possible to accept the invitation to attend this meeting.

5 OPERATING COMMITTEE AND MEHA REGIONAL CENTRE REPORTS (Agenda item 5)

5.1 On the invitation of the Chair the members of the Operating Committee, Dr Mohammad Al Masri, Mrs Rema Jebara, Professor Joseph Attias and Ms Josée Levasseur, reported on their activities. The highlights include:

5.1.1 MEHA Project 1 has been scheduled for completion by June 2004.

5.1.2 The Principal Investigators for MEHA Project I reported that 5,040 Israeli, 6,862 Jordanian and 691 Palestinian infants have been screened for Project 1. Full details of the meeting, held in Larnaca, Cyprus, September 20-21, 2003, and project plans are provided in Appendix 3

5.1.3 The Israeli children that were screened came from throughout central Israel with some representation from the northern and southern regions, and represented both Jewish and Arab Israeli families. The Jordanian children came from Amman, Madaba, Zarka, Salt, Jarash, Ajlun, Irbid and Karak. The Palestinian children tested came from Jerusalem, Abu-Dis, Jericho, Bethlehem, Hebron, Hezma and Ramallah.

5.1.4 Further screening in the north of Israel at the French Hospital, Nazareth started in October and will be completed by the end of February 2004. This represents the final component of the Israeli screening for Project 1.

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5.1.5 Screening in the east and south of Jordan will continue and the screening component of Project 1 will be completed by January 1, 2004.

5.1.6 The Pilot Project for the Palestinian children is now complete. Mrs Rema Jebara reported on the successful completion of the screening of 500 Palestinian newborns at the Makassid Hospital in East Jerusalem, including patients from the West Bank, as the Palestinian cohort to MEHA project #1.

5.2 Mrs Rema Jebra expressed the hope that a total of 6000 newborns and infants will ultimately be screened in new project activity in the Palestinian territories, when other districts such as Nablus, Ramallah, Bethlehem, Hebron and Gaza become involved. She also expressed gratitude for the ABR (brainstem evoked response) system which CISEPO has donated to Al Quds University. The donated equipment is intended to facilitate improved service to deaf infants and children. As agreed by Al Quds University, the university has committed to develop an acceptable cross-border research project using this equipment paired with Israeli colleagues, in a proposal to be worked out soon in order allow for its full use. It is hoped that both Palestinian and Israeli colleagues will make a submission regarding this intended project to the Canadian government's "Networking for Peace" program.

Mrs Rema Jebara further commented on the strong relationship between the Palestinian infant hearing screening project and the genetic work directed jointly by Prof Moein Kanaan of Bethlehem University and Professor Karen Avraham of Tel Aviv University. Mrs Jebara expressed thanks to both of them for their encouragement of the Palestinian efforts in the MEHA early detection project. The collaboration with Israeli and Jordanian colleagues in other areas such as cochlear implant candidate evaluation, mapping of devices and emphasizing the importance of habilitation was much appreciated.

A need for the collection of testing materials in Arabic, for use in evaluating and diagnosing hearing impaired children in the Middle East was noted.

5.3 Ms Josée Levasseur reported on a donation of 22 power hearing aids by Unitron and of 16 personal FM systems by Phonic Ear Oticon. She also reported on the success of a 4-week Cochlear Implant training program carried out in July for the RMS at the University of Toronto and its affiliated hospitals, the Hospital for Sick Children, Sunnybrook and Women's Health Science Centre, and Mount Sinai Hospital. Other organizations and agencies were involved, such as the Canadian Hearing Society. She presented certificates for successful completion of the training program to Dr Nabil Ardah, Ms Kholood Kaabneh and Mr Zzodan Khamayseh.

5.4 Dr Mohammad Al Masri reported that the necessary legal process and documentation had been completed and MEHA's by-laws approved. Thus MEHA with its duly constituted Board is now legally registered as an organization with the government in Jordan and has charitable status. Details are available concerning the MEHA board and other related maters upon request.

5.5 Dr Joseph Attias noted that the Operating Committee met in Haifa in February 2003 to review progress in MEHA Project 1, to modify the experimental procedures based on

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experience to date, and to discuss arrangements for the collection and presentation of the test data.

5.6 The Operating Committee held the "Advanced Technical Workshop for the Early Detection of Hearing Loss in Infants", August 19-20, 2002, in Israel for three Palestinian audiologists and technicians with the support of the Schneider Children's Medical Center of Israel (SCMCI), the Canada International Scientific Exchange Program (CISEPO), and MASHAV, Ministry of Foreign Affairs of Israel. The workshop was the initial activity in the pilot project plan for the testing of the Palestinian Infants.

5.7 The Operating Committee offered new proposals which were discussed and adopted subject to assured funding. Abstracts for each proposal are set out as Appendices 4 and 5

6. JORDANIAN MINISTRY OF HEALTH. (Agenda item 6)

6.1 The meeting was encouraged to know that joint activities continue between MEHA and the Ministry of Health in primary health care and in the field of hearing loss and newborn hearing screening.

6.2 The meeting was further encouraged to learn that $US 20,000 had been allocated by the Ministry of Planning towards future MEHA programming and project activity with the Ministry of Health in Jordan.

6.3 Additionally, there is the prospect of increasing Ministry of Health collaboration beyond hearing loss, resulting from successful MEHA programming and operational relationships with the Ministry of Health and Jordan’s universities and institutions. An example of this forward-looking development is noted in section 10 [below] and specifically the CISEPO-linked breakout group on infectious disease.

7 STEERING COMMITTEE PRIORITIES (Agenda item 7)

7.1 The new proposals as approved and described in 5.7 are titled Project 3 Central Auditory Processing Disorder (CAPD) and Project 4 Neonatal and Early Detection of Hearing Loss and Habilitation. (See Appendices 4 and 5)

7.2 Professor Catherine Chalin reported to the Steering Committee that the CISEPO Board, at its meeting earlier in the month in Toronto had passed a motion to the effect that all its programs would be environmentally friendly and gender sensitive.

7.3 New policies supporting gender equity and environmental sensitivity in all MEHA projects and activities were proposed and approved by the meeting.

7.4 The Steering Committee expressed its priority interest in advancing universal newborn hearing screening in the region; in contributing to the development of comprehensive habilitation programming for deaf infants and children detected in such screening programs; and in supporting the development of cochlear implant surgical programs within the region.

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7.5 In relation to cochlear implant surgery, the Steering Committee noted with satisfaction and gratitude the offer of four cochlear implants, with the provision of both the implant and the surgery in Israel gratis. Two cochlear implants have been offered previously by the Schneider Children's Medical Center of Israel, and two have been offered this date by Prof Yona Kronenberg of the Sheba Medical Center. Both offers were kindly put forth within the context of a proposed exchange surgical program with fellow Jordanian otologic surgeons [see otolaryngology group report]

8 MEHA FINANCIAL REVIEW (Agenda item 8)

8.1 Since its inception in 1998, financial support for MEHA has been based on CISEPO's commitment to fund and/or to help find funding.

8.2 Generous financial support for MEHA Project 1 has been received from the Government of Canada, provided through the Canadian International Development Agency (CIDA) and the Center for International Cooperation (MASHAV), Ministry of Foreign Affairs of Israel.

8.3 Immediate prospects for additional new funding are limited. In the past year, the private sector has been actively canvassed to raise the funds needed for the completion of Project 1 and the post-Project 1 Habilitation Project, designated Project 2.

8.4 Expenditures of funds for MEHA Project 1 to the end of September 2003 total approximately US$750,000 including an in-kind contribution of hearing aids valued at US$170,000 (Unitron). An additional US$100,000 is still required to complete Project 1, through to June 2004.

8.5 The meeting noted that the completion of Project 1, the implementation of subsequent cooperative projects including the Post Project 1 Habilitation, and the ongoing operating aspects of MEHA are all dependent on finding additional funding resources.

8.6 The Patron of MEHA reinforced his commitment to helping to raise the necessary funds to complete the approved projects and to sustain MEHA's infrastructure, with assistance provided by CISEPO.

8.7 To be assured that the agreed MEHA objectives are achieved the following additional funds are required

Project #1: Completion by June 2004	US$100,000
Project #2: The post Project 1 Habilitation Project	US$250,000
Project #3: The Central Auditory Processing Project	US$200,000
Project #4: The MEHA/Holy Land Institute for the Deaf/ RMS/Ministry of Health of Jordan Project	US$250,000
Total:	US$800,000

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9 CISEPO-LINKED PRIORITIES: DEVELOPING ASSOCIATIONS AND SPECIALITY GROUPINGS. (Agenda item 9)

A unique aspect of the meeting, as identified in the Provisional Agenda, was to broaden the meeting by planning for new CISEPO groupings and activities, using the successful MEHA model. A series of presentations and submissions of abstracts for information within the context of CISEPO, MEHA and CIHR initiatives were made, as follows, as a stimulus and focus for the break out groups (or task forces) intended for the Friday morning October 24th 2003 session. Participants formed several groups dealing with issues they identified as having priority for the region. At the end of the breakout groups participants exchanged contact information and made plans to continue their dialogue. Reports from the break out groups can be found in the appendices 10-12.

9.1 PRESENTATIONS AND SUBMISSION OF ABSTRACTS FOR INFORMATION: (Agenda item 9)

9.1.1 Professors Karen Avraham and Moien Kanaan reported on their collaborative work in the genetics of hearing loss and explained the nature and significance of their findings and the importance of the collaborative work. It was agreed that this topic would be continued in the Breakout Groups (see Section 10 below)

9.1.2 Professor Yona Kronenberg reported on his cochlear implant surgical technique developed and used in the Sheba Medical Center at Tel Aviv University. It was agreed that a cross border Breakout group would discuss training opportunities in this area (see Section 10 below).

9.1.3 A proposal concerning the Economic Evaluation of the Early Detection of Hearing Loss and Intervention Programs was presented for discussion. Ms Abi Sriharan, scholar in residence at the Peter A. Silverman Centre for International Health is seeking partners from universities in Canada and in the region to collaborate on this project. See Appendix 6

9.1.4 The Middle East Mother and Child Health Association (MEMCHA). This potential association, currently a grouping, continues to seek definition, opportunities and funding possibilities.

9.1.5 The Canadian Hearing Society (CHS): A report on the structure and activities of the CHS was tabled on behalf of Ms Beverley Biderman, Past Chair, and Ms Penny Parnes, Vice President as a sample of a Canadian community based for action (see Appendix 7)

9.1.6 The Research Agenda and CIHR/CISEPO: Professor Harvey Skinner joined the meeting by teleconference. He reiterated the Canadian Institutes of Health Research (CIHR) support for the MEHA steering committee meeting. He reported on the CIHR/CISEPO research initiative in the region and tabled the attached report (Appendix 8). Prof. Skinner offered several small CIHR seed grants to stimulate project activity within the current Global Health Research grant with its Canadian, Israeli, Jordanian and Palestinian principal investigators. Prof. Skinner also confirmed his intent to conduct a CIHR planning meeting in the region in conjunction with CISEPO and MEHA in the new year.

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9.1.7 E-Health/Telehealth: A Vision for the Future, tabled by Tim Patterson, Baycrest Centre for Geriatric Care, Canada; Gil Perez, Stanford University, United States; Lawrence Spero, University of Toronto, Canada; Yehudah Roth; Edith Wolfson Medical Center at Tel Aviv University, Israel; Mohammad Al-Masri, Jordan University of Science and Technology, Jordan. See Appendix 9

9.1.8 Inter-Faith Relations: Dr Ian Clark reported that he was working with former Ambassador Michael Bell who had served as Canadian Ambassador in Israel and in Egypt. Together they will gather in Toronto young adults from the faith communities in Toronto, represented in the Region for two initial purposes: first, to meet in a face to face situation to explore understandings of the regional situation; and second, to identify ways to reach the faith communities with information and good news to promote greater understanding and hope.

9.1.9 SUNSIH-CISEPO Student Summer Project. This project involved two Israeli and two Palestinian students together with 2 Canadian students and two student organizers and was located in Toronto and Southern Ontario in July-August 2003. The report included a Video of their involvements and activities. A Report in print, showing context and future plans, is found as Appendix 10.

10 BREAK OUT GROUPS AND THEIR REPORTS (Agenda item 10)

10.1 Following the successful series of presentations and abstract submissions (above), Professor Catherine Chalin introduced the agenda item and the meeting created the following topics for group discussion. These task groups were asked to prepare action reports:

1) Otolaryngology/ Cochlear implants,
2) Genetics of hearing loss,
3) Curriculum development
4) Infectious diseases
5) Mother and child health
6) MEHA/CISEPO 'friends and funding.'
7) Audiology and Habilitation

10.2 Reports were received from the following breakout/task groups

10.2.1 The otolaryngology group reported on a proposed cross-border program of exchange visits and collaboration on technical, research and educational aspects of cochlear implant developments. A fuller description is set out in Appendix 11

10.2.2 The genetics of hearing loss group reported on a gender sensitive, environmentally friendly project with academic underpinning which related to the needs of the region and offered training opportunities in a cross border program. This report is Appendix 12

10.2.3 The Curriculum development/Medical education group reported on the need to develop the technology to allow for distance learning and established priorities for regionally appropriate medical research. The report is presented as Appendix 13

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10.2.4 The Audiology and Habilitation group discussed a wide range of topics and prioritized in order of need and urgency. It is the intention of this group to move forward on these issues through smaller focus groups to help gather information and insure that there is relevant movement on these items. The group shared future responsibilities. See Appendix 14.

10.2.5 The Friends and Funding group reported on the need to prepare and publish 'human interest' publicity material in the languages of the region. It is also important to register the organization, MEHA, in Israel as has now been done in Jordan. See Appendix 15

10.2.6 The Maternal and Child Health task group reported on the need to map and evaluate the service delivery modes in the high risk areas of all the communities in the region. (See Appendix 16)

10.3 The infectious diseases on the need to collaborate cross borders on a number of specific infectious disease issues. (See Appendix 17)

11 CLOSING OF THE MEETING (Agenda item 11)

11.2 The Steering Committee will meet next in approximately 12 months, giving due consideration to the religious holy days

11.3 The Acting Chair thanked all the participants for their ongoing involvement in MEHA and for their productive participation in the meeting. He noted the maturation of MEHA as an organization and the new initiatives and developments which this fifth Steering Committee had produced. He expressed the appreciation of the meeting for the hosting undertaken by the Royal Medical Services with the leadership of Dr Manaf Hizaji, the Director of RMS and made particular reference to the banquet

11.4 The meeting also thanked Professor Arnold Noyek for his apparently boundless energy and commitment for the whole enterprise of CISEPO and MEHA and the comprehensive preparation for this Steering Committee and for his role as Acting Chair on behalf of Prince Firas. The meeting included in its appreciation the role played by Dr Ian Clark in the communication with the constituency and the preparation of documents for this Steering Committee meeting and the role of Prof. Catherine Chalin in formulating and organizing the break out sessions and task forces.

11.5 The Steering Committee, on behalf of all present, expressed their gratitude to His Royal Highness Prince Firas for his counsel and guidance in preparing for the meeting and for his ongoing involvement, encouragement and efforts as Patron of MEHA

11.6 The meeting closed at 10.30 a.m., October 24, 2003

The original is signed and held as the office file copy.

APPROVED _____ DATE: _____

His Royal Highness
Prince Firas bin Raad
Patron of MEHA

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Peter A Silverman Centre for International Health at Mount Sinai Hospital, Toronto

Fifth Planning Meeting
of the Steering Committee of
The Middle East Hearing Association (MEHA**)**

Aqaba, Jordan
October 23 and 24, 2003

Meeting Participants

Chair of the Meeting: His Royal Highness, Prince Firas bin Raad, Patron of MEHA (by Teleconference from Washington, DC).

Acting Chair of the Meeting: Professor Arnold Noyek*, Chair CISEPO, Professor of Otolarynology, of Medical Imaging, of Public Health Sciences, University of Toronto, Canada Representative to the Steering Committee.

Secretary of the Meeting: Dr Ian Clark, Adviser and Secretary to the MEHA Steering Committee 5, CISEPO Consultant on Inter-Faith and Inter-Community Relations.

Steering Committee

4. Major General, Dr Manaf Hijazi, Director, RMS; Jordan Representative.
5. Professor Hani Abdeen, Dean of Medicine, Al Quds University (representing Professor Ziad Abdeen, Director Institute for Heath and Nutrition, Dean of Research, Al Quds University; Palestinian Representative; CISEPO Director, Palestinian Program).
6. Professor Dov Lichtenberg, Dean, Sackler Faculty of Medicine, Tel Aviv University (representing Prof. Rivka Carmi, Dean, Faculty of Health Science, Ben Gurion University, Israeli Representative).
7. Dr Itamar Shalit, Schneider Children's Medical Center of Israel, Adviser to the Steering Committee.

Operating Committee

8. Professor Mohammad Al Masri*, Director, MEHA Regional Centre, Associate Dean, Faculty of Applied Health Sciences, JUST; Jordanian Member.
9. Ms. Rema Jebara, Al Quds University; Palestinian Member.
10. Professor Joseph Attias, University of Haifa; Director, Institute for Clinical Neurophysiology and Audiology, Schneider Children's Medical Center of Israel; Israeli Member.
11. Ms. Josee Levasseur, Auditory-Verbal Therapist, Toronto Canada; Canadian Representative.
12. Professor Hillel Pratt, Professor of Medical Science and Bio-Medical Engineering, Director, Evoked Potentials Laboratory, Technion – Israel Institute of Technology; Adviser to the Operating Committee.

Invited Observers

13. Professor Ziad Elnasser*, Dean, Faculty of Applied Medical Sciences, JUST.
14. Brigadier General Dr Hasan Malkawi, Head Ob/Gyn, KHMC, RMS.
15. Brigadier General Dr Nabil Ardah, Head ENT, KHMC, RMS.
16. Dr. Mohamad Nusier, Chair, Department of Biochemistry, JUST.
17. Ms. Kholood Kabenah, Senior Audiologist, Royal Medical Services.
18. Dr. Fawaz Alkazaleh, University of Jordan.

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19. Professor Samih Abu Raghib, University of Jordan.
20. Brother Andrew, Holy Land Institute for the Deaf, Salt, Jordan
21. Dr Ali Asad, Ministry of Health, Jordan
22. Dr Dafalah Al Luzi, Ministry of Health, Jordan
23. Mrs Helen Jones, Audiologist, HLID, Salt, Jordan
24. Dr Majel Hassen, Pediatrician, RMS
25. Dr Khalaf Omari, KHMC, RMS, Education
26. Dr Ammar Mubaidin, KHMC, RMS, Training
27. Ms Dania Al Reshek, Audiologist, MEHA, Amman
28. Professor Saied Jaradat, Micro Genetics, JUST
29. Dr Zeyad El Akawi, Medical School, JUST
30. Dr Amal Jasser, JUST
31. Ms Raiel Battah, JUST
32. Mrs Lina Abu Khader, Speech Pathologist, MOH, Jordan
33. Dr Asem El Omari ENT, Amman
34. Mrs Maria Omari, MEHA, Amman
35. Dr Moien Kanaan, Associate Professor of Molecular Genetics, Director of Hereditary Research Laboratory, Life Sciences, Bethlehem University.
36. Dr Hala Nassar, Annahda Womens Association, Ramallah, West Bank
37. Professor Mohammad Shaheen, formerly Dean School of Public Health, Al Quds University; currently Director, the Center for Development in Primary Health Care, Al Quds University
38. Mr Sabah Nabulsi, MEHA and Al Quds University
39. Dr Yehudah Roth, Deputy Director, CISEPO Israel; Chair, Department of Otolaryngology – Head Neck Surgery, Edith Wolfson Medical Center.
40. Dr Karen Avraham, Professor, Department of Human Genetics, Sackler School of Medicine, Tel Aviv University.
41. Dr Yona Kronenberg, Dept of Otolaryngology, Head and Neck Surgery, Sheba Medical Center, Tel Hashomer, Tel Aviv University.
42. Prof Miki Karplus, Faculty of Health Science, Ben Gurion University.
43. Dr Talma Hertzano, Chief Audiologist, MOH, Israel.
44. Dr Suliman Za'arura, Chair, Dept of Otolaryngology, Head and Neck Surgery, The French Nazareth Hospital, Nazareth.
45. Ms Rola Farah, French Nazareth Hospital and Sonic Center, Nazareth, Israel.
46. Dr Itzhak Braverman, Chair, Dept of Otolaryngology, Head and Neck Surgery, Hillel Yaffe Medical Center Hadera; Technion – Israel Institute of Technology.
47. Dr Ilana Shoham-Vardi, Faculty of Health Sciences, Ben Gurion University
48. Prof Yoseph Mekori, Meir Hospital, Vice Dean Research, Tel Aviv University
49. Dr Ron Eliashar, Department of Otolaryngology, Head and Neck Surgery, Hadassah Medical Center, The Hebrew University, Jerusalem
50. Amani Jamah, TRC, Jerusalem
51. Samah Dkiedeck, MICHA, Jerusalem
52. Iman Ghosheh, Princess Basma Center, Jerusalem
53. Professor Catherine Chalin*, Vice Chair CISEPO, Professor, Department of Public Health Sciences, University of Toronto
54. Mrs Judy Noyek, CISEPO, Toronto
55. Dr Khalid A Hadi, Otolaryngology, HGH, Qatar
56. Mrs Liora Lichtenberg, TASMC, Tel Aviv
57. Dr Khander J. Abdul-Baqi, University of Jordan
58. Mr Wasfe Btosh, MEHA, Jordan
59. Mrs Samira Hamwi, Amman, Jordan
60. Lieutenant Colonel Maher Fouri, Hospital Administration and Public Relations, RMS
61. Prof Harvey Skinner, Chair, Public Health Sciences, University of Toronto; CISEPO Director of Research (by Teleconference link from Seattle).

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Dignitaries

62. His Royal Highness Prince Raad, of the Royal Court of Jordan (by Teleconference link from Amman).
63. Ambassador Benjamin Abileah, Senior Advisor, MASHAV, Center for International Cooperation, Ministry of Foreign Affairs of Israel.
64. Ambassador John Holmes, the Canadian Embassy, Amman, Jordan.

Glossary of Abbreviations Used

ENT	Ear, Nose and Throat
HGH	Hamad General Hospital
HLID	Holy Land Institute for the Deaf
JUST	Jordan University of Science and Technology
KHMC	King Hussein Medical Centre
MICHA	Association for the Rehabilitation of Deaf and Hard of Hearing Children
MOH	Ministry of Health
RMS	Royal Medical Services
TASMC	Tel Aviv Soraski Medical Center

Footnote

* Principal Investigators supported in part by a grant from CIHR

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Fifth Planning Meeting
Of the Steering Committee of
The Middle East Association for Managing Hearing Loss (MEHA)

October 23, 2003

PROVISIONAL AGENDA

1. OPENING OF THE MEETING

   - In Memory of Dr Mohammed Al Omari
   - Announcement of Scholarship to honour the memory of Dr Mohammed Al Omari

   - WELCOME, INTRODUCTIONS AND GREETINGS

2. ADOPTION OF THE AGENDA

3. STEERING COMMITTEE MEMBERSHIP

4. STEERING COMMITTEE PRESENTATIONS

5. OPERATING COMMITTEE AND MEHA REGIONAL CENTRE REPORTS

6. JORDANIAN MINISTRY OF HEALTH REPORT:
   UNIVERSAL NEWBORN HEARING SCREENING

7. STEERING COMMITTEE PRIORITIES

8. MEHA FINANCIAL REVIEW

9. CISEPO-LINKED PRIORITIES
   DEVELOPING ASSOCIATIONS AND SPECIALITY GROUPINGS

10. BREAKOUT GROUPS AND THEIR REPORTS

11. CLOSING OF THE MEETING

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MEETING OF THE PRINCIPAL INVESTIGATORS FOR MEHA PROJECT 1, THE EARLY DETECTION OF HEARING LOSS IN INFANTS

Larnaca, Cyprus, Sept 20-21, 2003

SUMMARY MINUTES

I. Participants:

1. Mr. Phil Aber, Project Manager, MEHA Project 1; Policy Adviser, the Canada International Scientific Exchange Program (CISEPO)
2. Dr. Mohammad Al-Masri, Associate Dean, Faculty of Applied Medical Science, JUST, Irbid; Executive Director of MEHA Regional Centre-Jordan
3. Professor Joseph Attias, Haifa University, Director, Institute for Clinical Neurophysiology and Audiology, Schneider Children's Medical Center of Israel (SCMCI);
4. Mrs. Rema Othman Jebara, Faculty, Al Quds University; Audiologist/Speech Therapist, Hadassah Medical Organization;
5. Professor Hillel Pratt, Professor of Medical Science and Bio-Medical Engineering, Director, Evoked Potentials Laboratory, Technion - Israel Institute of Technology.

II. Objectives of the Meeting:

1. Review all the data collected from Israeli, Jordanian, and Palestinian components of MEHA Project 1;
2. Identify global conclusions and research questions suggested by the data;
3. Decide on the format of the scientific paper to be produced; on joint and individual Israeli, Jordanian, and Palestinian subsets to be included in the paper, and on their display;
4. Decide on the next steps in wrapping up the project and reporting on it.

III. Data Presentations

1. In her opening presentation, Mrs. Jebara indicated that 691 infants had been tested for the prototype project and included in her report. The children came from Jerusalem, Abu-Deis, Jericho, Bethlehem, Hebron, Hezma, and Ramallah.

2. In his presentation, Prof. Attias indicated that the 5,040 infants screened from November 2002-June 2003 were documented in his report. These children were from throughout Central Israel and represented both Jewish and Arab Israeli families. Since November 2001, 11,386 infants were screened. The later subset was identical to the overall population. The screening phase of the project, in Israel, will be concluded with approximately 700 screenings from French Nazareth Hospital in the north.

3. In his presentation, Prof. Al Masri indicated that 6,862 infants had been tested, to date, in the Jordanian component of the project, and statistics for these infants were included in his report. The children came from Amman, Madaba, Zarka, Salt, Jarash, Ajlun, Irbid, Karak. In addition to the children with

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bilateral sensory neuro hearing loss (SNHL) identified in his report, the diagnosis for an additional 70 to 80 children needs to be confirmed. Screening in the east and south of Jordan will continue and will be completed by January 1, 2004.

IV. Conclusions and Considerations

1. Following the presentations of the data, the group's conclusions included:

a. The criteria for reporting hearing loss for the project would be standardized as "Bilateral SNHL";
b. There is a need to understand and increase the participation rate of children who were referred for further testing but failed to appear.
c. Integration of non-compliance needs to be undertaken with development of strategies/formulae for so doing.
d. The issue of appropriate risk factors for different populations needs to be examined and options identified.
e. The final report should include sections for "special" data, e.g. costing analyses.
f. Incidental medical findings impacting the population which are discovered during the project will be brought to the attention of authority as an ethical response.

2. Based on the presentations and data tables from each site, Prof. Pratt and Mr. Aber selected the main findings to be compared across sites, and the best way to present them for comparison. The group then agreed on the summary tables and their representation in which the main data and findings would be organized. Please see Attachment 2.

3. The group considered scientific papers that could be published using the data acquired in Project 1. It was concluded that a working title for the first paper might be:

a. "The Incidence of Congenital or Early Onset of Bilateral Sensory Neural Hearing Loss in Israelis, Jordanians, and Palestinians."

Preferred targets for publication would be the "International Journal of Audiology", and "Hearing Research".

Additional papers were contemplated, also based on the data gathered in Project 1. Examples included:

b. "Adapting Screening Protocols to Local Constraints"
c. "Building Cross-Border Cooperation in the Middle East through Scientific Projects – MEHA Project 1, The Early Detection of Hearing Loss in Infants"
d. "Challenges in Establishing Hearing Loss Programs in Developing Countries**"**

V. Agreed Actions and Next Steps

1. Mr. Aber will complete the draft tables and circulate them.
2. Professor Al Masri, Professor Attias, and Mrs. Jebara will: review their data, modify it, as required, proof read it to ensure accounting accuracy, enter it into the tables, and email it to Mr. Aber no later than October 15, 2003. Mr. Aber will compile the data.
3. Professor Attias will analyse the early detection data from other Israeli regional centres in comparison with his data from Project 1 and provide a narrative report indicating that the Project 1 data already gathered was representative across regions.
4. Professor Al Masri, Professor Attias, and Mrs. Jebara will develop a questionnaire and undertake to

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interview "no shows" to determine causes for non compliance. Professor Al Masri will lead in developing the questionnaire. (He also will seek MEHA accreditation with JUST and the assignment of students to undertake the survey in Jordan.)

5. Professor Attias will provide a translation of the principal questions used in his patient questionnaire and documentation.

VI. Sub-Group of the MEHA Operating Committee

1. The group also met as a sub-group of the MEHA Operating Committee. The group proposed a new project to be undertaken by MEHA, following on from the success of Project 1. The concept for this new project, Project 3 would involve investigating:

"The correlation between existing behavioural tests and new neurophysiological equipment as applied to auditory processing disorders in young children"

"Class C" estimates for the project indicate its duration would be about two years and cost under US$200K. The Project would involve Israeli, Jordanian, and Palestinian researchers. The project would provide a suitable vehicle for PhD studies for Mrs. Jebara and, potentially, for MEHA Regional Centre staff also.

2. Follow up actions by the 15th of October included:

   a. Professor Attias will circulate a draft narrative summary for MEHA Project 3.
   b. Professor Al Masri will provide a draft cost summary analysis for MEHA Project 3 as developed at the meeting.
   c. Professor Pratt will organize a literature search on new neurophysiological equipment as relevent to auditory processing disorders.
   d. Mr. Aber will seek input and comments from the Canadian Operating Committee member, Ms. Josée Levasseur, on the proposal.
   e. The Operating Committee will present a proposal of Project 3 to the Steering Committee at its meeting in October seeking the Committee's approval in principle.

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MEHA Research Project 3 *:
Central Auditory Processing Disorder (CAPD)

Introduction

Central auditory processes are the auditory system mechanisms and processes responsible for the variety of behavioral phenomena including sound localization, lateralization, auditory pattern recognition, temporal aspects of audition including temporal resolution, temporal masking and auditory performance with degraded acoustic signals. A central auditory processing disorder (CAPD) is an observed deficiency in one or more of the above listed behaviors. For some patients the disorder stems from a specific impairment of the auditory pathway, for others the disorder stems from a general neural dysfunction. In its pure form, it is a deficit in the processing of auditory input associated with difficulties in listening, speech understanding, language development and learning.
It has been estimated that the prevalence of CAPD in children ranges between 2-3% (Ross 2000). In the aging population the incidence is much higher 17-90%.

CAPD can have a number of etiological bases including cerebromorphological abnormalities, delays in the neuromaturation development of central auditory processes as well as neurological involvement.

Usually individuals with CAPD are likely to have other comorbid conditions and thus it is critical that the clinical assessment will include professionals from different disciplines. The clinical picture is likely to differ with the site of lesion in the CNS including subtle auditory symptoms.

Common symptoms of the CAPD may include:

1. difficulties in hearing and understanding in noise
2. subjective Tinnitus;
3. auditory hallucination;
4. difficulty following complex auditory directions;
5. poor utilization of prosodic information;
6. auditory inattentiveness and high distractibility;
7. difficulty in localization sound source;
8. auditory memory deficits;
9. marked decrease in the appreciation of music.

Since the neural processing is complex, the deficits that accompany disorder are often subtle and may vary with the site of the lesion. Thus, if compromise of one level of the auditory system is suspected based upon case history information, then tests shown to be sensitive to lesions at that level of the system should be targeted for use.

With this respect electrophysiological tests are valuable techniques adjunct to the behavioral test for CAPD. Such tests are available allowing objective assessment of both the peripheral and the central auditory pathways. The most known electrophysiological test for the periphery is BERA (Auditory Brainstem Evoked

** This text represents the narrative section of the full proposal in a late stage of preparation. The full proposal, including the financial section is available through the CISEPO office in Toronto.*

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Response Audiometry), which provides information on the threshold of the hearing as well as neural conduction time along the brainstem pathways. However, in its standard form BERA lacks specificity for the impaired frequency. In addition, it provides information only up to the brainstem. A supplementary test that overcomes these two pitfalls is a new technique - SSEP. In this technique the threshold of each frequency is provided as well as information on cortical activity. Since a significant confounding variable in the assessment of CAPD is the presence of a peripheral hearing loss there is a great need to assess carefully both the severity of the hearing loss as well as its configuration. The presence of a peripheral impairment should not affect the assessment of auditory processing skills. Knowledge of the effects of peripheral loss on test performance along with careful selection of tests that are most resistant to cochlear confounds can result in a test battery that is interpretable.

The first MEHA project for early detection of hearing loss clearly showed that the incidence of hearing loss amongst Israeli and especially Jordanian and Palestinian infants is remarkably high. Beyond our desire to detect the hearing impaired infant as early as possible there is a great other need to detect infants with CAPD. In this respect, with very young children, only objective neural tests are relevant. Behavioral tests can be added at a later stage.

The first MEHA project clearly demonstrated the high prevalence of hearing loss amongst the Israeli-Arab, Jordanian and Palestinian children. This high incidence was strongly associated with the number and the configuration of the risk factors known to be linked with hearing loss. As a result the failed children will suffer not only from hearing loss but also from dysfunction of the central auditory pathways.

Thus, our primary aim on this MEHA Project 3, which follows the previous one, is to study the ways of early detection of patients suffering from CAPD. Early detection will necessarily result in better rehabilitation.

In order to study and compare the specificity and the sensitivity of some behavioral and electrophysiology tests on CAPD, in the first phase, the study will focus on school children suffering from CAPD enabling the assessment of the associations between behavioral and electrophysiology of CAPD.

Method

The study will consist of children from Israeli, Jordanian and the Palestinian communities suspected to have CAPD as well as normal controls matched for age, educational, socio-economical and hearing status.

The specific task in the initial phase of the study will be selection of the most promising behavioral and electrophysiological tests, and their correlations. Because many of the central auditory function tests are not yet standardized in Jordanian and Palestinians Arabic language, the initial step will be developing such material which will be similar to the test available in Hebrew so that the results will be comparable. The study will be conducted simultaneously on 100 Jordanian, Israeli and Palestinian children aged 7-10 years old who have been diagnosed as CAPD. All subjects will undergo standard behavioral auditory tests, followed by neurophysiological tests. The most important tests are listed below:

1. Comprehensive case history including IQ and development al evaluation.
2. Air and bone conduction auditory thresholds across .25 – 8 kHz including speech reception thresholds and discrimination tests.
3. Middle ear function and acoustic reflexes ipsi and contralaterally.
4. Otoacoustic emissions to clicks and pure tones (TEOAE and DPOAE) including contralateral suppression.
5. Sound localization and discrimination.
6. Speech in noise tests.
7. Low redundancy monaural speech.
8. Temporal aspects of audition.
9. Dichotic tests.
10. Loudness and frequency matching tests.

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11. Gap detection tests.
12. Efferent suppression effect by OAE.
13. ABR and SSEP.
14. Middle and late auditory potentials.
15. Standard language comprehension and articulation tests.

All the tests will be conducted in an audiological institute by certified audiologists in Haifa University Department of Communications Disorders and, as tests for central auditory function evolve, in the Jordan University of Science and Technology and in Al-Quds University.

By combining the behavioral with the neurophysiological tests we would like to select the most efficient test for the evaluation and the prognosis of children with CAPD. The most promising behavioral tests for central auditory function will be translated and validated in Arabic and the protocol for the second, main phase of the study will be finalized.

In the second phase of the project, the selected behavioral and electrophysiological tests will be applied to a wider population in the field, in urban and rural regions of Israel, Jordan and the Palestinian Authority. Special emphasis will be placed on following the populations already screened in MEHA Project 1, in order to detect additional misses from the screening protocols of that project which did not address central impairments.

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NEONATAL AND EARLY DETECTION OF HEARING LOSS AND HABILITATION PROJECT 4 *

Joint proposal for Middle East Hearing Association (MEHA), Ministry of Health (MoH), Royal Medical Services (RMS), and Holy Land Institute for the Deaf (HLID),

Introduction:

Hearing impairments that go undetected by the age of 3 years result in irreversible deficits in speech and language performance, in addition to the loss to the individual and the family, the impact on society in terms of higher special education costs and underemployment. The average age of hearing deficit detection in many regions of the Middle East is about 4 years (Al-Masri, 2000), twice that of Western Europe and the United States. The differences are mainly the result of availability of community services, modern diagnostic procedures and trained personnel. In the Middle East, these factors combine with a higher incidence of hearing impairments due to genetic factors to augment the magnitude and severity of the problem. For the same reason, it is also expected that the incidence of progressive and acquired hearing loss among pre-school and school-age children are remarkably greater than that of developed countries. Some studies at private schools in Jordan, using pure tone audiometry and tympanometry, show that more than 30% of children in Kindergarten and first grade suffer from mild to moderate fluctuating conductive hearing loss. About 2% of them have mild to moderate sensorineural hearing loss. This study clearly illustrates the pressing need for implementing a Universal Hearing Screening Program for neonates, pre-school and school age children.

Not even the youngest detection ages in the Middle East are early enough according to a 1990 US Department of Health and Human Services report (Healthy People 2000), which states that the target for the year 2000 should be detection and beginning of habilitation by the age of 1 year. These recommendations have been updated, based on the results of large scale surveys in the US (Christie Yoshinaga Itano 1998) showing that the single best predictor for language appears to be age of identification of hearing loss and that 6 months is the age at which delays become evident if loss is not identified earlier.

The US goal was therefore set at hearing loss detection by 3 months and habilitation by 6 months. In the United States, where a universal-screening program has been mandated Hawaii and Rhode Island have already met this goal. Jordan is extremely far from meeting this need for early detection. The reasons for this shortcoming are mainly the absence or limitations of community services, modern diagnostic procedures and trained personnel. However, the expertise and core infrastructure to approach this goal are present in the region, and with some help, these resources could reach the communities that need them, to bring them to a reasonably early detection of hearing deficits and habilitation.

Both the US National Institutes of Health policy statement and the European Community task force on Universal Hearing Screening concluded that the most effective methods to screen for hearing impairments are Otoacoustic Emissions (OAEs) or Auditory Brainstem Evoked Potentials (ABEPs).

** This text represents the narrative section of the full proposal in a late stage of preparation. The full proposal, including the financial section is available through the CISEPO office in Toronto.*

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Based on the experience from the Ontario wide newborn hearing screening program in Canada, in April 2001, the Isabel Silverman Canada International Scientific Exchange Program (CISEPO), a Canadian based charitable organization initiated through MEHA the Early Detection of Hearing Loss in Infants program to identify Israeli, Jordanian and Palestinian children with hearing loss at birth.

In May 1998, CISEPO brokered the formation of MEHA as an organization comprising senior representatives of Israeli, Jordanian, and Palestinian medical and academic establishments along with audiologists, educators, therapists and support personnel.

As its lead program, CISEPO supports and advances MEHA which is the first and only Arab-Israeli cross border professional association devoted to advancing the needs of the deaf and hard of hearing in the region. The Association has operated continuously and effectively since its formation. Its activities focus on medical and habilitative/rehabilitative services and scientific exchange programs in the region related to hearing loss (all of which contribute to peace building). His Royal Highness, Prince Firas of Jordan, is the Patron for MEHA and supports and facilitates its work.

MEHA Guiding Principles:

1. Early identification and diagnosis of hearing loss is important.

The proposed newborn screening program will consists of the following stages:

Stage 1: Infant Hearing Screening (part of MEHA Project 1)
Stage 2: Identification of Children with a hearing impairment
Stage 3: Training programs and seminars on hearing interventions for families
Stage 4: Families are given non-bias information about the different communication and educational options to encourage informed choice around choosing the most appropriate treatment options
Stage 5: Habilitation for initial 6 months (MEHA Project 1)
Stage 6: Habilitation for an extra 18 months (proposed Project 2)

The results of the first MEHA project, which this study proposes to continue was conducted on 7000 neonates at 28 different locations in Jordan. It showed that the OAE screening followed by ABR is very sensitive and evidently a reliable procedure for early detection of hearing loss before the age of 2-3 months. It also illustrated that about 0.9% of newborns in Jordan have some significant sensorineural hearing loss. The comparison between the incidences of hearing impaired infants identified from the included sample is about 5 times more than that in developed countries. This study illustrates the urgent need for adopting a neonatal hearing screening program in Jordan. Consequently, the Royal Medical Services in Jordan recently adopted a policy of screening all newborns at the RMS hospitals.

The Jordanian projects on detection and habilitation of hearing impairments are currently supported by a grant from the Canada International Development Agency (CIDA) and CISEPO.

This proposed project focuses on children and their families in the unprivileged governed areas in Jordan thus providing further information on the contribution of socio-economic factors, as well as genetic factors to the high prevalence of hearing loss in Jordan. Furthermore, the study will include close interactions for genetic analysis, database comparisons and standardization of screening and habilitation methodologies among all members of MEHA, already proven during Project 1. Thus it will further cross border collaboration, building bridges of cooperation and understanding in the region. In addition this project will provide a necessary regional database for future studies in hearing impairment and especially for rehabilitation.

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The main purposes of the Project are to:

- Identify the incidence and prevalence of congenital and early onset sensorineural hearing loss in Jordan in comparison with the data for Israel, and Palestinian Authority
- provide habilitation for the infants who are identified as hearing impaired
- Capacity building programs for audiology professionals and institutions in habilitation;
- Policy dialogue with the national government for planning and financing a comprehensive and ongoing early detection and habilitation program for infants;
- Extending the cooperative relationships among Israelis, Jordanians, and Palestinians established and maintained through MEHA Project 1.
- Promoting and Enhancing peace building in the region

Expected Project Outcomes

- More that 130000 neonates will be screened at 20 different locations distributed over unprivileged areas in Jordan
- A comprehensive, early detection and habilitation program will be available for Jordanian children.
- Based on this comprehensive model a universal early detection and habilitation service program will be available under the national health care programs for the Jordanian population.
- A network of professionals involved in hearing health habilitation will be established.
- The lessons learned from MEHA Project 1 and Project 2 will be used to encourage successful expansion of the program to other Middle Eastern countries.
- Direct comparison between the incidence of hearing loss between populations in the region, leading to emphasis the need for genetic studies and genetic counseling.
- The endemic findings of this project, already strongly indicated in Project 1, will guide the international community in establishing appropriate screening programs in regions with different constraints than the western countries where screening was first initiated.

Targeted Population

This study will be a joint project of MEHA with the Holy Land Institute for the Deaf, and will expand the sample of Project 1 and establish a screening program at 20 different locations distributed among the unprivileged governed areas in Jordan. These are:

1- Maan, MCC and Hospital
2- Wadi mousa
3- Karak, MCC and Hospital
4- Tafeleh, MCC and Hospital
5- Zarka, MOH hospital and RMS Hospital
6- Amman, Al Baser MOH hospital
7- Amman Jordan University Hospital
8- Amman Alhashemi
9- Amman, ANARW
10- Madaba, MOH MCC and Hospital
11- Jarash, MOH MCC and Hospital
12- Ajlun MOH MCC and Hospital
13- Irbid, MOH and RMS MCC and Hospital
14- Mafrak, MOH MCC and Hospital
15- Salt Hospital and HEAR
16- Shouneh, MOH MCC and Hospital
17- Der Allah Hospital

Methodology

Screening

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Evoked OAEs are low level signals that can be objectively and speedily detected by a miniature microphone placed in the external ear canal. The OAEs are by-products of normal auditory processes within the cochlea originating in the outer hair cell system. Of the OAEs, Transient Evoked OAEs (TEOAEs) and Distortion Product OAEs (DPOAEs) were the most studied. TEOAEs are evoked by short and brief clicks or tone bursts and the DPOAEs by the simultaneous presentation of two pure tones that differ slightly in frequency. Both provide frequency-specific information about the hearing status, are generated by the cochlear mechanism and both have been widely used to address a variety of clinical issues including neonatal hearing screening (White et al. 1993), detection of auditory Neuropathy and central processing disorders (Al-Masri 1998),detection of noise induced hearing loss in adults (Attias et al. 1996), and ototoxic monitoring (Hotz et al. 1994).

It has been clearly shown that the presence of TEOAEs, irrespective of the frequency, necessarily indicates normal hearing at that frequency. Using 55 and 65 dBHL stimulus levels, DPOAEs can also differentiate between normal and impaired ears (Gorga et al. 1997). Both types are sensitive to mid-high frequency (as compare to low frequencies), are quick, objective and relatively low cost.

Several studies using these systems carried out on babies suffering from a variety of degrees of hearing loss showed that ABR thresholds of greater than 20 dBHL were always associated with refer criteria in the OAEs in the 1 to 4 kHz range. This range, and especially in the extended high frequencies, often enabled detection of emissions even in the presence of type B or C tympanograms. At low frequencies (up to 2 KHz), the sensitivity of the test is affected by external noise. The test lasts less than 1 minute per ear. The system is flexible, battery operated.

Screening and follow up protocol

The neonates will be screened at the age of less than 24 hrs at hospitals and at the age of 2 months (with first vaccination) at Mother Child Clinics. The screening will be conducted by MEHA and HLID screening teams using Otoacoustic Emission followed by ABR.

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Economic Evaluation of the Early Detection of Hearing Loss and Intervention Programs

Background

Undetected hearing loss in early childhood can significantly compromise the development of speech, language and literacy, all of which affect later academic performance and psycho-social skills.

Recent research has suggested that Early Detection of Hearing Loss and Intervention (EDHI) programs may lead to both improved functional status for children with a hearing impairment and savings in the provision of educational and remedial services once the child reaches school age.

Proposal

Evidence is necessary on the effectiveness and potential cost savings associated with EDHI programs to inform practice and health policy decision-making. Research would be carried out at the Masters, Doctoral, or post-Doctoral levels and would be completed in collaboration with the the Middle East Association for Managing Hearing Loss (MEHA)'s Project 1. Project 1, The Early Detection of Hearing Loss in Infants, is a cooperative study among Jordanians, Israelis, and Palestinians. During the project, 12,000 infants in Israel, Jordan and the Palestinian Authority will be tested and treated for hearing loss. The results from these tests will be directed to develop new protocols for universal newborn hearing screening program, which will guide the decision makers in the region to achieve early identification of hearing loss.

The objective of this research project would be to develop a framework for the economic evaluation of EDHI programs in the Region, which would include costs associated with case finding and rehabilitation, and specific outcomes in the areas of communication, social development and academic placement. Evidence generated will help to assess the value of national EDHI programs.

CISEPO proposes a joint research program be developed involving researchers from Israeli, Jordanian, and Palestinian universities.

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The Canadian Hearing Society: A non-governmental agency serving people who are deaf, deafened or hard of hearing

Beverly Biderman, Past Chair, Canadian Hearing Society <bev.biderman@utoronto.ca>
Penny Parnes, Vice-President, Canadian Hearing Society <pparnes@chs.ca>

The Canadian Hearing Society (CHS) is Canada's largest non-profit agency serving the needs of the deaf, deafened and hard of hearing. It is unusual because unlike most agencies serving those who are deaf or have a hearing loss, the CHS serves the whole continuum of the community from those with a mild hearing loss, to those with profound losses who use sign language as their main mode of communication.

The agency was founded in 1940, and since then it has grown to encompass a budget of over 25 million dollars a year, 350 staff, over 450 volunteers, and 28 offices across the country's most populated province, Ontario. Its head office is in Toronto.

The direct services provided include:

- American Sign Language (ASL) interpreter services, classes, and teacher training
- Audiology and speech language pathology, tinnitus therapy, fitting and sales of hearing aids and technical devices
- Educational and employment support services and general counselling
- Hearing Help Classes and home support services to seniors with hearing loss
- Language and life skills training
- Mental Health Counselling

While the agency offices are entirely within the province of Ontario, and direct services are provided only within Ontario, the influence of the organization extends nationally and even internationally. On a national basis, the agency supports consumer groups across the country in advocacy issues, provides education to the public in deafness and hearing loss, and maintains a mail order service for assistive devices and educational materials. There is also an extensive and excellent website at www.chs.ca, and the Marketing Communications department produces brochures, publicity materials and a quarterly magazine, "Vibes."

The budget is funded by a variety of sources including: government contracts and grants, fees for services, charitable contributions and fundraising. :

The CHS has struggled with the need to represent all members of the community of those deaf, deafened and hard of hearing in spite of their sometimes differing needs (e.g. the hard of hearing want hearing aid services, the deaf want sign language interpreter services). It has also struggled with the financial reality that the more it does, the higher the expectations, and the greater the financial need. One new and interesting initiative has been as the implementing agency for the Healthy Hearing Program of the Special Olympics. This program focuses on hearing screening of

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athletes who are intellectually challenged. Preliminary results indicate that at least 30% of this group has some form of hearing loss.

The organization has had great success in speaking for a group that is often little heard in mainstream society, and has been successful not only in enhancing the independence of deaf, deafened and hard of hearing individuals and their families, but has also enriched Canadian society through many victories in advocacy battles. Successes include the requirement for hearing aid accessible public telephones, the provision of interpretation services in courts, schools and elsewhere, increasing public awareness of the dangers of high levels of noise … the list goes on and on.

For further information, you are invited to contact the authors as listed above.

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CISEPO/CIHR Middle East Mission
September 28 – October 12, 2003

PARTICIPANTS

Dr. Harvey Skinner, Professor and Chair, Public Health Sciences, University of Toronto, and CISEPO Director of Research

Russell Bader, Peter A. Silverman Research Scholar, Centre for International Health, Mount. Sinai Hospital, Toronto

OBJECTIVES

1. Further the regional involvement of key researchers and the planning of cross-border research projects under three themes specified in CIHR program development grant (summary attached):
    a. Screening infants for hearing impairment and offering habilitation services, under the auspices of the Middle East Association for Hearing Loss (MEHA),
    b. Improving the health of women and children (e.g. nutrition),
    c. Engaging youth in health promotion (e.g. smoking prevention) using information technologies, in partnership with the TeenNet Project and Global Youth Voices.

2. Finalize details of the three proposals that will be submitted on Oct 15, 2003 to the CIHR one-year pilot project grant competition;
    a. C. Chalin (PI): Habilitation of infants with hearing loss
    b. P. Williams (PI): Health services and factors influencing infant screening for hearing loss,
    c. H. Skinner (PI): Arabic/Farsi/Hebrew adaptation of youth smoking prevention website,

3. Consult with colleagues and further the planning of the *Middle East International Health Research Conference* to be held in the region in the winter of 2004,

4. Give invited research presentations at academic institutions:

    a. Israel - Israel Center for Disease Control,
    b. Palestinian Territories - Al-Quds University,
    c. Jordan - Royal Medical Services second annual conference.

ITINERARY AND SUMMARY REPORT

I. Israel

Sep 28 Arrive in **Tel Aviv** from Toronto, go to **Beer Sheva** (Paradise hotel)

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Sep 29 **Ben-Gurion University, Beer Sheva.**

Meetings with:

1) Departement of Education: **Prof. Shifra Sagy**, **Iris Tabak** and **Ismael Abu-Saad** (Bedouin). **Prof. Sagy** is interesting in collaborating in a school based study of the Hebrew adaptation of the Smoking Zine Website. She put us in contact with a Palestinian colleague, **Prof. Samy Adwan** at Bethlehem University.

Action step: contact him about collaborating in a project using a Palestinian high school.

Prof. Abu-Saad is interested in collaborative study with Bedouin youth in the Negev. He heads a Bedouin center for encouraging youth to attend Ben-Gurion University.

2) Faculty of Medicine: **Dr. Michael Karplus**, **Dr. Rivka Carmi** (dean) and **Dr. Gabriel Gurman**. We talked with **Dr. Karplus** about studies in the Bedouin communities and he arranged for us to meet **Kher Albaz** (Director of Social Services for Bedouin – Unrecognized Towns). We also talked with **Dr. Carmi** and colleagues and about CISEPO in the up-coming MEHA Steering Committee Meeting 5 in Aqaba, Jordan. They expressed their continued support and interest in CISEPO.

Sep 30 **Beer-Sheva.**

Meeting with:

1) **Michael Karplus** and **Kher Albaz** (Director of Social Services for Bedouin – Unrecognized Towns). We talked to them about studies involving Bedouin youth in the Negev. **Mr. Albaz** was quite keen in collaborating with us and in particular, we identified a town, Segev Shalom, which is one of the 14 recognized Bedouin towns in the Negev. The high school of this town has 5,500 students from the region even though the town has only 5,000 residents. Plans were made to visit this school on our next mission, likely early in 2004, to establish relationship and talk about collaborative research. In addition, **Mr. Albaz** put us in contact with **Prof. Richard Isralowitz** at BGU. We talked with him by phone and he told us about his research on drug abuse among Bedouin youth, as well as cross-border research involving Israeli, Palestinian and Egyptian youth. He expressed an interesting collaborating with us on youth smoking prevention research in the Bedouin community.

Action step: will follow up with him by email and share research papers.

Oct 1 **Tel Aviv**

Planned presentation at **Al Quds University** and meeting with **Ziad Abdeen** (dean research) and faculty/students had to be cancelled.

Action step: Talked with **Dr. Abdeen** rescheduling this visit for early in 2004.

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Oct 2 **Haifa/Tel Aviv**

Meetings with:

1) **Dr. Shai Linn** (Director of School of Public Health) and **Dr. Shumuel Reis** (Director of Medical Education) – Techinion University, Haifa. We discussed details about cultural adaptations of the Smoking Zine web site into Hebrew, Arabic and Farsi. They were very keen about this collaboration and offered to provide office space and some technical support. Also they saw this as a good opportunity to involve medical/graduate students in collaborative projects. It looks like Haifa will be an excellent base for conducting the technical and cultural adaptation of our eHealth websites.

Action step: will get back to them with a detailed plan for their involvement in adpating the Smoking Zine website.

2) Met briefly with **Hillel Pratt** about the upcoming MEHA steering committee 5 meeting in Aqaba, Jordan.

3) **Dr. Dov Lichtenberg** (dean), Tel Aviv University. We discussed CISEPO projects and the upcoming MEHA steering committee 5 meeting in Aqaba, Jordan. **Dov** encouraged our meeting with **Manfred Green** about the proposed new school of public health and CISEPO activities. We also met with **Dr. Yoseph Mekori** (Head, Department of Medicine and Vice Dean Research, Faculty of Medicine). He has previously had collaborative meetings with Israeli and Palestinian researchers in the area of immunology. He expressed a strong interest in the work of CISEPO and was keen in attending the upcoming steering committee 5 meeting in Aqaba, Jordan.

Action step: introduced **Dr. Mekori** to **Arnie Noyek** and facilitated his invitation to the Aqaba meeting.

Oct 3 **Tel Aviv**

Meetings with:

1) **Dr Manfred Green** (director), Israel Center for Disease Control, Tel Aviv. We discussed the role of the ICDC and potential areas for collaboration in public health, such as, chronic disease prevention, infection disease control (e.g. SARS) and health services research. **Dr. Green** provided us with an overview of tobacco control and prevention in Israel and he also introduced us to **Dr. Orna Baron-Epel** who works at the ICDC and who also is a professor in the new school of public health at Haifa University. Her focus is health promotion, including smoking prevention. We arranged to meet with her on October 5.

2) **Dr. Yehuda Roth** (CISEPO director in Israel). We discussed the upcoming MEHA steering committee 5 meeting in Aqaba and how we could use the organization of this meeting as a model for a research meeting in March of 2004 at Aqaba-an outcome from the initial CIHR/CISEPO investigators meeting last June at Beer-Sheeva. We also discussed opportunities for eHealth technology research and video conferencing for research collaboration. We also talked about a proposed collaborative study on Congenital General Anosmia, linked genetic researchers at the Weizmann Institute of Science in Rehovot, Israel. There is a

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need to identify families in several countries to have a large enough sample for this project.

Action step: talk with **Ziad Elnasser** about a collaborator/institution in Jordan to get involved in this project.

Oct 4 Tuba/Tel Aviv

Meetings with:

Dr. Alan Apter (Schneider Children's Hospital), **Mohammad Alhaib** (Head Master of Tuba High School and Head of Education for Bedouins in Israel) and **Dr. Ilana Farbstein** (Child psychiatrist in the Lower Galilee). We met at and toured the Tuba high school which serves Bedouin youth in this community. The school has two excellent computer labs (at least 40 computers) but no internet connectivity due to budget cuts. They need approximately $5,000 US for internet service. However, they have all the technical requirements to use the internet. We gave an overview of two proposed research areas:

i. Arab/Hebrew adaptation of the Smoking Zine website.
ii. Global Youth Voices, a model for engaging youth in community health promotion.

A particular interest was shown in conducting a pilot study early in 2004 using the Global Youth Voices model for identifying significant issues in the community. This would include tobacco use and mental health (self-harm). Mohammed is very interested in linking this pilot study with Bedouin youth in the Negev and in Jordan. He suggested that we conducted Queen Noor Secondary School in Amman Jordan as a possible collaborator.

Action step: provide a detailed plan for the Global Youth Voices pilot project for implementation for 2004.

Note: Look on the web for information and websites/resources regarding self-harm/suicide prevention for youth (e.g. The Reach Out Website in Australia).

Oct 5 Tel Aviv

Meetings with:

1) **Dr. Orna Baron-Epel**, School of Public Health and department of Nursing, Haifa University. She leads the Health Promotion program in their new School of Public Health and has extensive experience in community health promotion with Arab-Israeli populations. Also, at ICDC she has produced population health status reports for Israel, and conducted several studies of smoking rates in the general population, youth and in the IDF (military). Orna is very interested in collaborating on the youth theme of the CIHR grant , and has access to involving public health graduate students in collaborative projects.

2) **Sami Hamdan.** He is a graduate student working with Alan Apter on a study of genetics of self-harm with Bedouin families in Tuba, Northern Israel. Sami is interested in working with CISEPO on a pilot project with Bedouin youth at Tuba.

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He is an Arab-Israeli, speaks Arabic and would be a great asset for conducting the pilot study since he already knows the Tuba community.

Oct 6 In **Tel Aviv**, Yom Kipper

II. Jordan

Oct 7 Fly to **Amman, Jordan**

Oct 7-10 Amman

Attended the **2nd Research Conference of the Royal Medical Service (RMS)**.

Oct 7 Amman

Attended the opening ceremonies of the RMS conference.

Met with **Dr. Manaf Hijazi**, Major General of the RMS, and colleagues about collaborative research.

Oct 8 Amman

Keynote Presentations:
a) *Smoking Prevention: A Global Health Challenge for the 21st Century*
b) *SARS: Understanding Public and Institutional Responses*

Met with **Dr. Malek Dabbas**, Head of Epidemiology and Community Medicine in the RMS. He expressed keen interest in research collaboration on a variety of topics including smoking prevention in the RMS.

Oct 9 Amman, Dead Sea

Met with RMS colleagues and attended Gala dinner at the Dead Sea.
Met **Dr. Osama Bishtawi**, Chair of Surgery at Nablus Hospital. He expressed interest in collaboration involving the Palestinian medical community.

Belal Azab provided transportation support while in Jordan. He has recently graduated from JUST with a degree in Genetics and is interested in graduate work in North America. He could play a useful role in implementing some aspects of CIHR/CISEPO research in Jordan in 2004.

Oct 10 Amman

Met with **Dr. ElNasser** (JUST and CISEPO), his Bedouin brother-in-law, **Dr. Salim Khraisha**, **Dr. Mohammed Azab** (Jordan University of Science and Technology - JUST) and **Dr. Mohammad Al-Masri** (JUST and CISEPO) regarding research with disadvantaged populations and communities. **Dr. Khraisha**

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emphasized that the Bedouin population are becoming well integrated into Jordanian society, although they still value maintaining their cultural identity. One aim is to identify a Jordanian Bedouin community regarding a youth project potentially linked with Tuba (Northern Israel) using Internet and TeenNet's Global Youth Voices model.

Dr. Ziad ElNasser offered to provide space and infrastructure support at JUST.

Oct 11 Ajlun/Amman

*Went to Ajlun for a community lunch (over 30 attending) in honour of **Dr. Wajih Owais**, the new president of JUST. This lunch hosted by **Dr. Ahmed Annab**, professor of dermatology, JUST and Member of Parliament. Talked with **Dr. Owais** about CISEPO research and his interest in exploring a formal relationship between JUST and U of T. Action step: will discuss a JUST/U of T agreement with President **Robert Birgeneau** and Vice President (research/international) **John Challis**.*

Oct 12 Irbid/Amman

Keynote Presentation at Princess Basama Hospital (JUST teaching hospital) in Irbid:

Smoking Prevention: A Global Health Challenge for the 21st Century

*Fly home to **Toronto** from **Amman** via **Tel Aviv**, arrive 6am **Oct 13***

Next Steps:

1. Complete action steps described above.

2. Prepare a work-plan and budget for research to be conducted in the Middle East from January to June, 2004. This will involve three key elements:

i) Youth engagement in community health issues using the Global Youth Voices Model. This initial study will focus on disadvantaged populations.

ii) Arab/Farsi/Hebrew adaptation of the Smoking Zine website for youth smoking cessation and prevention. We will likely base this work out of the School of Public Health at the University of Haifa and the Technion University.

iii) Conduct a detailed review of smoking status and tobacco control components of the WHO framework in Israel, Jordan and Palestinian Territories.

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CISEPO/MEHA POSITION ON E-HEALTH / TELEHEALTH: A VISION FOR THE FUTURE

Patterson, T, Baycrest Centre for Geriatric Care, Canada. Perez, G, Stanford University, United States. Spero, L, University of Toronto, Canada. Roth, Y, Tel Aviv University, Israel. Al-Masri, M, Jordan University of Science and Technology, Jordan.

The purpose of this abstract is to summarize and emphasize CISEPO's vision of a role for telehealth in its knowledge exchange [educational, research and service] projects internationally and in the region, and to confirm CISEPO's intent to move toward further integration of information communication technology [ICT] into the infrastructure of CISEPO/MEHA programming and other CISEPO groupings and integrated programs.

Introduction: Historically, CISEPO AND MEHA have concentrated on academic research and education utilizing efforts to bring together Israeli, Jordanian and Palestinian individuals and institutions with a common cause of addressing the international public health issue of infants and children primarily with hereditary deafness in the Middle East. The efforts have been realized for the most part in face to face meetings/symposiums and facilitation of services within the Middle East. There have been 'one of' telehealth educational sessions in a variety of therapeutic areas that have provided the evidence for CISEPO and MEHA to explore the benefits of e-Health / telehealth designated sites in the Middle East to further the ongoing communication. Telehealth can assist in linking health professionals in distant locations, creating an environment of constant communication that can become a universal positive language for building bridges of cooperation and understanding. Additionally with a telehealth infrastructure in place CISEPO will be able to significantly increase the participation and contribution of the global community to the various telehealth initiatives it plans to embark on. Our long term vision is that the telehealth CISEPO platform and services will be leveraged and viewed as model to copy throughout the Middle East and around the world.

Description: Information and Communications Technology (ICT) is a tool for addressing the issues of professional isolation through the delivery of needs-based Continuing Medical Education / continuing Health Education (CME/CHE). This vision emphasizes the importance of best practice in the delivery of CME/CHE as it relates to telehealth in the international arena, connectivity opportunities, software and hardware advances, and the influence the provision of content can have on governments' policies and programs. Various successful international examples are recognized.

This vision draws on Canadian and American expertise, the Middle East experience of CISEPO and the allied experiences of a national satellite network and ISDN/IP/Internet telehealth distribution working with the 16 Canadian Medical Schools, The Royal College of Physicians and Surgeons of Canada, The College of Family Physicians of Canada and other Canadian regulatory bodies, International, Federal and Provincial/State governments and the various Ministries, World Health Organization, and the International Telecommunication Union.

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SUNSIH*-CISEPO International Child Health Elective

A Program designed for the Middle East Mother and Child Health Association (MEMCHA), CISEPO

Introduction

The SUNSIH-CISEPO International Health Elective is a multidisciplinary health elective involving collaboration of students and faculty from Canada and the Middle East. This elective program aims to educate participating students on health issues affecting children around the world. Each year, a program subtheme will focus on a particular health issue according to the following principles:

- The subtheme reflects a health issue that affects people all over the world and is a particular medical problem in the participating nations.
- It should be possible to move the site of the project between Canada and the Middle East without changing the subtheme.
- The subtheme for the project is focused, such that sufficient depth of study is possible.
- The subtheme leads to a multi-disciplinary approach, so that students understand the determinants of health, the medical and psychosocial aspects relating to the health theme, and the different roles of the health care team members (i.e. physicians, nurses, physical therapists, occupational therapists, social workers, spiritual counselors, family members)
- The subtheme augments medical and applied health sciences curricula at participating universities and is of interest for students.
- The subtheme addresses community concerns and involves community participation.
- Student selection is based on their academic interest in the SUNSIH-CISEPO International Child Health subtheme and their willingness to work collaboratively with students from other cultures.

International Child Health Elective 2003: A Focus on Paediatric Oncology

In June 2003, SUNSIH and CISEPO launched the first annual "International Child Health Elective" program in collaboration with the vision for a Middle East Mother and Child Health Association. This initial program was Toronto-based and involved the collaboration of 2 Palestinian, 2 Israeli and 2 Canadian medical students. The students participated in a non-credit academic elective that explored the field of paediatric oncology through multidisciplinary seminars, interactive workshops, on-site clinical tours, literature research projects, and community service. This program was developed and implemented by student coordinators, with faculty support by CISEPO and the University of Toronto.

Important outcomes of this initial program include: the participating students improved their understanding of child health issues and the field of paediatric oncology, created strong personal and professional relationships with each other, and provided a service to a community charity. This experience will thus benefit the students and their future patients as the students will incorporate their new knowledge about childhood cancer into their future medical practice.

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Furthermore, the students have expressed an interest in maintaining their team relationships and their connection to the project once they return home.

International Child Health Elective 2004: A Focus on Congenital Hearing Loss

The proposed focus of the 2004 SUNSIH-CISEPO International Child Health Elective is hearing loss. Hearing Loss is a significant problem in region. Thus, the 2004 SUNSIH-CISEPO program aims to educate students in the medical and psychosocial issues of hearing loss, including the cultural context, public health interventions, health services, and community supports.

2004 program will be open to Canadian, Israeli, Palestinian and Jordanian health students. Professionals from all health sectors who care for children affected by hearing loss will be invited to participate in order to ensure a multi-disciplinary approach. Furthermore, families affected by hearing loss will be invited to share their insight with participating students. The network professionals connected by the Middle East Hearing Loss Association (MEHA) will be directly involved in curriculum development.

Further information about 2004 program will be available in November 2003.

For more information, please contact

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Footnote.

SUNSIH The Student University Network for Social and International Health

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Interest Group Report

Otolaryngology

Participants

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Cochlear implant

Prof Kronenberg can assist the Jordanian CI project by the following steps:
* Obtaining 2 devices free of charge (to be coordinated with local Jordanian distributors)
* A two-week intensive preparatory advanced training in Sheba Medical Center for 1 surgeon and 2 audiologists. The surgeon will be working with Prof Kronenberg in the temporal bone laboratory to cover all practical tips and hints, and will be acquainted with the program details (screening, administration, instrumentation, operating room setup). At the end of this period a Jordanian patient will be operated jointly (followed by a 3 days hospitalization, rehab after a month in Jordan). A second procedure will follow, this time in Jordan, with Prof Kronenberg as a guest.
* Any other form of assistance as required

As it appears that more than one CI project is currently developed in Jordan, it was emphasized that the Israeli cooperation is pledged for anyone. On the Israeli part, all the centers involved with CI will be available for any form of cooperation.

Exchange visits

An initial and most important step would be mutual visits that will enable Jordanians, Israelis and hopefully Palestinain surgeons to be acquainted with each other's departments, operating rooms, clinics, capabilities and everyday work, as well as research interests. This interaction will include a small seminar with comparative discussions of procedures, treatment policies and modalities, as well as medical education and research.

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Temporal bone dissection course

This was considered as a most needed educational venture. While dissection positions and equipment exist in both countries, there is a shortage in actual bones to practice on. For a course involving 6 physicians (3+3) a minimum of 2 bones per trainee is required. It was agreed that a request for a 12 bones donation will be put in front of some people who routinely organize such courses over the world, such as Prof. Sultan from France. Other potential sources in Europe, USA, Russia and India will be approached.

Research

In Jordan, clinical research is conducted mainly by the university-affiliated surgeons, and relationships with them need to be further developed. Some of the topics raised were the epidemiologic features of nasopharyngeal carcinoma, the management protocols for advanced laryngeal carcinoma, post-laryngectomy TEP use, otoplasty techniques, facial reanimation, congenital (familial) anosmia.
Joint RFP submissions may be attempted.

Education

Exchange of educational materials was discussed, in the form of video films, CD's and slides. The formation of a regional pool of educational material was discussed.
Joint seminars, journal clubs and courses were discussed, and the use of videoconferencing was encouraged. A first videoconference session will be organized following the completion of the technical arrangements in Jordan.
Patient education materials were discussed as well, and it appears that currently these are not greatly needed.

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Interest Group Report

Genetics of Hearing Loss

Needs:
Establishing diagnostic test for connexin 26 in Jordan for the deaf population
Identification of additional deafness genes in Jordanian population.
Training in cytogenetics for Jordan.

Steps:
Diagnostic test for connexin 26 in the Jordanian deaf population. Should be linked to babies that fail newborn testing? Diagnostic test already established in the Israeli and Palestinian populations.
Identify large deaf families in Jordan in which connexin 26 is excluded. Ideally, connexin 26 is excluded in Jordan.
DNA transferred to Bethlehem for exclusion of other genes found in Arab population.
DNA transferred to Tel Aviv for genome scan to identify new genes.
Cytogenetics in Jordan. Connect to training program in Toronto and/or Sheba (Tel Aviv)

Gender sensitive:
Yes.

Environmentally friendly: all environmentally safe guidelines of the Universities are adhered to.

Additional ethical guidelines: Helsinki ethical approval
Internal Ethical review Board in each University. Headed by Faculty of Medicine. Code from IRB-NIH present in Jordan, Bethlehem and Tel AViv.

Academic/scholarly underpinning: Training of Jordanian and Palestinian graduate students to obtain MSc degree at Tel Aviv University, with research project in collaboration with Jordanian and Palestinian scientists.

Training opportunities: Training for graduate and medical students in genetics, both at Tel Aviv and Bethlehem.

Population health approach: screening of connexin 26 and other deafness genes in the deaf population.
Importance of determining connexin 26 status: allows prediction of type of hearing loss (no other abnormalities, stable, suitable for cochlear implantation).

Practical and realistic applications:
1. Find Jordanian who will prioritize collection of families.
2. Raid Battah (Jordan University of Science and Technology, Irbid) – plans to train at Bethlehem for ~2 months.

3. Proposal: Request seed money funding for JUST – ascertainment of families, extraction of DNA, connexin 26 screening.
Request seed money for Bethlehem University – screening of deafness genes in Arab population other than connexin 26.
Once these results are in hand, grant may be written by 3 partners (Palestinian, Jordanian, Israeli) to identify new genes in large families.

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Attended breakout group:

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Interest Group Report

Curriculum Development and Medical Education

Members of the Group:

Professor Dov Lichtenberg	physidov@post.tau.ac.il
Professor Yoseph Mekori	Vice Dean, Research, Tel Aviv University
Professor Hani Abdeen	habdeen@med.alquds.edu
Dr Khalaf Omani	KHMC, RMS, Education
Dr Amar Mubaidin	KHMC, RMS, Training
Professor Zaid El Nasser	znasser@just.edu.jo

The group which gathered represented Israeli, Jordanian and Palestinian Medical and Public Health Faculties. The discussion ranged widely but focused mainly on four areas:

1. The establishment of connections and partnerships between the medical institutions of the region to share and support medical research, curricula and clinical expertise. Face to face meetings such as this (SC%) occasion were useful for this purpose.

2. The strength and needs of the institutions represented were discussed. Medical/health education and faculty development needs especially at Al-Quds University and Jordan University of Science and Technology were discussed.

3. Difficulties with accessibility and exchange for both staff and students due to the current security situation were discussed.

4. The possibility and opportunities of a variety of learning systems and technologies were discussed, including the possibility and usefulness of the development of a tele-health infrastructure accessible for all institutions.

The hope was expressed that relationships would continue and grow as opportunities arose.

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Interest Group Report

Audiology and Habilitation

Participants:

Hillel Pratt	Falma Hertzono	Amani Jamal
Sabah Nabulsi	Samah Dkiedeck	Iman Ghoshek
Khalid A.Hadi	Joseph Attias	Mohammad Al-Masri
Josée Levasseur	Lina Abukhader	Rema Jebara
Dania Rishek	Rola Farah	Kholook Kaabneh
Khader J. Abdul-Baqi	Helen E. Jones	Brother Andrew de Carpentier

Areas of Discussion

1. Diagnostics

Need for standardized tests, norms and milestones in Arabic and Hebrew in the following areas of practice

- Audition (Central Auditory Processing, Speech Perception)
- Spondee words Arabic
- Phonetically Balanced sentences
- Other word lists for speech audiometry

Speech (Speech acoustics of Arabic, Speech development)

- Speech tests accounting for dialects

Language (Language development)

- Standardized tests speech, receptive and expressive language in Arabic and sign language)

Need for materials in all above areas

2. Standardized Protocol and Procedures of Practice

Need to develop standard of practice in audiology and speech language pathology in the Middle East
Need for a College of Audiology and Speech-Language Pathology in the Middle East
to outline code of practice and act as a regulatory body of practice
Need for an Association for Audiologists and Speech-Language Pathologists in the Middle East
For professional education, Training Material (videos, pamphlets, booklets) and
Conferences
To develop materials on awareness and advocacy (videos, pamphlets, booklets)
To address special topics of practice, Encourage research, Professional sharing and networking for the sharing of materials and tests

3. Parent Support Network

- Parent counseling
- Parent support groups
- Parent focus groups
- Parent training
- Parent “chat lines”

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4. Sharing - Arabic Tests and Materials Available in the Middle East

5. Planning for future sharing and responsibilities

Topic	Material/Language	Contact
Speech and Language	Screening Speech and Language for 2-21/2 year olds - Hebrew and Arabic	Talma Hertgano
Speech Perception	Arabic – SPAC Arabic – ESP	Joseph Attias Rema Jebara
Articulation	Articulation Test – Arabic	Iman Gosheh
Articulation	Articulation Test - Arabic	Lina Abukhader
Speech Perception	Discrimination Test – Arabic	Rola Farah
Speech Perception	SRT and discrimination materials – Arabic (Egypt)	Dr. Khader J. Abdnl Bagi
Audiology	Mapping Forms – Hebrew, Arabic, English	Rema Jebara
Language	Acquisition of Arabic plurals in Palestinian Arabic	Rola Farah
Audiology	Pamphlets on cochlea defects, hearing loss, … Mapping Forms	Rema Jebara (MICHA Jerusalem)
Cochlear Implants	Qatar protocol for Cochlear Implants	Rema Jebara (Hadassah) HGH Qatar
Cochlear Implants	Teacher Training - Arabic	Holy Land Institute of the Deaf
Education	Speech materials - Arabic Early Identification/detection - Arabic ….Deafness - Translated Teaching Deaf Children - Translated Harbour Lane Oliver Sacks Guidelines for parents Guidelines for teachers Guidelines for sign language interpreters	

* The group discussed these topics and prioritized in order of need and urgency. It is the intension of this group to move forward on these issues through smaller focus groups to help gather information and insure that we are moving forward on these items. We have yet to name someone for item in the first topic to take the lead.

* Rema Jebara with Rola Farah have volunteered to lead a smaller focus group on the topic of norms, milestones and materials on "hearing, audition, listening"

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Interest Group Report

CISEPO / MEHA - FRIENDS AND FUNDING

This small group did not meet the criteria of being fully cross border and inclusive of all constituent communities. But a useful discussion took place.

The Group:

1. Mrs Samira Hamwi, a Lawyer from Amman
2. Mrs Pilon Bonal, from MEHA, Amman
3. Mrs Judy Noyek from CISEPO, Toronto
4. Dr Ian Clark from CISEPO, Toronto

The Report:

Just as CISEPO has been registered in Jordan, it was noted that the same action would be helpful in Israel.

There was a perceived need to gather human interest stories, particularly with children, in order to create a funding tool. This might be in the form of print, video or DVD. Publicity is important for the sustaining and growth of the work. Many people know small parts of the story, but there is a need for a fuller resource.

The establishment of the "Dr Mohammed Al Omari Scholarship Fund" can be used as a platform to promote fund raising events to add to the capital among all the participating communities. The suggestions was made that professional and service groups might be solicited for support as well as corporate donors.

It was also noted that while as an organization we function in English as the medium of communication, there is a need to make publicity material designed for a wider audience available in Arabic and Hebrew also.

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Interest Group Report

Maternal and Child Health

The Group developed the following research / service ideas

Project topic: Mapping and evaluating maternal and child health service delivery modes in high risk areas in Palestine, Jordan and Israel

High risk areas were identified as:

Palestinian:	South Hebron mountain and Gaza
Jordanian:	Jordan valley and south
Israeli :	Negev Bedouins

These areas have higher than national average of infant and maternal morbidity and mortality.

Methods:

1. Statistics

Good ongoing data collection is the basis for designing interventions and evaluating impact.
Data collection systems regarding births and infant deaths, should be examined and suggestions for improvement made following a thorough examination of available resources and mechanisms. For the time being we should look for any available relevant reports and statistics and compile a preliminary database.

2. Mapping MCH services

The following services serving mothers and children should be assessed:

1) Services providing prenatal care
2) Delivery facilities
3) Newborn care
4) Health services for children will be evaluate at phase 2 of the project

3. Assessment should include:

Areas of service delivery

Prenatal care,
High risk pregnancy care,
Prenatal fetal diagnosis,
Genetics counseling,
Delivery facilities, healthy newborn care,
Newborn intensive care,
Post partum care,
Newborn screening,

4. Health Care Facilities and Provision

Providers
Policy

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Number of facilities
Location of facilities
Equipment
Supervision
Geographical accessibility
Financial accessibility
Cultural appropriateness

5. Utilization of the Current System
% Attending prenatal care
Number of visits
Hospital births
% birth attended by trained personal
Timing of initiation of prenatal care

6. Professional Staff availability
Employer
Number
Salaries
Level of training
Communication skills, including language
Cultural appropriateness (knowledge of local customs, gender, dress, etc)
Incentives
Commitment to the local population
Stability of employment, and possibilities of promotion
On-the-job training opportunities
Job satisfaction

7. Non-professional local staff
Availability of suitable persons
Incentives
Mechanisms of recruitments
Training programs
Cultural appropriateness (gender, age, marital status)
Resources and mechanisms for payment
Volunteer organizations

8. Political and Social leadership

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Interest Group Report

Infectious Diseases

Summary of the ID group discussion

Participants:
Dr. Ali Asad
Dr. Ziad El-Nasser
Dr. Itamar Shalit

The group has expressed major interest in collaborative, cross borders studies in the area of infectious diseases. This is an area were similar problems afflict and arise in all our respective countries, thus there is a true need for professional collaboration.

We have identified the following specific projects as most important and relevant:

A: Specific infectious diseases:

1) Leishmaniasis - Laboratory research
2) West Nile Fever - Laboratory research, Control and containment measures.
The therapeutic role of locally derived Intravenous Immune Globulin
3) Rickettsiosis - Laboratory diagnosis
4) Rabies - Disease control

B: Comprehensive projects:

1) Surveillance of infectious diseases - collaboration between Jordan, the P.A. Israel and potentially Egypt. Main emphasis should be given to capacity building, educational programs and training in the area of national surveillance programs.
2) Emerging infectious diseases (i.e. SARS, pandemic influenza, etc.) - The regional impact of such diseases call for cross border collaboration and the infrastructure could be laid by a collaborative program under CISEPO auspices.
3) Hospital infection control - analysing blood cultures isolates, their pattern of susceptibility and resistance and the utilization of antibiotics. Comparative data could be readily available and be of importance to all participants.

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