ZOONOTIC AND PARASITIC DISEASES

PROCEEDINGS OF THE THIRD INTERNATIONAL AND PAN-ARAB SEMINAR
HELD IN AMMAN, JORDAN,
17–20 OCTOBER, 1989
The International Development Research Centre is a public corporation created by the Parliament of Canada in 1970 to support research designed to adapt science and technology to the needs of developing countries. The Centre’s activity is concentrated in six sectors: agriculture, food and nutrition sciences; health sciences; information sciences; social sciences; earth and engineering sciences; and communications. IDRC is financed solely by the Parliament of Canada; its policies, however, are set by an international Board of Governors. The Centre’s headquarters are in Ottawa, Canada. Regional offices are located in Africa, Asia, Latin America, and the Middle East.

Le Centre de recherches pour le développement international, société publique créée en 1970 par une loi du Parlement canadien, a pour mission d’appuyer des recherches visant à adapter la science et la technologie aux besoins des pays en développement; il concentre son activité dans six secteurs : agriculture, alimentation et nutrition; information; santé; sciences sociales; sciences de la terre et du génie et communications. Le CRDI est financé entièrement par le Parlement canadien, mais c’est un Conseil des gouverneurs international qui en détermine l’orientation et les politiques. Etabli à Ottawa (Canada), il a des bureaux régionaux en Afrique, en Asie, en Amérique latine et au Moyen-Orient.

El Centro Internacional de Investigaciones para el Desarrollo es una corporación pública creada en 1970 por el Parlamento de Canadá con el objeto de apoyar la investigación destinada a adaptar la ciencia y la tecnología a las necesidades de los países en desarrollo. Su actividad se concentra en seis sectores: ciencias agrícolas, alimentos y nutrición; ciencias de la salud; ciencias de la información; ciencias sociales; ciencias de la tierra e ingeniería; y comunicaciones. El Centro es financiado exclusivamente por el Parlamento de Canadá; sin embargo, sus políticas son trazadas por un Consejo de Gobernadores de carácter internacional. La sede del Centro está en Ottawa, Canadá, y sus oficinas regionales en América Latina, África, Asia y el Medio Oriente.

This series includes meeting documents, internal reports, and preliminary technical documents that may later form the basis of a formal publication. A Manuscript Report is given a small distribution to a highly specialized audience.

La présente série est réservée aux documents issus de colloques, aux rapports internes et aux documents techniques susceptibles d’être publiés plus tard dans une série de publications plus soignées. D’un tirage restreint, le rapport manuscrit est destiné à un public très spécialisé.

Esta serie incluye ponencias de reuniones, informes internos y documentos técnicos que pueden posteriormente conformar la base de una publicación formal. El informe recibe distribución limitada entre una audiencia altamente especializada.
ZOOTONIC AND PARASITIC DISEASES

Proceedings of the Third International and Pan-Arab Seminar
held in Amman, Jordan, 17-20 October 1989

Edited by
Oumeish Youssef Oumeish and Panduka M. Wijeyaratne

Cosponsored by
International Development Research Centre,
Ottawa, Canada
and The Higher Council for Science and Technology,
Amman, Jordan

Material contained in this report is produced as submitted and has not been subjected to peer review or editing by IDRC Communications Division staff. Unless otherwise stated, copyright for material in this report is held by the author. Mention of proprietary names does not constitute endorsement of the product and is given only for information.
# TABLE OF CONTENTS

1. **ZOOHOSES; GENERAL**
   - Environmental and Community Research Issues on the Zoonoses.
     Pandu Wijeyaratne  
     1
   - Zoonotic and Parasitic Diseases in the Mediterranean Area.
     George Papdopoulos  
     8
   - New Information in Dermatology.
     Lawrence Charles Parish  
     19
   - The Changing Pattern of Disease Implications for Epidemiology and Individuals
     V. Tipton  
     26
   - Zoonotic Infections in Aids.
     D.C.W. Mabey  
     32

2. **LEISHMANIASIS**
   - Epidemiology of cutaneous Leishmaniasis in Jordan: The Current Situation.
     Oumeish Youssef Oumeish  
     35
   - The Presence, Distribution and Seasonal Abundance of Potential Vectors of Cutaneous and Visceral Leishmaniasis in Jordan.
     S. Kamhawi  
     40
   - Epidemiology of Cutaneous Leishmaniasis in The West Bank of Jordan.
     Hisham Arda  
     55
     Mamoon Jallad  
     59
- Existence of Leishmania Major in the South of Syria: Causative Agent of Damascus Boll.  
  A. Khiami  
  65

- Cutaneous Leishmaniasis in Aleppo/Syria.  
  A. Chehade, A. Mouakeh  
  67

- Leishmaniasis and Primary Health Care in Tunisia.  
  R. Ben-Ismail, M.S. Ben Rachid  
  73

- Protective Immunity Against Leishmania Donovani in Balb/C Mice.  
  Suad Z. Jawdat, Nada K. Al-Hussayni, Layla Kh. Rifaat  
  75

- Epidemiological Facts on Kala-Azar in Iraq.  
  85

- Treatment of Leishmaniasis  
  Mohamed Amen  
  93

- Histopathological and Immunological Changes in Experimental Leishmaniasis.  
  Magda Youssef, Laila Abou Samia, Soheir E. Hamam  
  101

3. HYDATIDOSIS

- Hydatidosis in Jordan: A Review.  
  E. Saliba  
  107

- Hydatid Disease: A Comparative Study in the Medical City Teaching Hospital After 10 Years.  
  A.H. Khalili, T.I. Aljeboori, Remm Munir & M. Alsammak  
  110

4. BRUCELLOSIS

- Brucellosis in Animals: Control and Preventive Measures in Jordan.  
  N. Abdul Aziz, F. Schenkel  
  122
- Update of the Epidemiology and Diagnosis of Brucellosis in Jordan.  
Yahia F. Dajani, Abdel Aziz Masoud

5. **TOXOPLASMOSIS**
- Prevalence of Toxoplasma Antibodies in Iraqi Pregnant Women in Baghdad.  
A.D. Niazi, A.R. Omer, T.S. Al-Hadithe and A. Aswad

6. **RABIES**
- Health Systems Research and Rabies Control.  
K. de Balogh
Fathy Saleh

7. **SCHISTOSOMIASIS**
Magda Youssef, Laila M. Boulos and Mervat El-Azzouni
Hoda F. Farag
- Community Control of Schistosomiasis in Zimbabwe.  

8. **RECOMMENDATIONS OF THE SEMINAR**

9. **PARTICIPANTS**
Both visceral leishmaniasis (VL) and cutaneous leishmaniasis occur in Tunisia. The pattern of VL is of classical infantile Mediterranean kala azar. Current annual incidence (1988) is about 120 reported cases. Almost all cases come from the north of Tunisia. However, new VL foci are presently arising in mid-Tunisia in areas where large water resources development projects have been recently completed. The causative parasite of VL is Leishmania (L.) infantum s.s. (zymodeme Lon 49, London = Mon 1, Montpellier). Dogs are a proven reservoir host. Phlebotomus (P) perniciosus is the suspected vector.

There are three forms of cutaneous leishmaniasis in Tunisia.

Zporadic CL is observed in the north in the VL foci and is caused by a variant of L. infantum (zym. Mon 24). About 20 cases are recorded every year. The vector and the reservoir hosts of SCL are unknown.

Zoonotic CL is widespread in the centre and the south of the country. Since 1982, an epidemic has spread rapidly from the governorate of Kalrouan to cover parts of 8 other governorates. More than 25,000 cases were reported since the beginning of the outbreaks. ZCL is caused by L. major (zym. Mon 25 = Lon 1). Psammomys obesus, Meriones (M) showi and M. libycus are proven reservoir hosts of ZCL in Tunisia and P. papatasi has been incriminated as a factor.

A Chronic CL form caused by L. tropica (zym. Mon 8, Syn. L. killici) is observed in the south-east of Tunisia (pre-Saharan zone). Its annual incidence is about 12 reported cases. The sporadic character of this particular form suggests the presence of an animal reservoir not yet identified. P. sergenti is the suspected vector of CCI.

ZCL and VL are considered as major public health problems in Tunisia. The Basic Health Care (BHC) Division plays an important role in their control and surveillance. Since the beginning of the ZCL epidemic, a system of case detection, registering, reporting and treatment was established at a peripheric level in the BHC.

* Departement de Parasitologie, Faculté de Medicine, Tunis
* Direction des Soins de Santé de Base, Ministere de la Santé Publique, Tunis, Tunisie.
regional units. The implementation of this "sentinelle" structure that allowed follow-up of the spread of the epidemic, will be described. Field research on the transmission cycles and pilot projects are carried out by research institution workers in close collaboration with the BHC regional units' personnel. The Ministry of Agriculture is involved in the control of rodents. The contribution of these different sectors will be discussed.