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Editorial

The concept, I adopted for this special issue of Acta Tropica, was not to assemble selected reviews on different aspects of filariasis, but rather to try to lay out ongoing research activities by presenting a collection of original papers. Fortunately during recent years, research on filariasis has sensibly been extended. This, to a large part, is certainly due to support given through the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases: 11 out of 18 studies published in this issue received financial contributions from the filariasis component of the Special Programme. I was fortunate in that many of my colleagues accepted to contribute to this special issue. My warmest thanks go to all of them, in particular to Professor G. S. Nelson for his stimulating introductory paper.

The majority of papers deals with experimental laboratory work. Only three contributions are reports on field research. For lymphatic filariasis Eric Ottesen and co-workers find no linkage between HLA locus specificities and susceptibility to filarial infections or predisposition to any clinical form of the disease. Further studies are needed to evaluate the importance of genetic and environmental factors in familial clustering of filariasis. Felix Partono and his associates report beneficial long term effects from repeated DEC treatments: prevalence and morbidity decreased in a *Brugia timori* endemic area. Lymphocyte blastogenesis is analyzed in *Brugia malayi* infected patients after DEC treatment by Willy Piessens and his colleagues. I included a paper of David Carlson and Frank Walsh, not especially written for this issue but fitting well into its scope. It is a new approach to identify closely related potential vectors by gas chromatographic analysis of cuticular paraffins. Another three papers are devoted to the in vitro cultivation of filariae. A remarkable feat has been achieved by Marcel Tanner; without host triggering vector-derived larvae of *Dipetalonema viteae* developed in a biphasic culture system. Partial success to grow *Dirofilaria immitis* microfilariae in cultured Malpighian tubules is reported by Eileen Devaney. Furthermore, recovery of living *Onchocerca volvulus* microfilariae is demonstrated by Jacob Ngu and his co-workers using an elegant culture method. A third group of papers concerns various subjects of experimental work. Tom Klei and associates present evidence for specifically suppressed granulomatous tissue reactions in *Brugia pahangi* infected jirds. A comparative study on the multimammate rat as a host for four different filarial species summarizes work done in the laboratory of Professor Lämmler. – As most of our readers know, Georg Lämmler regrettably died in early 1981. With him the scientific community lost a great parasitologist to whom it owes many

important contributions. – A detailed study on the effects of fluorinated pyrimidines on the development of *Brugia pahangi* and *Dirofilaria immitis* comes from the team of Bob Howells. Additional information on the development of *B. pahangi* in immune-deprived mice is presented by David Denham and coworkers. A further study on the immunity to circulating microfilariae in *D. viteae* infected hamsters comes from the "Gainesville filariasis team". This study complements and confirms earlier results obtained in this laboratory, according to which IgM antibodies mediate cellular cytotoxicity against microfilariae. Various homogenates of different worm stages of *Litomosoides carinii* are tested to immunize albino rats against homologous infections by Professor Subrahmanyam and his associates. We present evidence for a serum-dependent cytotoxicity against in vitro growing *D. viteae* larvae. Cuticular proteins and antigens of *Onchocerca gibsoni* microfilariae are analyzed in the laboratory of Graham Mitchell using surface micro-biochemistry. From immunoprecipitation studies it appears that the major radioiodinated cuticular antigens are neither species nor *Onchocerca* specific. It remains open whether this applies to the exposed (surface) antigens of the epicuticle. The final paper summarizes serologic results on human onchocerciasis from a collaborative study between Eric Ottesen's and my laboratory.

We are all aware that it is a long way to the ultimate goal, the control of human filariasis. Research priorities have recently been defined by Scientific Working Groups. In my personal opinion, the extreme logistic difficulties demand a concentration of efforts in filariasis research which, at present, is split into numerous small groups. Though difficult, one ought to nominate four or five main filariasis research centers. Two or three of these should be located in endemic areas, in order to focus work on human pathogenic filariae. Another two centers in nonendemic areas could concentrate research on rodent, bovine and primate filariae. Competent parasitologists, entomologists and epidemiologists would form the core staff of these centers. Their main task would be to breed the vectors, to maintain the life cycles of the parasites (if at all feasible) and to procure basic epidemiological data. Through goal oriented research grants specialized investigators, e.g. immunologists, biochemists, pathologists, could bring know-how and novel techniques to these centers in which an adequate supply of live parasites (microfilariae, larvae and adult worms) and of their antigens would be guaranteed. Such a concept would possibly lead to a higher efficacy in filariasis research and, hopefully, to a more rapid progress towards filariasis control.

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Basel, August 1981 Niggi Weiss