

Workshops and seminars attended

October 2008 Strategic Planning Workshop, Nairobi
Sponsor: National Museums of Kenya

July 2007 ISO 9001-2000 Certification Seminar, Mombasa
Sponsor: National Museums of Kenya

March/April 2006 International Teacher Training Course, Uppsala University,
Uppsala, Sweden
Sponsor: University of Uppsala

January 2003 Good Laboratory Practices Workshop, Nairobi
Sponsor: World Health Organization /Tropical Diseases Research (WHO/TDR)

Computer literate in Word Processing, Excel Spreadsheet and Microsoft Power Point
Using a computer for electronic mailing and Internet search routinely

University Teaching Assignments/ Visiting Lecturer

September - December 2011 Department of Medical Laboratory Science (HML 203:
Experimental Animal Science and HML 411: Practical Epidemiology; Department of
Zoological Sciences (SZH 303 Infectious and Bacterial Emerging Diseases)

Jan 2011 Department of Medical Laboratory Science, Postgraduate students, Kenyatta
University

Course units: Research Methods and Biostatistic, Advanced Epidemiology and Vector Biology

Jan 2009 – 2010 Department of Medical Laboratory Science, Undergraduate Students in B. Sc.
Medical Laboratory Science, Kenyatta University, Nairobi

Course units: Basic Research Methodology and Experimental Animal Science

August 2010 Institute-based Programme Mt. Kenya University, School of Health Sciences

Course unit: Laboratory Animal Care

September 2008 Department of Medical Laboratory Science, Master of Science students,
Kenyatta University, Nairobi

Course unit: Principles of Epidemiology

May 2006 Department of Neuroscience, Division of Comparative Medicine, Uppsala
University Topic: Comparative Biology of Experimental Animals

May/June 2004 Department of Neuroscience, Division of Comparative Medicine, Uppsala
University (Exchange Program funded by Linnaeus-Palme Grant)
Topic: Comparative Biology of Nonhuman Primates

June 2001 Department of Physiology, Division of Comparative Medicine, Uppsala University
Topic: Comparative Biology of Small Laboratory Animals

May 2000 Department of Comparative Medicine, Uppsala University
Topic: Stress physiology and pathology, Seminar on Advances in stress research

Postgraduate Student Supervisions

Current Postgraduate Students

2009/11 Clare Njoki Kimani, M. Sc. Programme, Department of Public Health, Pharmacology and Toxicology, University of Nairobi, Nairobi

Title of Project: Anti-diabetic effects of *Zanthoxylum chalybeum* in diabetic rats

2007/10 Maamun Jeneby, Ph D Programme, Department of Comparative Medicine, Division of Neuroscience, University of Uppsala. Graduated in June, 2011.

Title of thesis project: Prevalence and molecular characterization of haemoprotozoa in nonhuman primates

2009/11 Abednego Musyoki, M. Sc. Programme, Department of Medical Laboratory Science, Kenyatta University, Nairobi. He graduated in July, 2011.

Title of thesis project: Assessment bacteriological quality of Dandora Sewage Treatment Wastewater, Kenya

Past Student Supervisions

2002 Sara Arons, Project in Comparative Medicine, Partial Fulfilment for Masters Degree in Biomedical Science, Uppsala University

Title: The baboon: A possible experimental model for *Helicobacter pylori* infection

2000 Karin Charlotta Sjostedt, Project in Comparative Medicine, Partial Fulfilment for Masters Degree in Pharmacy, Uppsala University

Title: Nonhuman primates as animal models for gastric ulcers: A study of *Helicobacter pylori* presence in baboon, African green monkey and Sykes monkeys

1999 Charlotta Fors, Project in Comparative Medicine, Partial Fulfilment for Masters Degree in Pharmacy, Uppsala University

Title: Evaluation of vervet monkeys (*Cercopithecus aethiops*) and baboons (*Papio c. cynocephalus*) as probable experimental models for human *Helicobacter pylori* disease

External Examiner

- June 2008 External examiner 2nd Year students of B. Sc. Biomedical Technology, Course in Laboratory Animal Care, Faculty of Veterinary Medicine, University of Nairobi
- June 2007 External examiner 2nd Year students of B. Sc. Biomedical Technology, Course in Laboratory Animal Care, Faculty of Veterinary Medicine, University of Nairobi
- June 2006 External examiner 2nd students of B. Sc. Biomedical Technology, Faculty of Veterinary Medicine, University of Nairobi
- May/June 2000 External examiner of 3rd, 4th and 5th year students in Veterinary Medicine, Faculty of Veterinary Medicine, University of Nairobi
- August 1999 Third and 4th year students in Veterinary Medicine, Faculty of Veterinary Medicine, University of Nairobi

Professional appointments

- 1998-to-date Principal Research Scientist
Institute of Primate Research (IPR)
- 1993-97 Senior Research Scientist, IPR
- 1986-92 Chief Veterinarian, IPR
- 1981-85 Senior Veterinarian, IPR
- 1979-81 Clinical Veterinarian, IPR

Research activities

INDEVELOP funding (2010/2011)

Study title: Field-based study on protozoa parasites of public health importance

Principal Investigators: Prof. Hanserik Carlsson, Uppsala University, Uppsala Sweden
Dr. Mbaruk A. Suleiman, Principal Research Scientist, Institute of Primate Research, Kenya

Past funded projects

Funding (2007/08)

Wellcome Trust, UK

Study title: Role of metalloproteinase chemistry & vitamin D on vascular tissue in a primate model

Principal Investigators

Dr. Robert J, MacFadyen, Consultant Cardiologist and Senior Lecturer in Medicine, University Department of Medicine, Birmingham University, U.K

Dr. Muzahir Tayebjee, Specialist Registrar in Cardiology, Hammersmith Hospital, London

Eli Lilly Pharmaceuticals, USA (2005/06)

Study title: Differential impact of Raloxifene on the matrix composition of vascular atheroma in accelerated hyperlipidaemic primate atherosclerosis model

Principal Investigators

Dr. Robert J, MacFadyen, Consultant Cardiologist and Senior Lecturer in Medicine, University Department of Medicine, Birmingham University, U.K

Dr. Muzahir Tayebjee, Specialist Registrar in Cardiology, Hammersmith Hospital, London

Phase 2 (Pilot Study). Streptozotocin induced diabetes in primate animal model

2000/01 (1) World Bank Tana Global Environmental Facility (WB Tana GEF)
Study title: Primate population census and distribution, habitat/forest evaluation and strategies for enhancement of community relations

(2) WB Tana GEF
Title: Zoonoses investigation and prevalence in Lower Tana river, Kenya

2003 Africa 2000+ Network – Kenya United Nations Development Fund
Title: Best practices of poverty reduction activities of Community-Based Organisations in Kilifi District

Research interests

Stress endocrine physiology and pathology

Helicobacter species infection and colonisation of stomach mucosa

Ecology and epidemiology of zoonotic diseases in wild fauna

Contribution to books

IPS International guidelines for the acquisition, care and breeding of nonhuman primates. Else, J. G. (Ed.) ISBN 9966-9847-2-0 Institute of Primate Research. 1988

Guidelines to care and use of laboratory animals in Kenya. ISBN 9966-9847-5-5 Institute of Primate Research. 1989

Laboratory Animal Science into the Next Century. Proceedings of the First East African Conference on Laboratory Animal Science, Nairobi, Kenya. Suleman, M. A., Muchemi, G. and Eley, R. M. (Eds.). ISBN 9966-9847-7-1 Institute of Primate Research. 1993

Veterinary Management and Research Techniques for Reproductive Studies in the Baboon: A Practical Approach. Bambra, C. (Ed.). ISBN 9966-9874-5-2 Institute of Primate Research. 1993

Publications in refereed journals

1. Jeneby, Maamun, **Suleiman, M. A.**, M. Akinyi, H. Ozwara, T. Kariuki, H-E. Carlsson. Prevalence of *Babesia microti* in Free-ranging Baboons and African green monkeys J. Parasitol. 97 (1): 63-67, 2011
2. Gicheru M. M., Jeneby M. M., Macharia C.J., Carlsson H-E and **Suleiman M.A** Sero-prevalence of leishmaniasis in non human primates from different geographical locations in Kenya Acta Tropica 109: 136-140, 2009
3. Jeneby, M. M., Ngeiywa, M., Yole, D. S., Mwenda, J. and **Suleiman, M. A.** Enzootic simian piroplasm (*Enteropolypoides macaci*) in wild-caught Kenyan nonhuman primates. J. Med. Primatol. 37 (6): 329-326, 2008 (**PubMed – indexed for MEDLINE**)
4. Moinde, N. F., Oguge, N., Mugambi, K. Otina, J. and **Suleiman, M. A.** (2006). Human and natural impacts on forests along Lower Tana river region, Kenya: Implications towards conservation and management of endemic primate species and their habitat. Biodiversity Conserv. 2006
5. **Suleiman, M.A.**, Wango, E., Sapolsky, R.M., Odongo, H. and Hau, J. Physiologic manifestations of stress from capture and restraint of free-ranging male African Green Monkeys (*Cercopithecus aethiops*) J. Zoo and Wldlf. Med. 35(1): 20-24, 2004 (**PubMed – indexed for MEDLINE**)
6. Karere, G.M., Oguge, N.O., Kirathe, J., Muoria, P.K., Moinde, N.N. and **Suleiman, M.A.** Population sizes and distribution of primates in the Lower Tana River Forests, Kenya. Int. J. Primatol. 25(2): 351-365, 2004
7. Moinde, N.N., **Suleiman, M.A.**, Higashi, H. and Hau, J. Habituation, capture and relocation of Sykes monkeys (*Cercopithecus mitis albatorquatus*) on the coast of Kenya. Animal Welfare, 13: 343-353. 2004
8. Farah, I., Borjesson, A., Kariuki, T., Yole, D., **Suleiman, M. A.**, Hau, J. and Carlsson, H-E. Morbidity and immune response to natural schistosomiasis in baboons (*Papio anubis*). Parasitol. Res. 2003
9. Muoria, P.K., Karere, G.M., Moinde, N.N. and **Suleiman, M.A.** Primate Census and habitat evaluation in the Tana delta region, Kenya. Afr. J. Ecol.41: 157-163, 2003
10. Jeneby, M.M., **Suleiman, M.A.**, Gichuki, C. Sero-Epizootiologic survey of *Trypanosoma brucei* in Kenyan nonhuman primates. J. Zoo & Wldlf. Med. 33(4): 337-341, 2002 (**PubMed – indexed for MEDLINE**)
11. Hagelin, J., Hau, J., Schapiro, S.J., **Suleiman, M.A.** and Carlsson, H-E. Religious beliefs and opinions on clinical xenotransplantation – a survey of university students from Kenya, Sweden and Texas. Clin. Transplant. 15:421-425, 2001 (**PubMed – indexed for MEDLINE**)
12. Hagelin, J., Carlsson, HE., **Suleiman, M. A.** and Hau, J. Swedish and Kenyan medical and veterinary students accept nonhuman primate use in medical research. J. Med. Primatol. 29 (6): 431-432, 2000 (**PubMed – indexed for MEDLINE**)
13. **Suleiman, M.A**, Wango, E. Farah, I.O. and Hau, J. Adrenal cortex and stomach lesions associated with stress in wild male African green monkeys (*Cercopithecus aethiops*) in the post-capture period J. Med. Primatol. 29:338-342, 2000 (**PubMed – indexed for MEDLINE**)

14. Hirai, H., Kawamoto, Y., **Suleman, M.A** and Mwenda, J.M. Variant centromere lacking specific molecular traits in the Sykes monkey. *Chromosome Res.* 8: 357-359, 2000 (**PubMed – indexed for MEDLINE**)
15. **Suleman, M.A.**, Yole, D., Wango, E., Sapolsky, R., Kithome, K., Carlsson, H-E. and Hau, J. Peripheral blood lymphocyte immunocompetence in wild African green monkeys (*Cercopithecus aethiops*) and the effects of capture and confinement. *J. In Vivo* 13: 25-28, 1999
16. Farah, I. O., Nyindo, M., **Suleman, M. A.**, Nyaundi, J., Kariuki, T. M., Blanton, R. E., Elson, L. H. and King, C. L. *Schistosoma mansoni*: Development and modulation of the granuloma after single or multiple exposure in the baboon (*Papio cynocephalus anubis*). *Experim. Parasitol.* 86: 93-101. 1997 (**PubMed – indexed for MEDLINE**)
17. Muriuki, S. M. K., Farah, I. O., Kagwiria, R. M., Chai, D. C., Njamunge, G., **Suleman, M. A.** and Olobo, J. O. The presence of *Cryptosporidium* oocysts in stools of clinically diarrhoeic and normal primates in Kenya. *Vet. Parasitol.* 72: 141-147. 1997
18. Mugambi, K., Butynski, T., **Suleman, M. A.** and Ottichilo, W. The vanishing de Brazza monkey (*Cercopithecus neglectus* Schlegel) in Kenya. *Int. J. Primatol.* 18 (6): 995-1004. 1997
19. D'Hooghe, T. M., Bambra, C. S., Raemaeker, B. M., Riday, A. M., **Suleman, M. A.** and Koninckx, P. R. The cycle pregnancy rate is normal in baboons with stage I endometriosis but decreased in primates with stage II and stage III-IV disease. *Fertil Steril.* 66 (5): 809-813. 1996 (**PubMed – indexed for MEDLINE**)
20. Otsyula, M., Yee, J. L., **Suleman, M. A.**, Marx, P. and Jennings, M. B. Immunoassay for detection of antibodies to simian immuno-deficiency virus and human immuno-deficiency virus in serum. *Lab. Anim. Sci.* 46 (2): 198-201. 1996 (**PubMed – indexed for MEDLINE**)
21. Otsyula, M., Yee, J., Jennings, M., **Suleman, M. A.**, Isahakia, M., Marx, P. and Lerche, L. Prevalence of antibodies against simian immuno-deficiency virus (SIV) and simian T-Lymphotropic virus (STLV) in colony of nonhuman primates in Kenya, East Africa. *Ann. Trop. Med. Parasitol.* 90: 65-70. 1996
22. Otsyula, M., Yee, M. J., **Suleman, M. A.**, Martin, J., Woods, P. and Glass, R. Rotavirus infection in African nonhuman primates. *Ann. Trop. Med. Parasitol.* 90 (6): 659-661. 1996
23. **Suleman, M. A.**, Tarara, R., Else, J. G. and Sayer, P. D. Spontaneous acute gastric mucosal erosions and ulceration in vervet monkeys (*Cercopithecus aethiops*). Part I. *J. Zoo and Wldlf. Med.* 26 (1): 67-71. 1995
24. Tarara, E. B., Tarara, P. R. and **Suleman, M. A.** Stress-induced gastric ulcers in vervet monkeys (*Cercopithecus aethiops*). Part II. *J. Zoo and Wldlf. Med.* 26 (1): 72-75. 1995
25. Snodgrass D. R., Campbell, I., Mwenda, J. M., Chege, G., **Suleman, M. A.**, Morein, B. and Hart, C. A. Stimulation of rotavirus IgA, IgG and neutralizing antibodies in baboon milk by parenteral vaccination. *Vaccine.* 13: 405-413. 1995 (**PubMed – indexed for MEDLINE**)
26. Otsyula, M., Gettie, A., **Suleman, M. A.**, Tarara, P., Isahakia, M. and Marx, P. Apparent lack of vertical transmission of simian immunodeficiency virus (STLV)

- in naturally infected African green monkeys (*Cercopithecus aethiops*). *Ann. Trop. Med. Parasitol.* 89: 573-576. 1995
27. D'Hooghe, T. M., Bambra, C. S., **Suleman, M. A.**, Dunselman, G. A., Evers, H. L. and Koninckx, P. R. Development of a model of retrograde menstruation in baboons (*Papio anubis*). *Fert. Steril.* 62 (3): 635-638. 1994 (**PubMed – indexed for MEDLINE**)
 28. Tomonaga, K., Katahira, J., Fukasawa, M., Ahmed, H. M., Kawamiura, M. Akari, H., Miura, R., Nakai, M., **Suleman, M. A.**, Isahakia, M. and Hayami, M. Isolation and characterisation of simian immunodeficiency virus from African White-Crowned mangabeys monkeys (*Cercocebus torquatus lunulatus*). *Arch. Virol.* 129: 77-92. 1993
 29. Eley, R. M., Gould, K. G., Eley, D. S., **Suleman, M. A.**, and Tarara, R. P. Effect of clomiphene citrate upon periovulatory endometrial development in the baboon. *J. Med. Primatol.* 20: 49-57. 1991 (**PubMed – indexed for MEDLINE**)
 30. Binhazim, A. A., Tarara, R. P. and **Suleman, M. A.** Spontaneous external endometriosis in a de Brazza's monkey (*Cercopithecus neglectus*). *J. Comp. Pathol.* 101: 471-474. 1989 (**PubMed – indexed for MEDLINE**)
 31. Uno, H., Tarara, R., Else, J. G., **Suleman, M. A.** and Sapolsky, R. M. Hippocampal damage associated with prolonged and fatal stress in a primate. *Neuroscience.* 9 (5): 1705-1711. 1989 (**PubMed – indexed for MEDLINE**)
 32. **Suleman, M. A.** Neonatal problems in nonhuman primates. *Kenya Vet.* 12 (1): 3. 1988
 33. **Suleman, M. A.** Hazards of pet nonhuman primates. *Kenya Vet.* 12 (2): 10. 1988
 34. **Suleman, M. A.** and Tarara, R. P. Clinical aspects of respiratory diseases in laboratory animals. *Kenya Vet.* 11: 42-43. 1987
 35. Else, J. G., Tarara, R., **Suleman, M. A.** and Eley, R. M. Enclosure design and reproductive success of baboons used for reproductive research in Kenya. *Lab. Anim. Sci.* 36: 168-172. 1986
 36. Githure, J. I., Shatry, A. M., Tarara, R., Chuley, J. D., **Suleman, M. A.**, Chunge, C. N. and Else, J. G. The suitability of East African primates as animal models of visceral leishmaniasis. *Trans. Roy. Soc. Trop. Med. Hyg.* 80: 575-576. 1986 (**PubMed – indexed for MEDLINE**)
 37. Macpherson, C. N. L., Else, J. G. and **Suleman, M. A.** Experimental infection of the baboon (*Papio cynocephalus*) with *Echinococcus granulosus* of camel, cattle, sheep and goat origin from Kenya. *J. Helminthol.* 60: 213-217. 1986
 38. Tarara, R., **Suleman, M. A.**, Sapolsky, R. and Else, J. G. Tuberculosis in wild baboons (*Papio c. anubis*). *J. Wildl Dis.* 21 (2): 137-140. 1985 (**PubMed – indexed for MEDLINE**)
 39. Else, J. G., Eley, R. M., **Suleman, M. A.** and Lequin, R. M. Reproductive biology of Sykes and Blue monkeys (*Cercopithecus mitis*). *Am. J. Primatol.* 9: 189-196. 1985
 40. **Suleman, M. A.**, Johnson, B. J., Tarara, R., Sayer, P. D., Ochieng, D. M., Muli, J. M., Mbeta, E., Tukei, P. M., Ndirangu, D., Kago, S. and Else, J. G. An outbreak of poliomyelitis caused by poliovirus type I in black and white colobus monkeys (*Colobus abyssinicus kikuyuensis*) in Kenya. *Trans. Roy. Soc. Hyg.* 78: 655-669. 1984 (**PubMed – indexed for MEDLINE**)

41. **Suleman, M. A.**, Tarara, R., Mandalia, K. M. and Weiss, M. A spontaneous bronchogenic carcinoma in Sykes monkey (*C. mitis stuhlmani*). *J. Med. Primatol.* 13 (3): 153-157. 1984 (**PubMed – indexed for MEDLINE**)
42. **Suleman, M. A.**, Tarara, R., Kamunyi, R. C. and Runyenje, R. N. Bovine tuberculosis in a baboon colony. *Kenya Vet.* 7 (1): 1-2. 1983
43. Johnson, B. K., Gitau, L. C., Gichogo, A., Tukei, P. M., Else, J. G., **Suleman, M. A.** and Sayer, P. D. Marbug, Ebola and Rift Valley Fever antibodies in East African primates. *Trans. Roy. Soc. Trop. Med. Hyg.* 76: 307-310. 1982 (**PubMed – indexed for MEDLINE**)
44. Johnson, B. K., Gitau, L. C., Gichogo, A., Tukei, P. M., Else, J. G. and **Suleman, M. A.** Marbug and Ebola virus antibodies in Kenya primates. *Lancet.* 1: 1420-1421. 1980 (**PubMed – indexed for MEDLINE**)

Abstracts of conference papers

1. Suleman, M. A. and Mugambi, K. A critical review of the de Brazza's monkey (*Cercopithecus neglectus*) survival in Kenya: ecological and conservation nightmares. Symposium on "Adaptation and evolution of Cercopithecidae in Africa". Inuyama City, Japan 6-11 Jan 1999
2. Suleman, M. A. and Hau, J. The importance of laboratory animal science in the conservation of wild animals. Joint International ICLAS/FELASA Conference. Palma de Mallorca, Spain, 24-29 May 1999
3. McLean, R.G., Suleman, M. A., Igobwa, R., Tukei, P. M., Kirk, L. J. and Gubler, D. J. Sylvatic transmission of Yellow Fever virus in Kenya. 43rd Annual Conference of Wildlife Disease Association, California, 35: 42, 1994
4. Ahmed, H. M., Isahakia, M., Sleman, M. A., Miura, T., Tomonaga, K., Igarashi, T. and Hayami, M. Simian immuno-deficiency virus isolated from white-crowned mangabeys belonged to the great heterogeneity of SIVAGM group. A World United Against AIDS, VIIIth International Conference on AIDS/III STD World Congress. Amsterdam, The Netherlands, 19-24 July 1992
5. Suleman, M. A. Infertility in nonhuman primates. Nairobi Centre for Research in Reproduction (NCRR) Conference, Nairobi 1987
6. Suleman, M. A. *Campylobacter jejuni* infection – An increasingly recognized cause of infertility in animals and humans, NCRR Conference, Nairobi, 1987
7. Bin hazim, A. A. Tarara, R. and Suleman, M. A. Spontaneous endometriosis in a de Brazza's monkey (*Cercopithecus neglectus*), NCRR Conference, Nairobi, 1987
8. Else, J. G., Poole, T. B., Wolfe, T., Nazareno, J. B., Darsano, C. L., Eudey, A. A., Box, H. O., Suleman, M. A., Croxato, H., Houghton, P., Held, J. R. and Nishida, T. International guidelines for acquisition, breeding, captive care and use of nonhuman primates. *Int. J. Primatol.* 8 (5): 409, 1987
9. Suleman, M. A. Maintenance of African cercopithecines for research in their natural climate. *Primate Report* 14: 198. 1986
10. Eley, R. M., Tarara, R., Suleman, M. A., Eley, D. S. and Gould, K. G. Clomiphene citrate effects upon periovulatory endometrial development and peripheral hormones in the baboon. *Int. J. Primatol.* 5 (4): 335. 1984

11. Macpherson, C. N. L., Suleman, M. A. and Else, J. G. Experimental infection of baboon (*Papio* sp) with *Echinococcus granulosus* of human, cattle, sheep and goat origin. *Int. J. Primatol.* 5 (4): 358. 1984

Reports and other publications

1. Suleman, M.A. and Karisa, J.W. Poverty Reduction Projects in Kilifi District: Field studies on best practices, achievements and difficulties and handicaps experienced. A report to Africa 2000+ Network – Kenya, United Nations Development Fund, 2003
2. Suleman, M.A, Wahungu, G.M., Muoria, P.K., Karere, G.M., Oguge, N. and Moinde, N.N. Tana River primate census and forest evaluation. Report to World Bank Global Environmental Facility. Kenya Wildlife Service. 2001
3. Wango, E. and Suleman, M. A. Strategies in wildlife conservation. *Discovery and Innovation.* 1994
4. Morland, H. S., Suleman, M. A. and Tarara, E. Changes in male-female interactions after introduction of new adult males in vervet monkey (*Cercopithecus aethiops*) groups. *Lab. Primate Newsletter.* 31 (2): 1-4. 1992
5. Chai, D. and Suleman, M. A. Vervet (*Cercopithecus aethiops*): Mortality in a breeding colony in Kenya. *Bull. Anim. Hlth. Prod. Afr.* 39: 441-445. 1991
6. Suleman, M. A. The development of laboratory animal management and the state of the art in Kenya. *ICLAS Bulletin Number 66:* 26-28. Spring 1990
7. Suleman, M. A. Education and training of animal technicians in Kenya. *Proceedings of the IXth ICLAS International Symposium on Animal Science.* Bangkok, Thailand. In: *Laboratory Animal and Health for All.* Ericksen, S., Coates, M. E. and Chatikavanij, P. (Eds). 338-340. 1990
8. Kyambi, J. M., Tarara, R., Gulamhussein, N., Sayer, P. D. and Suleman, M. A. A comparison of streptokinase/streptodanase with 32% dextran 70 for the prevention of peritoneal adhesions. *Recent Developments in Surgical Research. Proceedings of the First Annual Scientific Session of the Academy of Surgical Research.* Hall, C. W. (Ed.). Pergamon Press, New York. 1985