

**UNIVERSITY OF PRETORIA**  
**CURRICULUM VITAE**  
**PROF JOHN THOMSON SOLEY**

**1. BIOGRAPHICAL SKETCH**

1.1 General Information										
<b>Surname</b>	Soley									
<b>First names</b>	John Thomson				<b>ID Number</b>		4906295095008			
<b>Citizenship</b>	South African				<b>Title</b>	Prof	<b>Female</b>		<b>Male</b>	✓
<b>Place of birth</b>	Glasgow, Scotland				<b>Date of birth</b>		29 June 1949			
<b>Population group</b>	<b>African</b>		<b>Coloured</b>		<b>Indian</b>		<b>White</b>	✓	<b>Other (Please specify)</b>	
<b>Department</b>	Anatomy and Physiology				<b>Position</b>		Full Professor			
<b>Direct Telephone</b>	012 529 8252				<b>Direct Telefax</b>		012 529 8320			
<b>E-mail</b>	john.soley@up.ac.za									
<b>Date of appointment</b>	February 1976				<b>Permanent full-time</b>		✓	<b>Temporary full-time</b>		

1.2 Academic qualifications obtained				
<b>Degree/Diploma</b>	<b>Field of study</b>	<b>Higher institution education</b>	<b>Year</b>	<b>Distinctions</b>
National Diploma for Technicians (Microbiology)	Microbiology	Pretoria Technikon	1971	Organic Chemistry, Haematology, Virology, Bacteriology (Practical), Parasitology and Mycology, and Biochemistry (Practical).
BA	Anthropology and History	University of South Africa	1975	N/A
BA (Honours Anthropology)	Anthropology	University of South Africa	1980	N/A
The Histology course (BVSc II)	Veterinary Science	University of Pretoria	1981	With Distinction
The Embryology course (BVSc II)	Veterinary Science	University of Pretoria	1983	N/A
MSc	Zoology	University of the Witwatersrand	1988	N/A
PhD	Veterinary Anatomy	University of Pretoria	1993	N/A

<b>1.3 Work experience to date</b>		
<b>Name of employer</b>	<b>Capacity and/or type of work</b>	<b>Period</b>
Department of Agricultural Technical Services at Onderstepoort.  Departments of Reproduction and Physiology.	<b>Pupil Technician</b> Thin-layer and paper chromatographic techniques for hormone determinations. The extraction of various hormones (progesterone and cortisol) and their quantitative determination using gas chromatography and liquid scintillation techniques.  Preparation of student practicals. Research on plasma proteins (the determination of total plasma proteins and the separation and quantitative determination of the various protein fractions using the cellulose acetate electrophoresis technique).	01/1986 – 12/1973
Municipal Laboratory of the Pretoria City Council	<b>Chemical assistant</b> Testing the bacteriological quality of drinking water and purified sewerage effluents. Testing pollution levels of river systems in the Pretoria area partially fed with purified sewerage effluents. The routine analysis of bulk milk supplies delivered to the City.	01/1974 – 01/1976
University of Pretoria (Electron Microscope Unit housed in the Department of Anatomy of the Faculty of Veterinary Science)	<b>Electron Microscope Operator and Technician</b> Fixation and preparation of a wide variety of biological materials for both transmission and scanning electron microscopy. Operation and maintenance of a Philips 301 HRG transmission electron microscope and the application of associated photographic and dark-room techniques. Training of technicians and post-graduate students in theoretical and practical aspects of electron microscopy. From 1982 onwards involved in the BVSc II Histology course as demonstrator for practical sessions.	02/1976
University of Pretoria (Department of Anatomy and Physiology, Faculty of Veterinary Science)	<b>Lecturer</b> Teaching of Anatomy, Histology and Embryology. Participation in the research activities of the Department.	1988- 1991
University of Pretoria (Department of Anatomy and Physiology, Faculty of Veterinary Science)	<b>Senior Lecturer</b> Field of interest: Comparative spermatology	1991- 1997
University of Pretoria (Department of Anatomy and Physiology, Faculty of Veterinary Science)	<b>Associate Professor</b>	1997
University of Pretoria (Department of Anatomy and Physiology, Faculty of Veterinary Science)	<b>Section Head of Physiology</b>	2004- 2008
University of Pretoria (Department of Anatomy and Physiology, Faculty of Veterinary Science)	<b>Full Professor</b>	2005- current

## 2. TEACHING ACTIVITIES

2.1 Formal academic modules/courses presented		
Course	Level	Self developed
Anatomy, Histology and Embryology courses of old curricula for Veterinary Science	Second year	No
ANA 213 (up to 2004)	Second year	No
ANA 214 (up to 2004)	Second year	No
HIS 200 (up to 2004)	Second year	No
VAP 300 (2005 – 2011)	Third year (BSc III)	No
VCA 400 (2006 – 2012)	Fourth year (BVSc I)	No
VCA 200 (2012 - )	Second Year (BVSc II)	No
ANG 104 (up to 2011)	First year	No
VWE 802	Masters	No
VWE 902	Doctoral	No

### 2.2 Other presentations N/A

Course	Year	Institution
--------	------	-------------

## 3. TEACHING OUTPUTS

### 3.1 Educational publications and products

## 4. OTHER TEACHING CONTRIBUTIONS

### 4.1 Membership of national and international bodies N/A

### 4.2 Visits to local and overseas universities as guest professor or lecturer with regard to teaching

- Swedish University of Agricultural Sciences Faculty of Veterinary Medicine and Animal Science - Sweden – 2002. Lecturer exchange programme.

#### 4.3 Participation in national and international teaching associations, bodies, committees

I have acted as external examiner in Histology and Embryology for the University of the Witwatersrand (General Anatomy and Anatomical Sciences), the University of Pretoria (Department of Anatomy, Faculty of Medicine), the University of North West (Developmental Biology) and MEDUNSA (Veterinary Anatomy). In October 1998, June 1999 and June 2000 I was invited to act as external examiner for 2<sup>nd</sup> year Veterinary students in both Gross Anatomy and Histology and Embryology at Sokoine University of Agriculture, Morogoro, Tanzania. I have also been External Examiner for a number of Masters dissertations and a PhD thesis:

- M.Med.Sc. 1995. J.L. Steyl. "Die uitwerking van chroniese blootstelling aan 'n lae intensiteit-lae frekwensie elektriese veld op die ontwikkelende serebrum van die muis (*Mus musculus*)". Universiteit van die Oranje-Vrystaat.
- MSc. 1996. K. Reddy. "The reproductive biology of four species of South African dolphins". Rhodes University.
- MSc. 1997. D. Wagner. "Functional morphology of elasmobranch dermal denticles with comments on aspects of their hydrodynamics". University of Port Elizabeth.
- MSc (Anatomy) 1999. N.P. Baloyi. "An immunocytochemical study of the distribution of heat shock protein 27 in normal myometrium, host myometrium and fibromyomata". Faculty of Medicine, University of Pretoria.
- MSc. 1999. W.E. Joseph. "The responses of peripheral blood, splenic and lymphnode lymphocyte proliferation in healthy goats and cattle and those undergoing infection with *Theileria parva* protozoal parasites". Faculty of Veterinary Science, Sokoine University of Agriculture, Tanzania.
- PhD. 2001. J. M. Brinders. "Sperm structure and quantitative sperm motility analysis of three wild antelope species: *Aepyceros melampus*, *Damaliscus dorcas phillipsi* and *Connochaetes taurinus*". Faculty of Natural Sciences, University of the Western Cape.
- MSc. 2003. C.B. Penny. "Alkaline phosphatase in *Xenopus Laevis* gastrulation: An experimental approach". Faculty of Science, University of the Witwatersrand.
- MSc. 2003. E.G. Othieno. "Oogenesis in the development of Zebrafish (*Brachydanio rerio*)". Faculty of Science, University of the Witwatersrand.
- MSc. 2005. M.L. Mokae. "Exfoliative cytology as a biomarker in the assessment of cadmium and zinc pollution in the liver of *Oreochromis mossambicus* (Cichlidae)". Faculty of Science, University of Johannesburg.

## 5. RESEARCH ACTIVITIES

5.1 Former supervision or co-supervision				
Name of student	Degree/Title of dissertation/ thesis and date	Supervisor	Co-supervisor(s)	Duration of studies
L. du Plessis	<b>MSc</b> "Comparison of blood platelet morphology of various mammalian species" - 1997	Prof JT Soley	N/A	2 years
J.F. Putterill	<b>MSc</b> "A light and electron microscopic study of the mouth cavity, oesophagus and stomach of the Nile crocodile <i>Crocodylus niloticus</i> (Laurenti, 1768)" - 2003	Prof JT Soley	N/A	

S. Schmidt	<b>MSc</b> "Morphology of peri-partial placentomes and post-partial fetal membranes in African buffalo ( <i>Syncerus caffer</i> ) and comparative aspects with cattle ( <i>Bos taurus</i> )" - 2005		Prof JT Soley	
C. Tivane	<b>MSc</b> "The morphology of the upper digestive tract of the ostrich ( <i>Struthio camelus</i> )" - 2008	Prof JT Soley	Prof H.B. Groenewald	
M.R. Crole	<b>MSc</b> "A gross anatomical and histological study of the oropharynx and proximal oesophagus of the emu ( <i>Dromaius novaehollandiae</i> )" - 2009	Prof JT Soley	N/A	1 year
M. Viljoen	<b>PhD</b> "The effect of dietary energy and protein interaction on the physiological plasticity of the small intestine of the young ostrich" - 2012		Prof JT Soley	
F. Stansfield	<b>PhD</b> "Ontogeny of the follicular reserve in the African elephant ( <i>Loxodonta africana</i> )" - 2012	Prof J Nöthling	Prof JT Soley	

### 5.2 Current post-graduate students

Name of student	Degree enrolled for and date of first registration	Project title	Supervisor	Co-supervisor (s)	Year of registration
M.Z.J. Elias	VWE 902 - PhD	"The vasculature of the male reproductive organs of the ostrich ( <i>Struthio camelus</i> )"	Prof T.A. Aire	Prof JT Soley	
M.R. Crole	VWE 902 – PhD 2010	"Comparative morphology and functional significance of mechanical and sensory structures in the upper digestive tract of the ostrich ( <i>Struthio camelus</i> ) and emu ( <i>Dromaius novaehollandiae</i> )"	Prof JT Soley	N/A	3
L. du Plessis	VWE 902 – PhD 2011	"The structure and development of normal and abnormal spermatozoa in the emu, <i>Dromaius novaehollandiae</i> "	Prof JT Soley	N/A	2
L.N. Havenga	VWE 802 MSc – 2011	A morphological study of the kidney and renal portal system of the Cape griffon vulture ( <i>Gyps coprotheres</i> )	Dr MR Crole	Prof JT Soley	2

### 5.3 Raising research funding (Optional)

Origin of research funds (e.g. contract research, THRIP, international funding organisations, other)	Title of research project or programme	Duration	Money allocated (R) (Optional - exact amounts not required)
University of Pretoria			
National Research Foundation			

## 6. RESEARCH OUTPUTS

### 6.1 Publications in peer-reviewed or refereed journals

1. Newsholme, S.J., T.S. Kellerman, G.C.A. van der Westhuizen and J.T. Soley. 1983. Intoxication of cattle on Kikuyu grass following army worm (*Spodoptera exempta*). Onderstepoort J. Vet. Res. **50**: 157-167.
2. Bertschinger, H.J., D.G.A. Meltzer, A. van Dijk, R.I. Coubrough, J.T. Soley and F.A. Collett. 1984. Cheetah life-line. Nuclear Active **30**: 2-7.
3. Oetllé, E.E. and J.T. Soley. 1985. Infertility in a Maltese poodle as result of a sperm midpiece defect. J. S. Afr. Vet. Ass. **56**: 103-106.
4. Oetllé, E.E. and J.T. Soley. 1986. Severe sperm abnormalities with subsequent recovery following on scrotal oedema and posthitis in a bulldog. J. Small Anim. Pract. **27**: 477-484.
5. Oetllé E.E. and J.T. Soley. 1986. Ultrastructural changes in the acrosome of human sperm during freezing and thawing: a pilot trial. Arch. Androl. **17**: 145-150.
6. Oetllé, E.E. and J.T. Soley. 1988. Sperm abnormalities in the dog: A light and electron microscopic study. Vet. Med. Rev. **59**: 28-70.
7. Van Rensburg. I.B.J., P. Stadler and J. Soley. 1989. Bronchiolo-alveolar adenocarcinoma in a horse. J. S. Afr. Vet. Ass. **60**: 212-214.
8. Kotzé, S.H. and J.T. Soley. 1990. Scanning electron and light microscopy of the mucosa of the equine ileocaecal junction. Onderstepoort J. vet. Res. **57**: 19-23.
9. Van Vuren, J.H.J. and J.T. Soley. 1990. Some ultrastructural observations of Leydig and Sertoli cells in the testis of *Tilapia rendalli* following induced testicular recrudescence. J. Morphol. **206**: 57-63.
10. Van Rensburg, I.B.J, D.H. Volkmann, J.T. Soley and C.G. Stewart. 1991. Encephalitozoon infection in a still-born foal. J. S. Afr. vet. Ass. **62**: 130-132.
11. Kotzé, S.H. and J.T. Soley. 1992. Specialized veins in the submucosa of the equine ileocecal junction. J. Morphol. **214**: 261-267.
12. Soley, J.T. 1993. Ultrastructure of ostrich (*Struthio camelus*) spermatozoa: I. Transmission electron microscopy. Onderstepoort J. vet. Res. **60**: 119-130.
13. Bezuidenhout, A.J., W.P. Burger, F. Reyers and J.T. Soley. 1994. Serum- and bone-mineral status of ostriches with tibiotarsal rotation. Onderstepoort J. vet. Res. **61**:203-206.
14. Soley, J.T. 1994a. Centriole development and formation of the flagellum during spermiogenesis in the ostrich (*Struthio camelus*). J. Anat. **185**: 301-313.
15. Soley, J.T. and Roberts, D.C.1994b. Ultrastructure of ostrich (*Struthio camelus*) spermatozoa: II. Scanning electron microscopy. Onderstepoort J. vet. Res. **61**: 239-246.
16. Kotzé, S.H. and J.T. Soley. 1995. Scanning electron microscopic study of intestinal mucosa of the Nile crocodile (*Crocodylus niloticus*). J. Morph. **225**: 169-178.
17. Bezuidenhout, A.J., J.T. Soley, H.B. Groenewald and W.P. Burger. 1995. Sperm storage tubules in the vagina of the ostrich (*Struthio camelus*). Onderstepoort J. vet. Res. **62**: 193-199.
18. Westlin, L.M., J.T. Soley, N.J. van der Merwe and Y.J. van Dyk. 1995. Late foetal development and

selective resorption in *Saccostomus campestris* (Cricetidae). *Reprod. Fertil. Dev.* **7**: 1177-1184.

19. Soley, J.T. 1996. The differentiation of the acrosomal complex in ostrich (*Struthio camelus*) spermatids. *J. Morph.* **227**: 101-111.
20. Soley, J.T. 1997. Nuclear morphogenesis and the role of the manchette during spermiogenesis in the ostrich (*Struthio camelus*). *J. Anat.* **190**:563-576.
21. Ausió, J., J.T. Soley, W. Burger, J.D. Lewis, D. Barreda and K.M. Cheng. 1999. The histidine-rich protamine from ostrich and tinamou sperm. A link between reptile and bird protamines. *Biochemistry* **38**: 180-184.
22. Soley, J.T. and Groenewald, H.B. 1999. Reproduction. In: Deeming, D.C. (Ed.) *The Ostrich: Biology, Production and Health*. CAB International, Wallingford, United Kingdom.
23. Bezuidenhout, A.J, Groenewald, H.B. and Soley, J.T. 1999. An anatomical study of the respiratory air sacs in ostriches. *Onderstepoort J. vet. Res.* **66**: 317-325.
24. Aire, T.A. and Soley, J.T. 2000. The surface features of the epithelial lining of the ducts of the epididymis of the ostrich (*Struthio camelus*). *Anatomy, Histology and Embryology* **29**: 119-126.
25. Soley, J.T. and Kramer, B. 2001. Student perceptions of problem topics/concepts in a traditional veterinary anatomy course. *Journal of the South African Veterinary Association* **72**: 150-157.
26. Kramer, B. and Soley, J. T. 2002. Medical students perception of problem topics in anatomy. *East African Medical Journal* **79**: 408-414.
27. Aire, T. A., Soley, J. T. and Groenewald, H. B. 2003. A morphological study of simple testicular cysts in the ostrich (*Struthio camelus*). *Research in Veterinary Science* **74**: 153-162.
28. Putterill, J. F. and Soley, J. T. 2003 General morphology of the oral cavity of the Nile crocodile, *Crocodylus niloticus* (Laurenti, 1768). I. Palate and gingivae. *Onderstepoort Journal of Veterinary Research* **70**: 281-297.
29. Aire, T. A. and Soley, J. T. 2003 The morphological features of the rete testis of the ostrich (*Struthio camelus*). *Anatomy and Embryology* **207**: 355-361.
30. Putterill, J. F. and Soley, J. T. 2004 General morphology of the oral cavity of the Nile crocodile, *Crocodylus niloticus* (Laurenti, 1768). II. The tongue. *Onderstepoort Journal of Veterinary Research* **71**: 263-277.
31. Gee, G.F., Henk, B., Donoghue, A.M., Blanco, J. and Soley, J. 2004 Reproduction in nondomestic birds: Physiology, semen collection, artificial insemination and cryopreservation. *Poultry and Avian Biology Reviews* **15**: 47-101.
32. Schmidt, S., Gerber, D., Soley, J. T., Aire, T. A. and Boos, A. 2005 Histo-morphology of the uterus and early placenta of the African buffalo (*Syncerus caffer*) and comparative placentome morphology of the African buffalo and cattle (*Bos taurus*). *Placenta* **27**: 899-911.
33. Putterill, J. F. and Soley J. T. 2006 Morphology of the gular valve of the Nile crocodile (*Crocodylus niloticus* Laurenti, 1768). *Journal of Morphology* **267**: 924-939.
34. Ozegbe, P. C., Aire, T. A. and Soley, J. T. 2006 The morphology of the efferent ducts of the testis of the ostrich, a primitive bird. *Anatomy and Embryology* **211**: 559-565.
35. Elias, M. Z. J., Aire, T. A. and Soley, J. T. 2007 Macroscopic features of the arterial supply to the reproductive system of the male ostrich (*Struthio camelus*). *Anatomia, Histologia. Embryologia – Journal of Veterinary Medicine Series C* **36**: 255-262.
36. Ozegbe, P. C., Aire, T. A., Madekurozwa, M-C. N. and Soley, J. T. 2008 Morphological and immunohistochemical study of testicular capsule and peritubular tissue of emu (*Dromaius novaehollandiae*) and ostrich (*Struthio camelus*). *Cell and Tissue Research* **332**: 151-158.
37. Aire, T. A., Ozegbe, P. C., Soley, J. T. and Madekurozwa, M-C. N. 2008 Structural and

- immunohistochemical features of the epididymal duct unit of the ostrich (*Struthio camelus*). *Anatomia, Histologia, Embryologia – Journal of Veterinary Medicine Series C* **37**: 296-302.
38. Elias, M. Z. J., Aire, T. A. and Soley, J. T. 2008 Macroscopic features of the venous drainage of the reproductive system of the male ostrich (*Struthio camelus*). *Onderstepoort Journal of Veterinary Research* **75**: 289-298.
  39. Crole, M. R. and Soley J. T. 2009 Morphology of the tongue of the emu (*Dromaius novaehollandiae*). I. Gross anatomical features and topography. *Onderstepoort Journal of Veterinary Research* **76**: *Onderstepoort Journal of Veterinary Research*, 76:335–345
  40. Crole, M. R. and Soley J. T. 2009 Morphology of the tongue of the emu (*Dromaius novaehollandiae*). II. Histological features. *Onderstepoort Journal of Veterinary Research* **76**: 347–361.
  41. Ozegbe, P. C., Kimaro, W., Madekurozwa, M-C., Soley, J. T. and Aire, T. A. 2010 The excurrent ducts of the testis of the emu (*Dromaius novaehollandiae*) and ostrich (*Struthio camelus*): Microstereology of the epididymis and immunohistochemistry of its cytoskeletal systems. *Anatomia Histologia Embryologia* **39**: 7 – 16.
  42. Crole, M. R. and Soley J. T. 2010 Gross Morphology of the Intra-Oral rhamphotheca, Oropharynx and Proximal Oesophagus of the Emu (*Dromaius novaehollandiae*). *Anat. Histol. Embryol.* **39**: 207–218.
  43. Crole, M. R. and Soley J. T. 2010 Surface Morphology of the Emu (*Dromaius novaehollandiae*) Tongue. *Anat. Histol. Embryol.* **39**: 355–365.
  44. Crole, M. R. and Soley, J. T. 2011 Distribution and structure of glandular tissue in the oropharynx and proximal esophagus of the emu (*Dromaius novaehollandiae*). *Acta Zoologica (Stockholm)* **92**: 206–215.
  45. Du Plessis, L. and Soley, J. T. 2011 Incidence, structure and morphological classification of abnormal sperm in the emu (*Dromaius novaehollandiae*). *Theriogenology* **75**: 589–601.
  46. Du Plessis, L. and Soley, J. T. 2011 Head-base bending and disjointed spermatozoa in the emu (*Dromaius novaehollandiae*): A morphological comparison of two closely related defects. *Theriogenology* **76**: 1275–1283.
  47. Tivane, C., Rodrigues, M. N., Soley, J. T. and Groenwald, H. B. 2011 Gross anatomical features of the oropharyngeal cavity of the ostrich (*Struthio camelus*). *Pesq. Vet. Bras.* **31**: 543-550.
  48. Du Plessis, L. and Soley, J. T. 2012 Abaxial tail implantation in the emu, *Dromaius novaehollandiae*: Morphological characteristics and origin of a rare avian sperm defect. *Theriogenology* **77**: 1137–1143.
  49. Crole, M. and Soley, J. 2012 Gross anatomical features of the tongue, lingual skeleton and laryngeal mound of *Rhea americana* (Palaeognathae, Aves): morpho-functional considerations. *Zoomorphology*. Published online: DOI 10.1007/s00435-012-0156-1
  50. Crole, M.R. and Soley, J.T. 2012. What prevents *Struthio camelus* and *Dromaius novaehollandiae* (Palaeognathae) from choking? A novel anatomical mechanism in ratites, the linguo-laryngeal apparatus. *Frontiers in Zoology*. **9**: 11. doi:10.1186/1742-9994-9-11.
  51. Crole, M.R. and Soley, J.T. 2012. Evidence of a true pharyngeal tonsil in birds: A novel lymphoid organ in *Dromaius novaehollandiae* and *Struthio camelus* (Palaeognathae). *Frontiers in Zoology*. In press.
  52. Du Plessis, L. and Soley, J. T. 2012 Structural peculiarities associated with multiflagellate sperm in the emu, *Theriogenology*. In press.
  53. Viljoen, M., Brand, T.S., Soley, J.T., and Boomker, E.A. 2012 The composition of egg yolk absorbed by fasted ostrich (*Struthio camelus* L.) chicks from 1 to 7 days posthatching and for ostrich (*Struthio camelus* L.) chicks from 1 to 16 days posthatching on a prestarter broiler diet. *Poultry Science* **91**:1342–1349.
  54. Myburgh, J.G. Huchzermeyer, F.W., Soley, J.T., Booyse, D.G., Groenewald, H.B., Bekker, L.C., Taguchi, T. and Guillet Jr, L.J. 2012 Technique for the collection of clear urine from the Nile crocodile (*Crocodylus*

*niloticus*). Journal of the South African Veterinary Association 83 (1) Art. #8, 6 pages.  
<http://dx.doi.org/10.4102/jsava.v83i1.8>

55. Stansfield, F.J., Nöthling, J.O., Soley, J.T. and Allen, W.R. 2012. Development of the germinal ridge and ovary in the African elephant (*Loxodonta africana*). Reproduction 144: 583-593.

## 6.2 Books and/or chapters in books

- Soley, JT and Groenewald, H.B. 1999. Reproduction. In *The Ostrich, Biology, Production and Health* (D. C. Deeming, Ed.). CABI Publishing, Wallingford, UK. pp. 129 – 158.

## 6.3 Published full-length conference papers/keynote addresses

1. Coubrough, R.I. H.J. Bertschinger, J.T. Soley and D.G. A. Meltzer. 1976. Some aspects of normal and abnormal spermatozoa in cheetah (*Acinonyx jubatus*). Proc. Electron Microsc. Soc. South. Afr. **6**: 5-6.
2. Coubrough, R.I. and J.T. Soley. 1977. An acrosome defect in a subfertile bull. Proc. Electron Microsc. Soc. South Afr. **7**: 117-118.
3. Coubrough R.I., H.J. Bertschinger and J.T. Soley. 1978. Scanning electron microscopic studies on cheetah spermatozoa. Proc. Electron Microsc. Soc. South. Afr. **8**: 57-58.
4. Soley, J.T. and R.I. Coubrough. 1978. The use of the montage as an aid in the evaluation of semen quality. Proc. Electron Microsc. Soc. South. Afr. **8**: 55-56.
5. Soley, J.T. and R.I. Coubrough. 1979. Specimen tilting as an aid in interpreting spermatozoon ultrastructure. Proc. Electron Microsc. Soc. South. Afr. **9**: 31-32.
6. Coubrough, R.I. and J.T. Soley. 1979. Electron microscopic techniques in spermatozoon studies. Proc. Electron Microsc. Soc. South. Afr. **9**: 77-78.
7. Green, E.D. and J.T. Soley. 1979. Scanning electron microscopic observations of the sweat duct openings on the feet of three indigenous rodents. Proc. Electron Microsc. Soc. South. Afr. **9**: 95-96.
8. Green, E.D. and J.T. Soley. 1979. A Scanning electron microscopic study of the tongue surface of two indigenous rodents. Proc. Electron Microsc. Soc. South. Afr. **9**: 97-98.
9. Soley, J.T. 1980. Variations in mitochondrial structure in bovine thymocytes. Proc. Electron Microsc. Soc. South. Afr. **10**: 137-138.
10. Soley, J.T. and R.I. Coubrough. 1981. A "Pouch-like" defect in the basal plate region of Cheetah spermatozoa. Proc. Electron Microsc. Soc. South. Afr. **11**: 121-122.
11. Coubrough, R.I. and J.T. Soley. 1981. The fine structure of interstitial cells of Leydig in Cheetah (*Acinonyx jubatus*). Proc. Electron Microsc. Soc. South. Afr. **11**: 97-98.
12. Green, E.D. and J.T. Soley. 1981. Ultrastructure of the sweat glands of the rodent *Aethomys namaquensis*. Proc. Electron Microsc. Soc. South Afr. **11**: 107-108.
13. Green, E.D. and J.T. Soley. 1981. Observations of the surface features of the scales of the skink *Mabuya capensis*. Proc. Electron Microsc. Soc. South. Afr. **11**: 105-106.
14. Soley, J.T. 1982. An intracytoplasmic crystal in a Leydig cell of the cheetah. Proc. Electron Microsc. Soc. South. Afr. **12**: 93-94.
15. Coubrough, R.I. and J.T. Soley. 1982. The "Dag Defect" in mammalian spermatozoa. Proc. Electron Microsc.

Soc. South. Afr. **12**: 75-76.

- 16.** Soley, J.T., G. Steyn and J.H. J. van Vuren. 1983. Some observations on chromatin condensation in developing spermatozoa of the teleost, *Clarias gariepinus*. Proc. Electron Microsc. Soc. South. Afr. **13**: 131-132.
- 17.** Soley, J.T. and J.H.J. van Vuren. 1984. Phagocytic properties of Sertoli cells in the testis of the teleost *Tilapia rendalli* (Cichlidae). Proc. Electron Microsc. Soc. South. Afr. **14**: 123-124.
- 18.** Van Vuren, J.H.J. and J.T. Soley. 1984. Ultrastructural observations of Leydig cells in the testis of the teleost, *Tilapia rendalli* (Cichlidae). Proc. Electron Microsc. Soc. South. Afr. **14**: 143-144.
- 19.** Gilbert, R.O., J.T.Soley and R.I. Coubrough. 1984. The ultrastructure of the ovine zona pellucida. Proc. Electron Microsc. Soc. South. Afr. **14**: 99-100.
- 20.** Soley, J.T., L.R. Tiedt, V.L. Hamilton-Attwell and L. Connaway. 1985. Ultrastructural features of abnormal spermatozoa from an infertile bull. Proc. Electron Microsc. Soc. South. Afr. **15**: 177-178.
- 21.** Van Vuren, J.H. J. and J.T. Soley. 1985. Morphological features of secondary spermatocytes in *Oreochromis macrochir* (Cichlidae). Proc. Electron Microsc. Soc. South. Afr. **15**: 191-192.
- 22.** Coubrough, R.I., D.H. Volkmann and J.T. Soley. 1985. The ultrastructure of retained cytoplasmic droplets in stallion spermatozoa. Proc. Electron Microsc. Soc. South. Afr. **15**: 131-132.
- 23.** Putterill, J.F., J.T.Soley and E.E.Oettlé. 1985. Some features of abnormal dog spermatozoa. Proc. Electron Microsc. Soc. South. Afr. **15**: 163-164.
- 24.** Oettlé, E.E. and J.T. Soley. 1985. The diadem defect in dog spermatozoa. Proc. Electron Microsc. Soc. South. Afr. **15**: 159-160.
- 25.** Soley, J.T. and J.H.J. van Vuren. 1986. Ultrastructural features of inter-Sertoli cell junctions in some teleosts. Proc. Electron Microsc. Soc. South. Afr. **16**: 67-68.
- 26.** Van Vuren, J.H.J., and J.T. Soley. 1986. The fine structure of the sperm tail of the teleost *Oreochromis macrochir* (Cichlidae). Proc. Electron Microsc. Soc. South. Afr. **16**: 77-78.
- 27.** Soley, J.T. and S.V. Yeates. 1988. The ultrastructure of amastigotes of a species of Leishmania in the bone marrow of an infected dog. Proc. Electron Microsc. Soc. South. Afr. **18**: 83-84.
- 28.** Van Vuren, J.H.J., J.T. Soley and G.J. Steyn. 1988. An unusual chromatin pattern in sperm of the tigerfish (*Hydrocynus forskahlii*). Proc. Electron Microsc. Soc. South. Afr. **18**: 93-94.
- 29.** Bertschinger, H.J., J.T.Soley, H.J. Ehret and R. Wood. 1988. The morphology and fertility of bull sperm with a mid-piece defect. Proc. 15th World Buiatrics Congr. pp. 1334-1339.
- 30.** Kotzé, S.H. and J.T. Soley. 1989. Scanning electron microscopic observations of the equine ileocaecal mucosa. Proc. Electron Microsc. Soc. South. Afr. **19**: 131-132.
- 31.** Soley, J.T. 1989. Transmission electron microscopy of ostrich (*Struthio camelus*) sperm. Proc. Electron. Microsc. Soc. South. Afr. **19**: 145-146.
- 32.** Soley, J.T. 1990. Manchette formation during spermiogenesis in the ostrich. Proc. Electron. Microsc. Soc. South. Afr. **20**: 169-170.
- 33.** Kotzé, S.H. and J.T. Soley. 1990. The structure of "intimal cushions" in veins of the equine ileocecal junction. Proc. Electron Microsc. Soc. South. Afr. **20**: 177-178.
- 34.** Putterill, J.F., N.J. Van der Merwe and J.T. Soley. 1991. Scanning electron and light microscopy of the oesophagus of the Nile Crocodile, *Crocodylus niloticus*. Proc. Electron Microsc. Soc. South. Afr. **21**: 235-236.
- 35.** Soley, J.T. 1991. Cytoplasmic densities in developing spermatids of the ostrich. Proc. Electron Microsc. Soc. South. Afr. **21**: 245-246.

36. Van Vuren, J.H.J., L. Fishelson and J.T. Soley. 1991. Spermiogenesis in *Clarias gariepinus*. Proc. Electron Microsc. Soc. South. Afr. **21**: 251-252.
37. Soley, J.T. and H.J. Els. 1992. The morphology of the proximal region of the ductuli efferentes in the ostrich testis. Proc. Electron Microsc. Soc. South. Afr. **22**: 139-140.
38. Bertschinger, H.J., W.P. Burger, J.T. Soley and J.H. de Lange. 1992. Semen collection and evaluation of the male ostrich. Proceedings of the Biennial Congress of the South African Veterinary Association, Grahamstown. 154-158.
39. Soley, J.T. and H.J. Els. 1993. The ultrastructure of retained cytoplasmic droplets in ostrich spermatozoa. Proc. Electron Microsc. Soc. South. Afr. **23**: 58.
40. Kotzé, S.H. and J.T. Soley. 1993. Scanning electron microscopic observations of the small intestinal mucosa of the Nile crocodile (*Crocodylus niloticus*). Proc. Electron Microsc. Soc. South. Afr. **23**: 45.
41. Els, H.J., J.T. Soley, C. de Jager and M.S. Bornman. 1994. Electron microscopy of tail-stump and short tail spermatozoa in two patients with asthenozoospermia. Proc. ICEM 13-Paris. 1141-1142.
42. Soley, J.T. 1994a. Ostrich sperm ultrastructure - evidence of a close link between the ratites and tinamous. VIIth Int. Symp. Spermatology - Cairns, Australia, pp.5.27-5.28.
43. Soley, J.T., H.J. Els and D. Volkmann. 1994. A gross form of tail bending in spermatozoa of a stallion. Proc. Electron Microsc. Soc. South. Afr. **24**: 96.
44. Soley, J.T., H.J. Els and L.M. Westlin. 1995. Ultrastructural features of the diadem defect in cane rat spermatozoa. Proc. Electron Microsc. Soc. South. Afr. **25**: 70.
45. Groenewald, H.B., J.T. Soley, A.J. Bezuidenhout and W.P. Burger. 1996. Sperm storage tubules in the vagina of the ostrich (*Struthio camelus*). Proc. Int. Conf. "Improving our Understanding of Ratites in a Farming Environment", Univ. Manchester, England. pp.154-155.
46. Soley, J.T., H.J. Bertschinger, H.J. Els and W.P. Burger. 1996. The morphology and incidence of retained cytoplasmic droplets in ostrich spermatozoa. Proc. Int. Conf. "Improving our Understanding of Ratites in a Farming Environment", Univ. Manchester, England. pp.16-18.
47. Irons, P.C., H.J. Bertschinger, J.T. Soley and W.P. Burger. 1996. Semen collection and evaluation in the ostrich. Proc. Int. Conf. "Improving our Understanding of Ratites in a Farming Environment", Univ. Manchester, England. pp.157-159.
48. Soley, J.T. and H.J. Els. 1996. Sperm defects in vertebrates: Variations on a theme? Proc. Microsc. Soc. South. Afr. **26**: 102.
49. Soley, J.T., H.J. Els and L.M. Westlin. 1996. Unusual morphological features of the outer dense fibres of the sperm of the cane rat (*Thryonomys swinderianus*). Proc. Microsc. Soc. South. Afr. **26**: 105.
50. Putterill, J.F. and J.T. Soley. 1996. The internal relief pattern of the oesophagus of the Nile crocodile. Proc. Microsc. Soc. South. Afr. **26**: 105.
51. Soley, J.T. 1997. The morphology of the testicular capsule of the ostrich (*Struthio camelus*) Proc. Microsc. Soc. South. Afr. **27**: 109.
52. Soley, J.T., H.B. Groenewald, A.J. Bezuidenhout and H.J. Els. 1998. Scanning electron microscopy of the luminal epithelium of the air sacs of the ostrich (*Struthio camelus*) Proc. Microsc. Soc. South. Afr. **28**: 88.
53. Putterill, J.F. and J.T. Soley. 1998. Histology of the tongue of the Nile crocodile, *Crocodylus niloticus* (Laurenti 1768). Proc. Microsc. Soc. South. Afr. **28**: 89.
54. Putterill, J.F. and J.T. Soley. 1998. Histology of the gular-valve of the Nile crocodile, *Crocodylus niloticus* (Laurenti 1768). Proc. Microsc. Soc. South. Afr. **28**: 90.

55. Soley, J.T. 1998. Nuclear shaping during spermiogenesis in two non-passerine birds, the ostrich (*Struthio camelus*) and sacred ibis (*Threskiornis aethiopicus*). Joint Meeting of the Anatomical Society of Great Britain and Ireland, the Anatomical Society of Southern Africa and the Nederlandse Anatomen Vereniging, 15 - 17th April 1998, Rolduc, the Netherlands.
56. Bezuidenhout, A.J., G. Putter, H.B. Groenewald and J.T. Soley. 1998. The anatomy of the air sacs of the ostrich. Proceedings of the 2nd International Ratite Congress - "Ratites in a Competitive World", Oudtshoorn, South Africa, 21 - 25 September 1998, pp. 94-95.
57. Soley, J.T., H.B. Groenewald and A.J. Bezuidenhout. 1998. Ultrastructural features of the epithelial lining of the air sacs of the ostrich. Proceedings of the 2nd International Ratite Congress - "Ratites in a Competitive World", Oudtshoorn, South Africa, 21 - 25 September 1998, pp. 96-98.
58. Soley, J.T., H.J. Bertschinger, R.I. Coubrough and D.G.A. Meltzer. 1999. The morphology of normal and abnormal cheetah sperm. 5th International Symposium on Human Sub-Fertility - "Andrology in the Nineties", Stellenbosch, South Africa, 25 - 27 March 1999, pp. AL-47.
59. Bertschinger, H.J., J.T. Soley, D.G.A. Meltzer and H. 1999. A comparative study of the sperm morphology of lions in the Hluhluwe/Umfolozi game reserve and the Kruger National Park. 5th International Symposium on Human Sub-Fertility - "Andrology in the Nineties", Stellenbosch, South Africa, 25 - 27 March 1999, pp. AL-48.
60. Soley, J.T. and Groenewald, H.B. 1999. Testicular structure and the process of spermatogenesis in the ostrich. 10th Symposium on Tropical Animal Health and Production. Faculty of Veterinary Medicine, Utrecht University, The Netherlands, 5th November, 1999, pp. 61-65.
61. Soley, J.T. and Josling, D. 1999. Stages of spermiogenesis in the ostrich revealed by light microscopy of semi-thin resin sections. Proc. Microsc. Soc. South. Afr. **29**: 68.
62. Cross, R.H.M., Pinchuck, S.C. and Soley, J.T. 1999. Effects of preparative technique on the dimensional characteristics of sperm cells. Proc. Microsc. Soc. South. Afr. **29**: 98.
63. Soley, J.T. and van Wilpe, E. 2000. Ultrastructural characteristics of the interstitial cells of Leydig in the cane rat (*Thryonomys swinderianus*). Proc. Microsc. Soc. South. Afr. **30**: 57.
64. Putterill, J.F and Soley, J.T. 2001. Surface features of the roof of the pharyngeal cavity of the Nile crocodile, *Crocodylus niloticus*. Proc. Microsc. Soc. South. Afr. **31**: 69.
65. Aire, T.A. and Soley, J.T. 2003. The guinea fowl spermatozoon centriolar complex: A morphological deviation for a non-passerine bird. Proc. Microsc. Soc. South. Afr. **33**: 75.
66. Soley, J.T and van Wilpe, E. 2003. A unique modification of the smooth endoplasmic reticulum in Leydig cells of the sexually mature male ostrich. Proc. Microsc. Soc. South. Afr. **33**: 82.
67. Putterill, J.F. and Soley, J.T. 2004. Morphological features of the rostral palatine region of the Nile crocodile, *Crocodylus niloticus*. Proc. Microsc. Soc. South. Afr. **34**: 68.
68. Schmidt, S., Soley, J.T., Aire, T.A. and Gerber, D. 2004. Villous architecture and fetomaternal interdigitation in the African buffalo (*Syncerus caffer*) during different gestation stages. Proc. Microsc. Soc. South. Afr. **34**: 69.
69. Soley, J.T. and Gray, M. 2004. Modified small muscular arteries in the shoulder joint capsule of the dog. Proc. Microsc. Soc. South. Afr. **34**: 70.
70. Soley, J.T., van Wilpe, E., Aire, T.A. and Ozegbe, P.C. 2005. The morphology of the seminiferous tubules in three-day-old ostrich chicks. Proc. Microsc. Soc. South. Afr. **35**: 60.
71. Ozegbe, P.C., Aire, T.A. and Soley, J.T. 2005. The efferent ductules of the testis of the ostrich (*Struthio camelus*). Proc. Microsc. Soc. South. Afr. **35**: 74.
72. Elias, M.Z.J., Aire, T.A. and Soley, J.T. 2005. The microvasculature of the testis, epididymis and proximal ductus deferens of the ostrich (*Struthio camelus*) as revealed by India ink injection. Proc. Microsc. Soc. South. Afr. **35**: 75.

73. Mabeta, P., Soley, J.T. and Davis, P.F. 2006 Assessment of the effects of bleomycin and interferon  $\alpha$ -2a on angiogenesis in a human vascular tumour model. *Proc. Microsc. Soc. South. Afr.* **36**: 49.
74. Elias, M.Z.J., Aire, T.A. and Soley, J.T. 2006 The arterial microvasculature of the distal ductus deferens, receptaculum ductus deferentis and phallus of the ostrich, as revealed by India ink injection. *Proc. Microsc. Soc. South. Afr.* **36**: 53.
75. Tivane, C., Soley, J.T. and Groenewald, H. B. 2006 Distribution and structural features of Pacinian (Herbst) corpuscles in the non-glandular region of the palate of the ostrich (*Struthio camelus*). *Proc. Microsc. Soc. South. Afr.* **36**: 64.
76. Ozegbe, P.C., Aire, T.A., Madekurozwa, M-C. and Soley, J.T. 2006 Morphological and immunohistochemical characterisation of the testicular capsule and peritubular tissue of ratite birds. *Proc. Microsc. Soc. South. Afr.* **36**: 66.
77. Crole, M.R. and Soley, J.T. 2008 Histological structure of the tongue of the emu (*Dromaius novaehollandiae*). *Proc. Microsc. Soc. South. Afr.* **38**: 63.
78. Putterill, J.F. and Soley, J.T. 2008 Immune defences in the oral and pharyngeal cavities of the Nile crocodile, *Crocodylus niloticus*. *Proc. Microsc. Soc. South. Afr.* **38**: 65.
79. Elias, M.Z.J., Soley, J.T., Aire, T.A. and du Plessis, L. 2008 Membrane specializations in the efferent ducts of the ostrich epididymis. *Proc. Microsc. Soc. South. Afr.* **38**: 76.
80. Crole, M.R. and Soley, J.T. 2009 Surface structure of the tongue of the emu (*Dromaius novaehollandiae*). *Proc. Microsc. Soc. South. Afr.* **39**: 26.
81. Crole, M.R., Soley, J.T. and du Plessis, L. 2009 The ultrastructure of Herbst corpuscles in the oro-pharynx of the emu (*Dromaius novaehollandiae*) and ostrich (*Struthio camelus*). *Proc. Microsc. Soc. South. Afr.* **39**: 27.
82. Crole, M.R. and Soley, J.T. 2009 Gland structure in the oropharynx and proximal esophagus of the emu (*Dromaius novaehollandiae*). *Proc. Microsc. Soc. South. Afr.* **39**: 25.
83. Elias, M.Z.J., Soley, J.T. and Aire, T.A. 2009 Ultrastructure of microvasculature of the ostrich Ductus deferens, Receptaculum ductus deferens and Phallus. *Proc. Microsc. Soc. South. Afr.* **39**: 28.
84. Crole, M.R. and Soley, J.T. 2010 Distribution and structure of lymphoid tissue in the upper digestive tract of the emu (*Dromaius novaehollandiae*). *Proc. Microsc. Soc. South. Afr.* **40**: 18.
85. Du Plessis, L. and Soley, J.T. 2010 Incidence and morphology of multiflagellate spermatozoa in the emu, (*Dromaius novaehollandiae*). *Proc. Microsc. Soc. South. Afr.* **40**: 19.
86. Elias, M.Z.J., Soley, J.T. and Aire, T.A. 2010 The blood-testis barrier in the ostrich (*Struthio camelus*). *Proc. Microsc. Soc. South. Afr.* **40**: 20.
87. Crole, M.R. and Soley, J.T. 2011 Granulomatous inflammation of the pharyngeal tonsils in an ostrich. *Proc. Microsc. Soc. South. Afr.* **41**: 23.
88. Du Plessis, L. and Soley, J.T. 2011 Morphology and origin of sperm neck defects in the emu, (*Dromaius novaehollandiae*). *Proc. Microsc. Soc. South. Afr.* **41**: 18.
89. Crole, M.R. and Soley, J.T. 2011 Abstracts. A selection of abstracts presented at the 39th Annual Conference of the Anatomical Society of Southern Africa (ASSA) at the University of Witwatersrand, Johannesburg, Gauteng, South Africa, 22–25 May 2011. "Functional morphology of the tongue and larynx in the greater rhea (*Rhea americana*)". *Clinical Anatomy* **24**: 924-935 (927).
90. Crole, M.R. and Soley, J.T. 2012. Abstracts. A selection of abstracts presented at the 40th Annual Conference of the Anatomical Society of Southern Africa (ASSA) at the University of Namibia, Windhoek, Namibia, 14 – 18 April 2012. "What prevents ratites from choking?". *Clinical Anatomy* **25**: in press.
91. Crole, M.R. and Soley, J.T. 2012 As rare as "emu" teeth. *Proc. Microsc. Soc. South. Afr.* **42**: in press.

## 6.4 Non-refereed publications or popular articles

### Conference abstracts

1. Soley, J.T. and E.J. Marais. 1984. Cytoplasmic microtubules - An integral component of type I epithelial lining cells of the chicken lung. *S. Afr. J. Sci.* 80: 434 (Abstr.).
2. Soley, J.T., S.A. Hanrahan and B.C. Fabian. 1985. Scanning electron microscopic observations of the gastrulation process in BrdU-treated chick embryos. *S. Afr. J. Sci.* **81**: 384 (Abstr.).
3. Soley, J.T., S.A. Hanrahan and B.C. Fabian. 1986. Some ultrastructural features of cilia in definitive primitive streak-stage chick embryos. *S. Afr. J. Sci.* **82**: 451 (Abstr.).
4. Soley, J.T. 1990. Ultrastructural features of the boundary tissue of the seminiferous tubule of the ostrich (*Struthio camelus*). *S. Afr. J. Sci.* **86**: 163. (Abstr.).
5. Soley, J.T., L.M. Westlin, N.J. Van Der Merwe and Y.J. Brymer. 1994. Preliminary observations on prenatal ossification in the pouched mouse (*Saccostomus campestris*). *J. Anat.* **185**: 694. (Abstr.).

## 6.5 Patents N/A

## 6.6 Technical reports

- Report on toe amputation in ostrich chicks - 2011

# 7. OTHER SCHOLARLY AND RESEARCH-BASED CONTRIBUTIONS

## 7.1 Participation in conferences, workshops and short courses - specify type of contribution

### 7.2.1 National

#### The Electron Microscopy Society of Southern Africa.

#### Poster Presentations:

1. 1976 - Some aspects of normal and abnormal spermatozoa in cheetah (*Acinonyx jubatus*)
2. 1976 - Changes in uterine ciliogenesis seen in cattle on low plane nutrition.
3. 1977 - An acrosome defect in a subfertile bull.
4. 1978 - Scanning electron microscopic studies on Cheetah spermatozoa.
5. 1978 - The use of the montage as an aid in the evaluation of semen quality.
6. 1979 - Electron microscopic techniques in spermatozoon studies.
7. 1979 - Specimen tilting as an aid in interpreting spermatozoon ultrastructure.

8. 1979 - A scanning electron microscopic study of the tongue surface of two indigenous rodents.
9. 1979 - Scanning electron microscopic observations of the sweat duct openings on the feet of three indigenous rodents.
10. 2003 - A unique modification of the smooth endoplasmic reticulum in Leydig cells of the sexually mature male ostrich.

**Papers:**

1. 1980 - The Ultracut/FC4 low temperature sectioning system.
2. 1980 - Variations in mitochondrial structure in bovine thymocytes
3. 1981 - A "Pouch-like" defect in the basal plate region of cheetah spermatozoa.
4. 1982 - An intracytoplasmic crystal in a Leydig cell of the Cheetah.
5. 1983 - Some observations on chromatin condensation in developing spermatzoa of the teleost, *Clarias gariepinus*.
6. 1984 - Phagocytic properties of Sertoli cells in the testis of the teleost *Tilapia rendalli*
7. 1985 - Ultrastructural features of abnormal spermatozoa from an infertile bull.
8. 1986 - Ultrastructural features of inter-Sertoli cell junctions in some teleosts.
9. 1988 - The ultrastructure of amastigotes of a species of *Leishmania* in the bone marrow of an infected dog.
10. 1989 - Transmission electron microscopy of ostrich (*Struthio camelus*) sperm
11. 1990 - Manchette formation during spermiogenesis in the ostrich.
12. 1991 - Cytoplasmic densities in developing spermatids of the ostrich.
13. 1992 - The morphology of the proximal region of the ductuli efferentes in the ostrich testis.
14. 1993 - The ultrastructure of retained cytoplasmic droplets in ostrich spermatozoa.
15. 1994 - A gross form of tail bending in spermatozoa of a stallion.
16. 1995 - Ultrastructural features of the diadem defect in cane rat spermatozoa.
17. 1996 - Sperm defects in vertebrates: Variations on a theme?
18. 1996 - Unusual morphological features of the outer dense fibres of the sperm of the cane rat (*Thryonomys swinderianus*).
19. 1997 - The morphology of the testicular capsule of the ostrich (*Struthio camelus*).
20. 1998 - Scanning electron microscopy of the luminal epithelium of the air sacs of the ostrich (*Struthio camelus*).
21. 1999 - Stages of spermiogenesis in the ostrich revealed by light microscopy of semi-thin resin sections.

22. 2000 - Ultrastructural characteristics of the interstitial cells of Leydig in the cane rat (*Thryonomys swinderianus*).
23. 2003 - The guinea fowl spermatozoon centriolar complex: A morphological deviation for a non-passerine bird.
24. 2004 - Modified small muscular arteries in the shoulder joint capsule of the dog.
25. 2005 - The morphology of the seminiferous tubules in three-day-old ostrich chicks.

**Papers presented from 2006 – 2012 have not been included**

### **The Anatomical Society of Southern Africa.**

#### **Papers.**

1. 1982 - Ultrastructural observation on chromatin condensation in developing cheetah spermatozoa.
2. 1984 - Cytoplasmic microtubules - an integral component of Type I epithelial lining cells of the chicken lung.
3. 1985 - Scanning electron microscopic observations of the gastrulation process in BrdU-treated chick embryos.
4. 1986 - Some ultrastructural features of cilia in definitive primitive streak-stage chick embryos.
5. 1987 - The fine structure of atypical mitochondria in Sertoli cells of an infertile bull.
6. 1989 - Preliminary observations on the fine structure of ostrich (*Struthio camelus*) sperm.
7. 1990 - Ultrastructural features of the boundary tissue of the seminiferous tubule of the ostrich (*Struthio camelus*).
8. 1991 - Formation of the flagellum in ostrich (*Struthio camelus*) spermatozoa.
9. 1992 - Scanning electron microscopy of normal ostrich sperm.
10. 1994 - Preliminary observations on prenatal ossification in the pouched mouse (*Saccostomus campestris*).
11. 1995 - Ultrastructural features of cane rat spermatozoa.
12. 2000 - Perceived problem topics/concepts experienced by students of anatomy, histology and embryology: a comparison between medical and veterinary students.
13. 2003 - Comparative morphology of the Crocodylian kidney – a preliminary report.
14. 2004 - Ultrastructural features of the sperm storage tubules in sexually immature female ostriches.
15. 2005 - The incidence and morphological characteristics of pigmentation in the ostrich caecum

**Papers presented from 2006 – 2012 have not been included**

## The South African Association of Veterinary Technologists.

1. 1983 - The application of the electron microscope in veterinary histology.

### Others.

1. 1983 - Tegniek vir die voorbereiding van vissemen vir TEM (Post-graduate seminar - Faculty of Science, Rand Afrikaans University, 14th April, 1983).
2. 1984 - Some ultrastructural features of abnormal spermatozoa (1st Faculty Day - Faculty of Veterinary Science, University of Pretoria, 5th September, 1984).
3. 1985 - Scanning electron microscopic observations of the gastrulation process in BrdU-treated chick embryos. (2nd Faculty Day - Faculty of Veterinary Science, University of Pretoria, 25th September, 1985).
4. 1986 - Some ultrastructural features of cilia in definitive primitive streak-stage chick embryos. (3rd Faculty Day - Faculty of Veterinary Science, University of Pretoria, 1st October, 1986).
5. 1986 - The influence of BrdU on primitive streak formation in the chick embryo. (Joint Symposium of the Zoological and Parasitological Societies of Southern Africa - Rand Afrikaans University, 15 18th July 1986).
6. 1987 - Morphological features of Sertoli cells from an infertile bull. (4th Faculty Day - Faculty of Veterinary Science, University of Pretoria, 25th September, 1987)
7. 1988 - The ultrastructure of amastigotes of a *Leishmania* species in the bone marrow of a dog. (5th Faculty Day - Faculty of Veterinary Science, University of Pretoria, 5th October, 1988). **Prize winning poster.**
8. 1989 - Ultrastructural characteristics of normal ostrich (*Struthio camelus*) sperm. (6th Faculty Day - Faculty of Veterinary Science, University of Pretoria, 27th September, 1989) and (Ostrich Research Seminar, Oudtshoorn, 26 - 27th July).
9. 1991 - Correlation between semen quality and egg fertility in ostriches. (Ostrich Research Seminar, Oudtshoorn, 17 - 18th July).
10. 1993 - The ultrastructure of retained cytoplasmic droplets in ostrich spermatozoa. (10th Faculty Day - Faculty of Veterinary Science, University of Pretoria, 1st October, 1993).
11. 1995 - The ultrastructure of cane rat (*Thryonomus swinderianus*) spermatozoa. (12th Faculty Day - Faculty of Veterinary Science, University of Pretoria, 27th September, 1995).
12. 1999 - The anatomy of the male gamete - Recipe for success? Thompson-Stibbe Lecture, 29<sup>th</sup> Congress of the Anatomical Society of Southern Africa, Sun City, 18<sup>th</sup> April 1999.
13. 2000 - Anatomy Dedication Ceremony, Technikon Witwatersrand, 19<sup>th</sup> January 2000.
14. 2003 - Sperm abnormalities and infertility in a variety of species including wildlife. Annual Congress of the South African Veterinary Semen and Embryo Group, Faculty of Veterinary Science, University of Pretoria, Pretoria, 5 – 6 September 2003.
15. 2003 - The ultrastructure of mammalian sperm abnormalities: Making sense of it all. Bi-annual meeting of the South African Semen and Embryo group, Development Trust

Centre, Pretoria, 13 September 2003.

16. 2003 - Spermatozoon ultrastructure in some African wildlife species (Lion, Cheetah, Cane Rat and Ostrich): The Good, the Bad and the Ugly. Invited Lecture, The Veterinärmedizinische Universität Wien, Vienna, Austria, 14 October 2003.

#### **CAREER-ASSOCIATED TRAINING:**

1. An informal introductory course conducted by Mr. G.P. Loots at the Department of Anatomy of the Medical School of the University of Pretoria, in February 1976.
2. A week long course in the utilization and maintenance of the electron microscope held at Eindhoven in the Netherlands during 18 - 22 April 1977.
3. A practical course in Electron Microscopy Techniques held during 23 - 30 November 1977 at the Institute for Electron Microcopy of the South African Medical Research Council in Cape Town.
4. Two workshops on specialized electron microscopic techniques held during 7 - 15 December 1978 at the above venue.
5. A Scanning Electron Microscopy workshop held by Dr. Alan Boyde during 4 - 5 December 1980 at the Dental School of the University of the Witwatersrand.
6. A short course in Autoradiography (Light and Electron microcopy) conducted by Drs. John Baker and Robin Christian during 13 - 17 February 1984 at the Centre for Electron Microcopy, Pretoria Technikon.
7. An immunocytochemistry Workshop (Light and Electron microscopy) run by Prof Ric Bernard at Rhodes University in November 1990.

#### **7.2.2 International**

- 1994 - Ostrich sperm ultrastructure - evidence of a close link between the ratites and tinamous. VIIIth Int. Symp. Spermatology - Cairns, Australia.
- 1996 - The morphology and incidence of retained cytoplasmic droplets in ostrich spermatozoa. Int. Conf. "Improving our Understanding of Ratites in a Farming Environment", Univ. Manchester, England.
- 1998 - Nuclear shaping during spermiogenesis in two non-passerine birds, the ostrich (*Struthio camelus*) and sacred ibis (*Threskiornis aethiopicus*). Joint Meeting of the Anatomical Society of Great Britain and Ireland, the Anatomical Society of Southern Africa and the Nederlandse Anatomen Vereniging, 15 - 17<sup>th</sup> April 1998, Rolduc, the Netherlands.
- 1998 - Ultrastructural features of the epithelial lining of the air sacs of the ostrich. Proceedings of the 2<sup>nd</sup> International Ratite Congress - "Ratites in a Competitive World", 21 - 25 September 1998, Oudtshoorn, South Africa.
- 1999 - The morphology of normal and abnormal cheetah sperm. 5<sup>th</sup> International Symposium on Human Sub-Fertility - "Andrology in the Nineties", 25 - 27 March 1999, Stellenbosch, South Africa.
- 1999 - Testicular structure and the process of spermatogenesis in the ostrich. 10<sup>th</sup> Symposium on Tropical Animal Health and Production. 5<sup>th</sup> November, 1999, Faculty of Veterinary Medicine, Utrecht University, The Netherlands.

- 2001 - The ultrastructure of spermatozoa of the greater cane rat (*Thryonomys swinderianus*). 16<sup>th</sup> International Symposium on Morphological Sciences, 22 - 26<sup>th</sup> July 2001, Sun City, South Africa.
- 2001 - Basic architecture of the interstitial tissue of the testis of the Sacred Ibis (*Threskiornis aethiopicus*). **POSTER**. 16<sup>th</sup> International Symposium on Morphological Sciences, 22 - 26<sup>th</sup> July 2001, Sun City, South Africa.
- 2002 - Sperm sterilizing defects: Cause or symptom? 9<sup>th</sup> International Symposium on Spermatology, 6-11 October, Cape Town, South Africa.
- 2009 The anatomy of the cloaca of the Nile crocodile (*Crocodylus niloticus*). 17<sup>th</sup> Congress of the International Federation of Associations of Anatomists, 16 – 19 August, Cape Town, South Africa.
- 2012 Poster presentation: Biennial Meeting: Association for Applied Animal Andrology (AAAA) "Andrology QA / Biosecurity", Vancouver Community College Vancouver, BC, Canada July 28-29, 2012

#### 7.2 Teamwork and collaboration with others:

- See authorship of publications.

#### 7.3 Membership in national and international bodies

- Member of the Electron Microscopy Society of Southern Africa. (1976-current).
- Member of the South African Association of Veterinary Technologists (1982).
- Member of the Anatomical Society of Southern Africa (February 1982 - current).
- I have been a committee member and acting Secretary for the Anatomical Society of Southern Africa (ASSA) and serve as Treasurer of the Electron Microscopy Society of Southern Africa (1991 - 2009). I am presently a council member of ASSA, but have also served a term as President of the Society as well as acting as Honorary Editor of Proceedings. I have also been responsible for organising two conferences of the EM Society (Onderstepoort 1989 and Berg-En-Dal 1993) and acted as co-organiser of the 1987 conference of the Anatomical Society at the Morula Sun. I have also acted as session chairman and as prize winners referee (papers and posters) on numerous occasions for both Societies. I was also involved in the organisation of the 29<sup>th</sup> Congress of the Anatomical Society of Southern Africa (Scientific Programme). I also acted as session chairman at the 9<sup>th</sup> International Symposium on Spermatology in 2002.
- I have been involved on the Organizing Committees of the following International Conferences held in South Africa: (1). 16th International Symposium on Morphological Sciences, Sun City, 22 - 26th July 2001. [Scientific Programme]. (2). 9th International Symposium on Spermatology, Cape Town, October 6-11, 2002 (Treasurer). (3). 15th International Congress on Electron Microscopy, Durban, 1 - 6th September 2002. [Secretariat]. I am currently a member of the organising committee of the 2009 conference of the International Federation of Associations of Anatomists (IFAA) to be held in Cape Town.

#### 7.4 Visits to local and overseas universities or research institutes as guest professor or researcher

- Invited guest lecturer at the University of Veterinary Medicine, Vienna, Austria in 2004 and 2011.

## 8. ARTISTIC OUTPUTS

N/A

## 9. MANAGEMENT AND ADMINISTRATIVE DUTIES

- I recently served on the Paraveterinary Curriculum Committee.
- I have also been involved in the interviews for prospective 2nd year Veterinary students and 1st year Veterinary nurses during the past 6 years.
- I was part of the interview panel for Veterinary Nursing Tutors for the 2000 academic year.
- During the past 10 years I have acted as group guide during the annual Faculty Parent's Day.
- I was the convenor of the Faculty of Veterinary Science "Faculty Day" committee for 10 years.
- I have also acted as Head of Department on various occasions, the most recent being for a five week period from 24/4/2004 – 26/5/2004.
- Physiology section head 2004-2008.
- All duties related to lecturing, post-graduate student supervision, setting of tests and marking.

## 10. COMMUNITY AND/OR PROFESSIONAL ENGAGEMENT

### 10.1 Outreach projects, 10.2 Professional service performed and 10.3 Clinical service

N/A

### 10.4 Involvement with other universities/scientific institutions

- NRF rated scientist
- External examiner for other universities (national and international)
- Guest lecturer in Vienna, Austria

### 10.5 Referee duties

I have refereed a number of papers for the **European Journal of Morphology**, **Onderstepoort Journal of Veterinary Research**, **The South African Journal of Zoology**, **Journal of the South African Veterinary Association**, **Proceedings of the Microscopy Society of Southern Africa**, **Anatomical Society of Southern Africa**.

I currently serve on the Board of the **European Journal of Morphology**.

I have been involved as an independent reviewer for the **National Research Foundation** on a Curriculum Vitae of Prof John T Soley as of 2014-04-14

number of occasions as well as for Research Protocols of the Faculty of Veterinary Science. I

In 1996 I acted as a specialist reviewer for the **United States - Israel Bi-national Agricultural Research and Development Fund** for a proposal on Artificial insemination in ratites.

## 11. AWARDS AND SCIENTIFIC/SCHOLARLY RECOGNITION

### 11.1 Evaluation status as scientist/scholar

#### Current NRF rating – C3

**C category** - Established researchers with a sustained recent record of productivity in the field who are recognised by their peers as having: produced a body of quality work, the core of which has coherence and attests to ongoing engagement with the field demonstrated the ability to conceptualise problems and apply research methods to investigating them.

**C2** - All of the reviewers are firmly convinced that the applicant is an established researcher as described. The applicant may, but need not, enjoy some international recognition for the quality and impact of his/her recent research outputs.

### 11.2 Research awards and prizes

Wirsam Light Microscopy Prize For Best Presentation: 47<sup>th</sup> Annual Conference of the Microscopy Society of Southern Africa (MSSA) in Durban, 8 – 11 December 2009.

Co-author: Fiona Graham Prize for First time correct accepted abstract : 46<sup>th</sup> Annual Conference of the Microscopy Society of Southern Africa (MSSA) in Botswana, 23-25 July 2008.

Co-author: Wirsam Light Microscopy Prize For Best Presentation: 48<sup>th</sup> Annual Conference of the Microscopy Society of Southern Africa (MSSA) in Warmbaths, 26 – 29 October 2010.

### 11.3 Teaching awards and prizes

Short-listed numerous times for Lecturer of the Year at the Faculty of Veterinary Science, University of Pretoria.

### 11.4 Artistic awards and prizes

N/A

### **11.5 Academic awards and prizes**

Prize for the best MSc thesis in Zoology: University of the Witwatersrand, 1988.