

8. 神 經 系

(Nervous system)

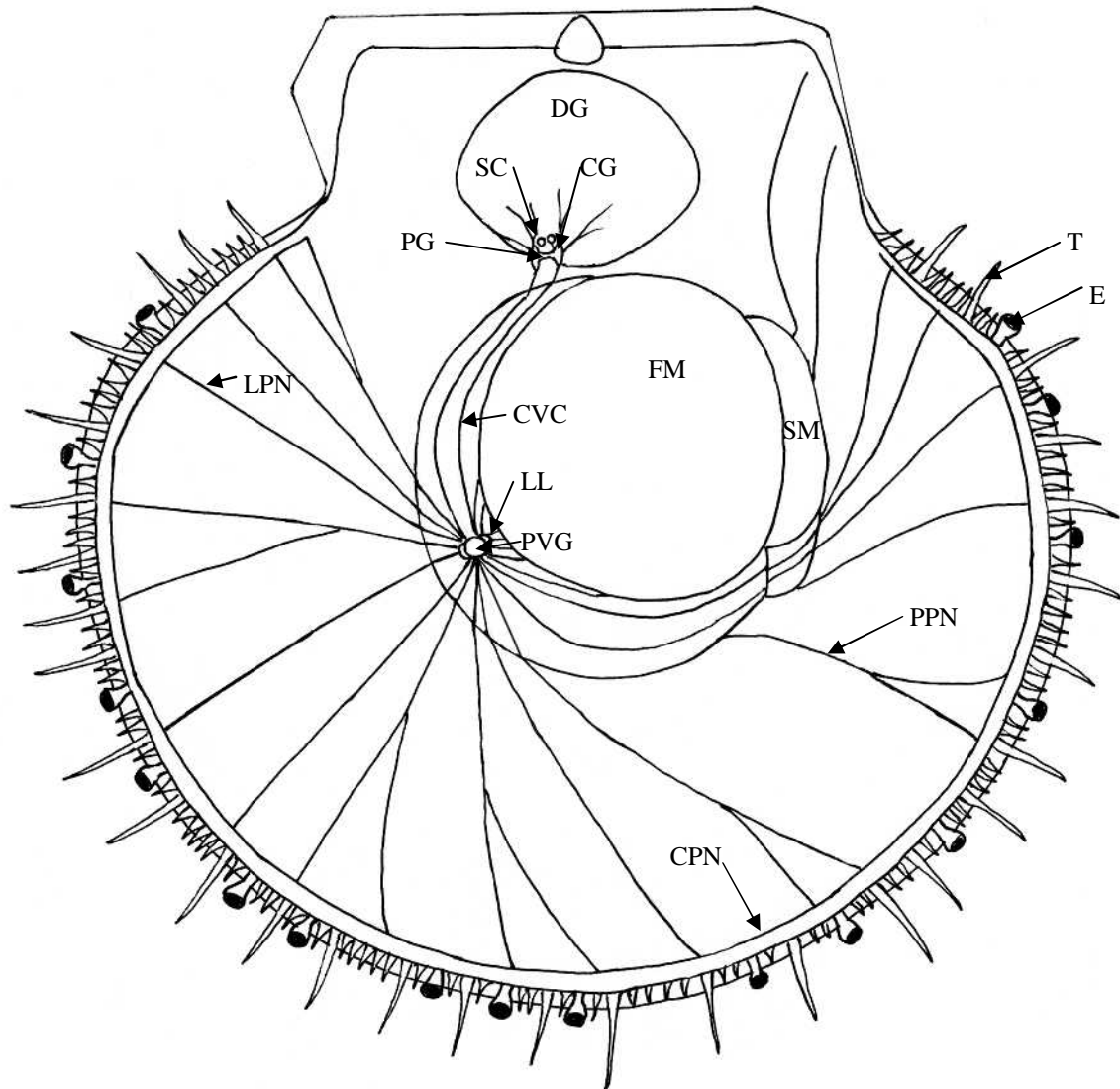


図8.1 神経系の組織図

CG:脳神経節(cerebral ganglion), CVC:脳内臓性連鎖(cerebro-visceral connective), CPN:環外套神経(circum pallial nerve), DG:中腸腺(digestive gland), E:目(eye), FM:横紋筋(striated muscle), LL:側葉(lateral lobe), LPN:側外套神経(lateral pallial nerve), PG:足神経節(pedal ganglion), PPN:後外套神経(posterior pallial nerve), PVG:体壁内臓神経節(parieto-visceral ganglion), SC:平衡胞(statecyst), SM:無紋筋(non-striated muscle), T:触手(tentacle)

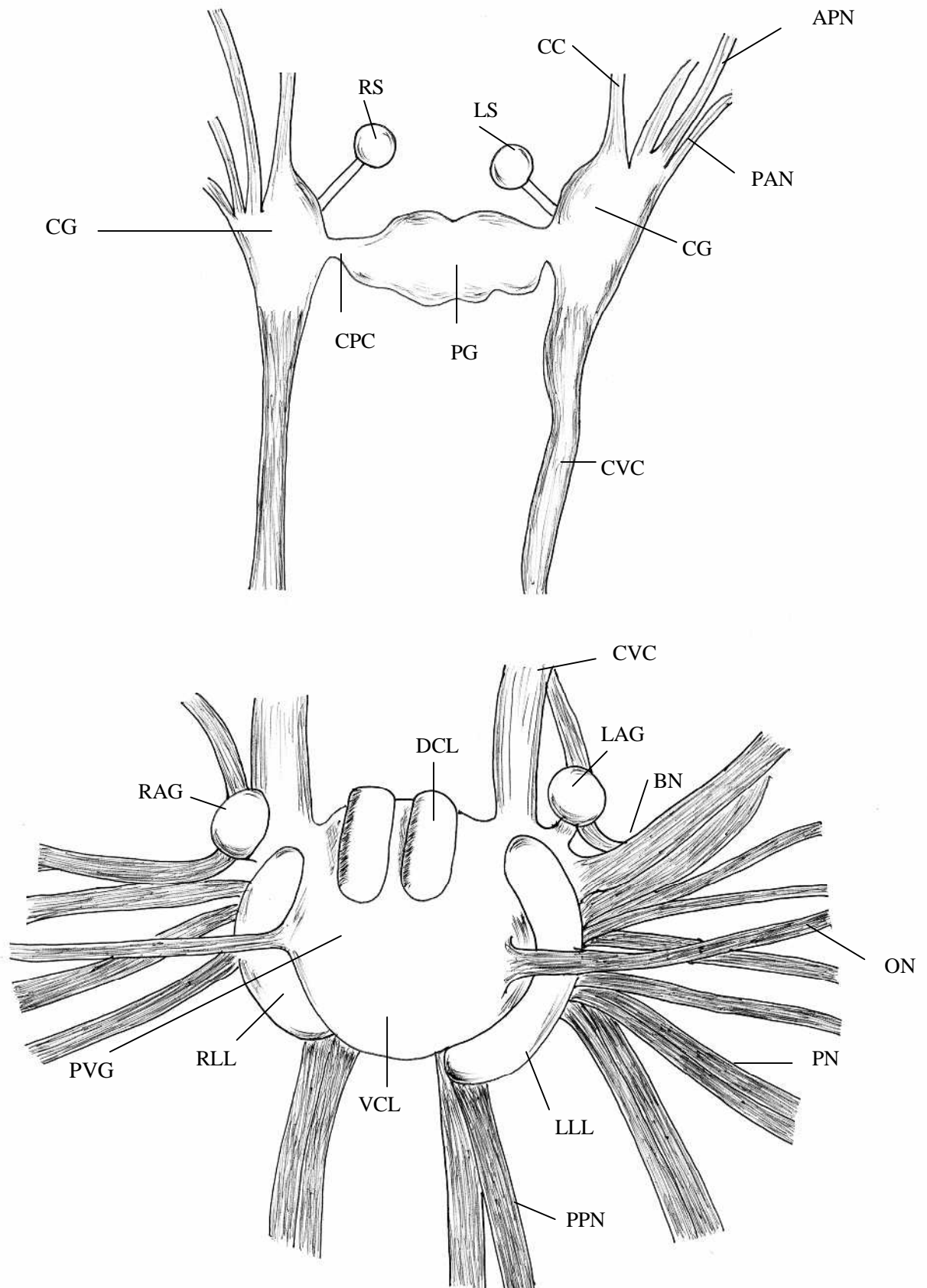


図8.2. 神経節の組織図

APN:前外套神経 (anterior pallial nerve), BN:鰓神経 (branchial nerve), CC:脳神経節連鎖 (cerebral commissure), CG:脳神経節 (cerebral ganglion), CPC:脳足神経連鎖 (cerebro-pedal connective), CVC:脳内臓神経連鎖 (cerebro-visceral connective), DCL:背中心葉 (dorsal central lobe), LAG:左副神経節 (left accessory ganglion), LLL:左側葉 (left lateral lobe), LS:左平衡胞 (light statocyst), ON:嗅検器鰓神経 (osphradio-branchial nerve), PAN:触手神経 (palp nerve), PG:足神経節 (pedal ganglion), PN:外套神経 (pallial nerve), PPN:後外套神経 (posterior pallial nerve), PVG:体腔内臓神経節 (parieto-visceral ganglion), RAG:右副神経節 (right accessory ganglion), RLL:右側葉 (right lateral lobe), RS:右平衡胞 (right statocyst), VCL:腹中心葉 (ventral central lobe)

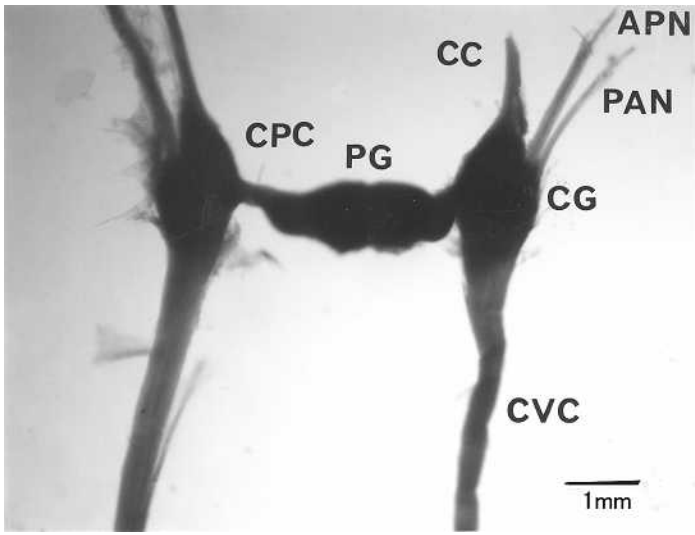


图.8.3

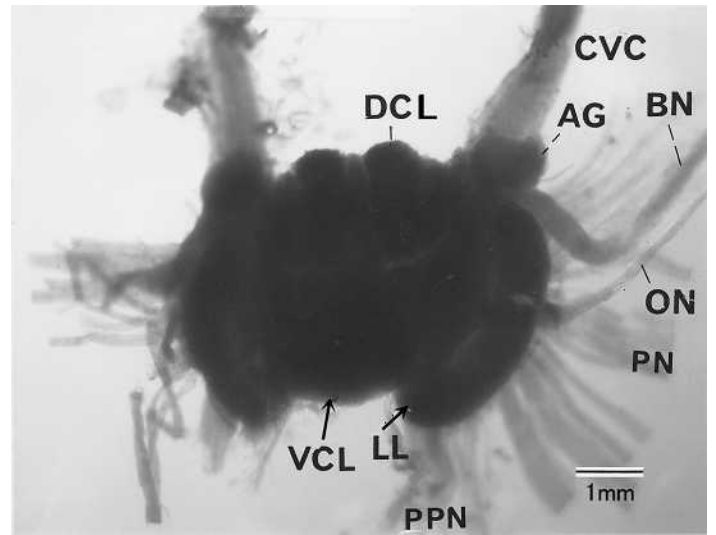


图.8.4

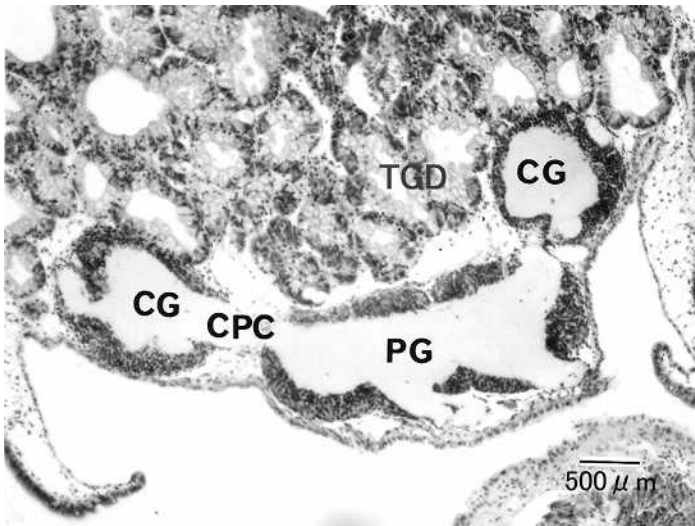


图.8.5

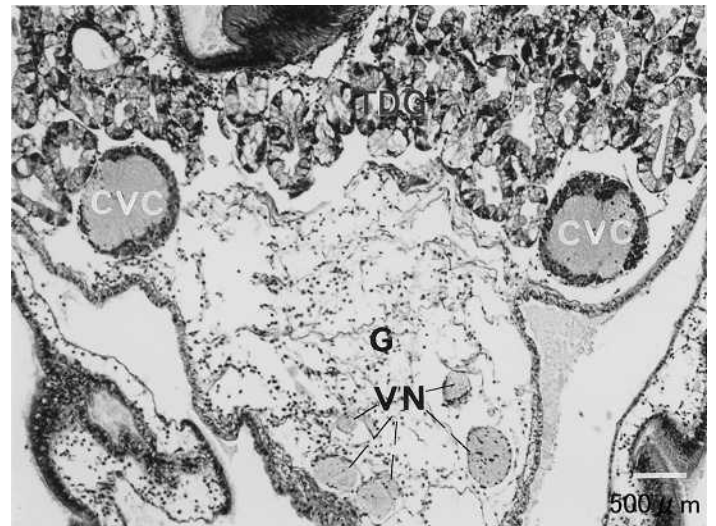


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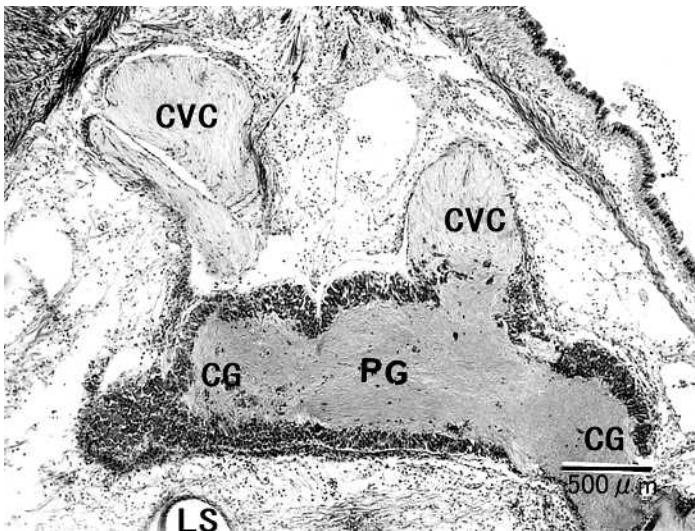


图.8.7

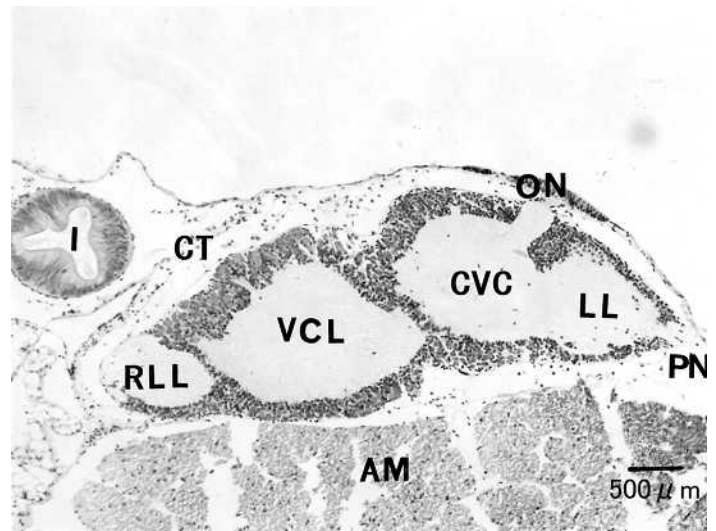


图.8.8

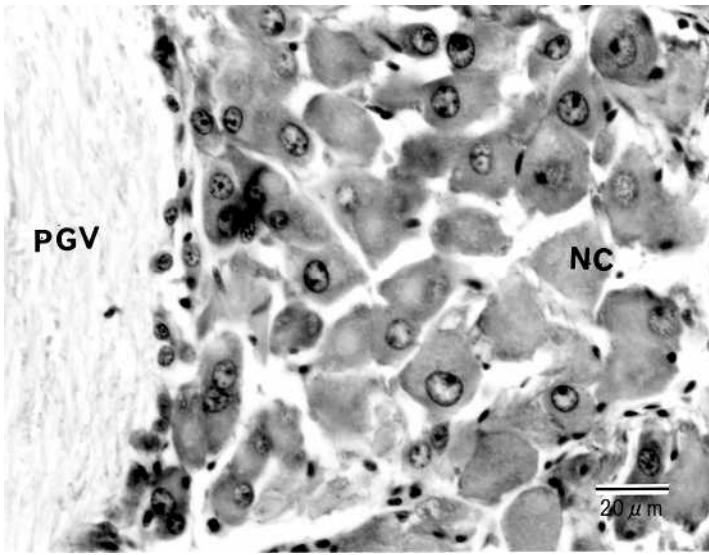


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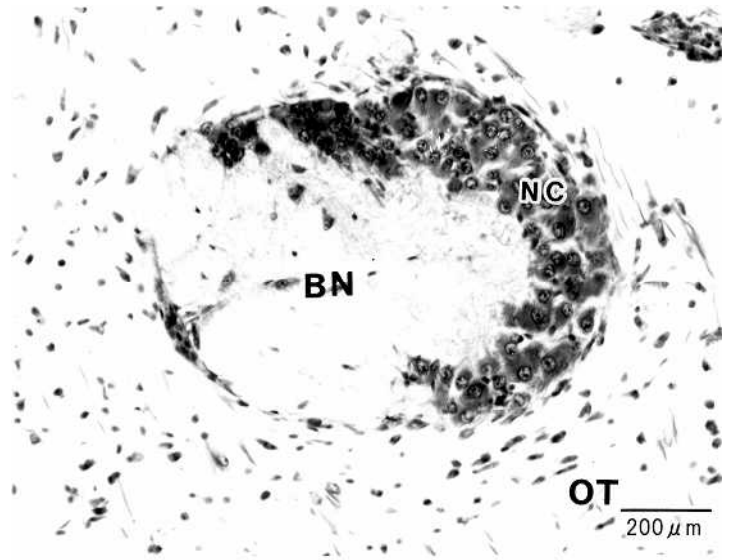


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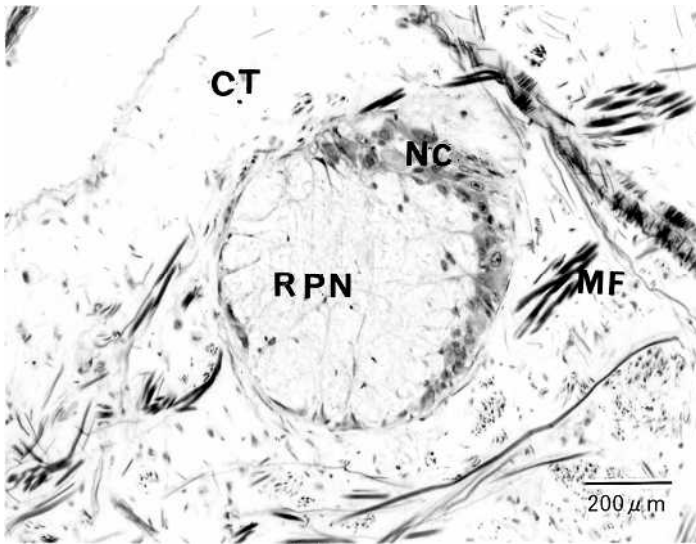


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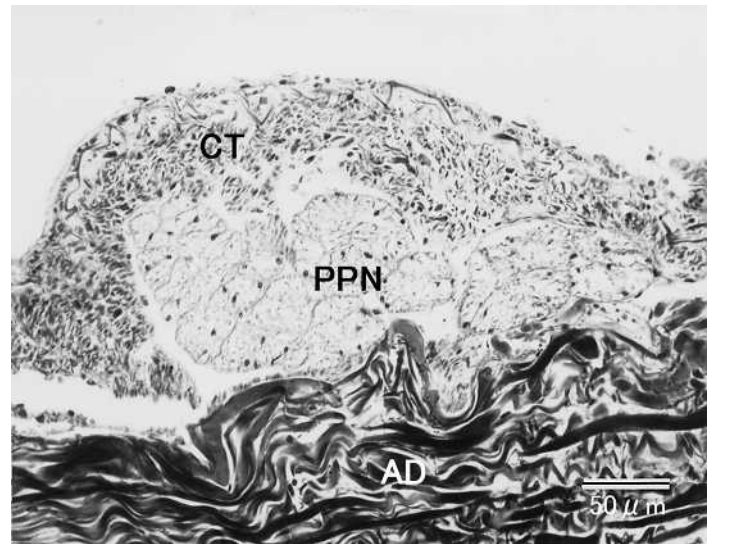


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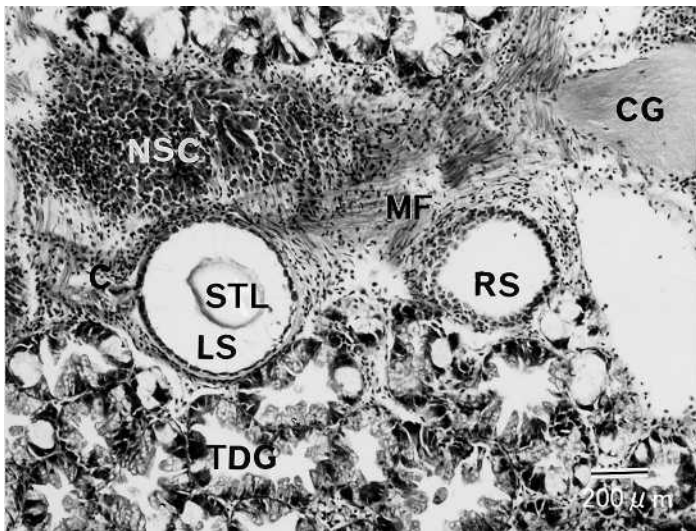


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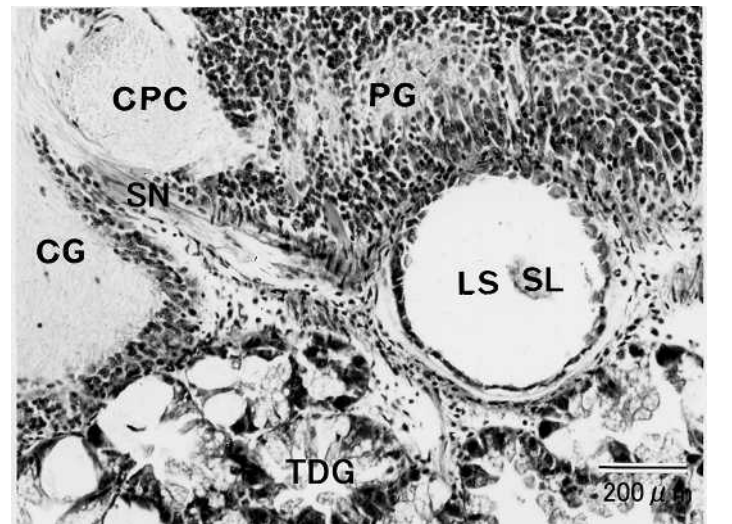


图.8.13

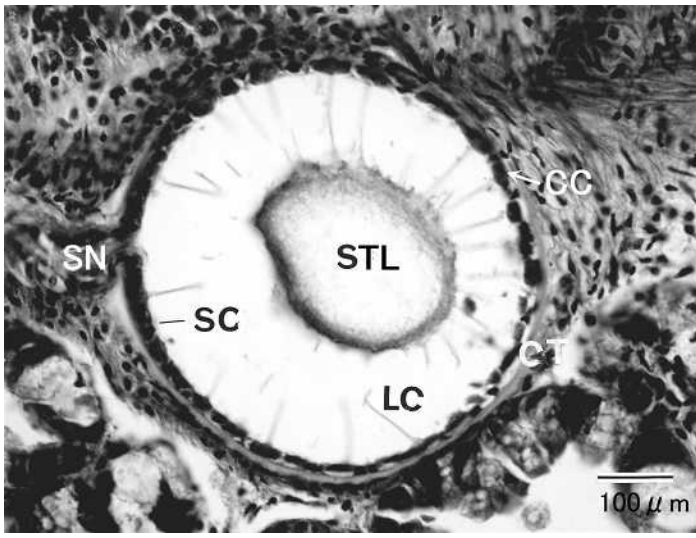


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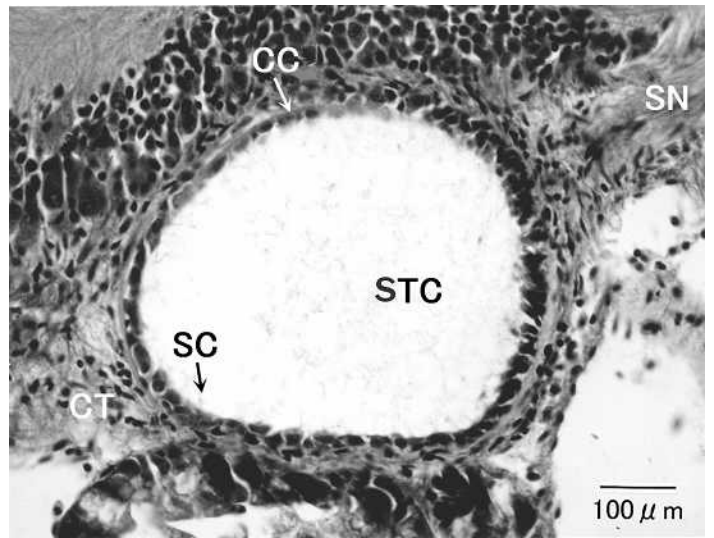


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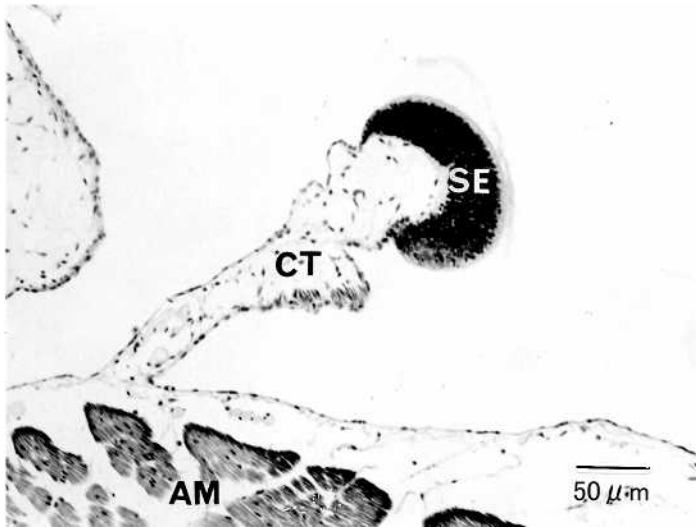


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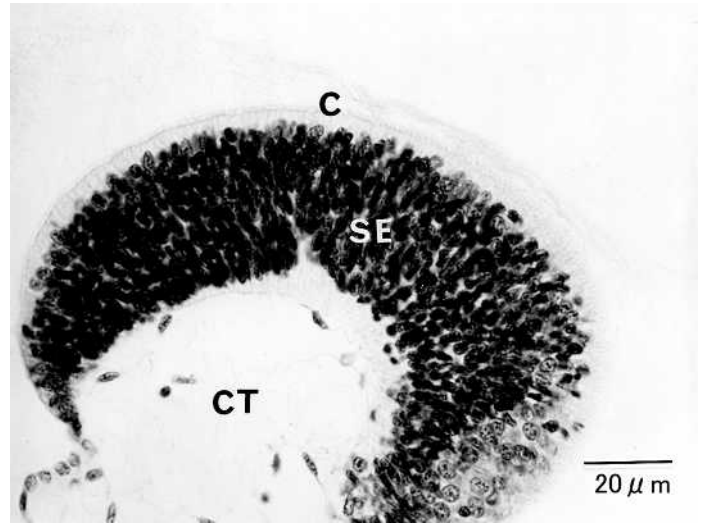


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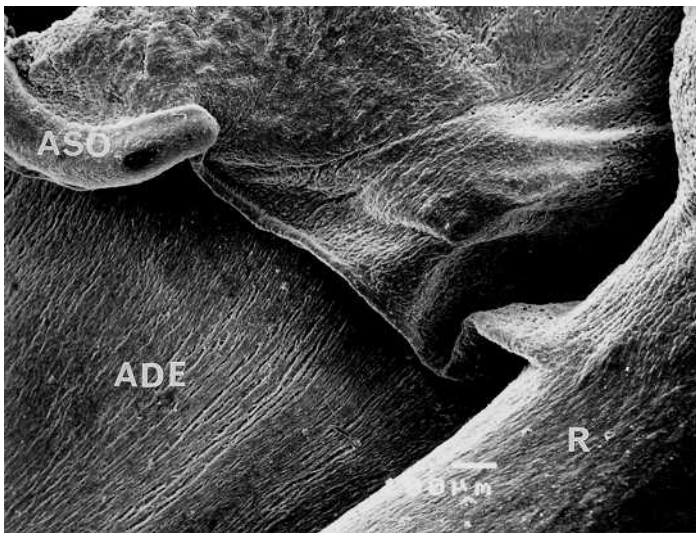


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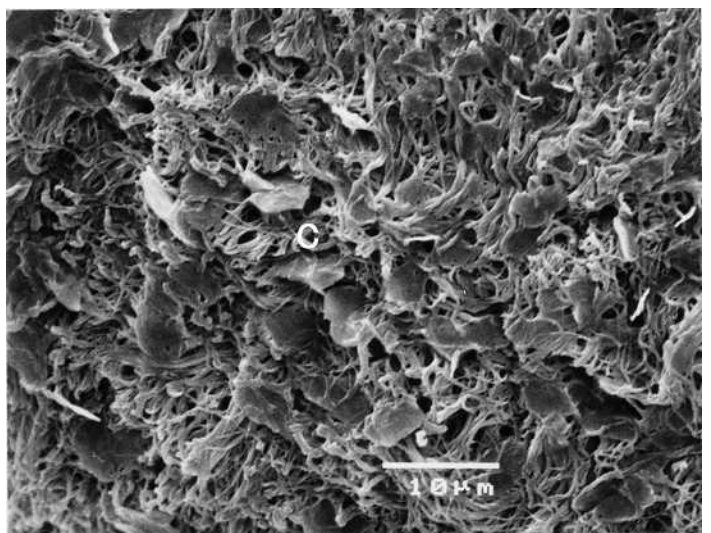


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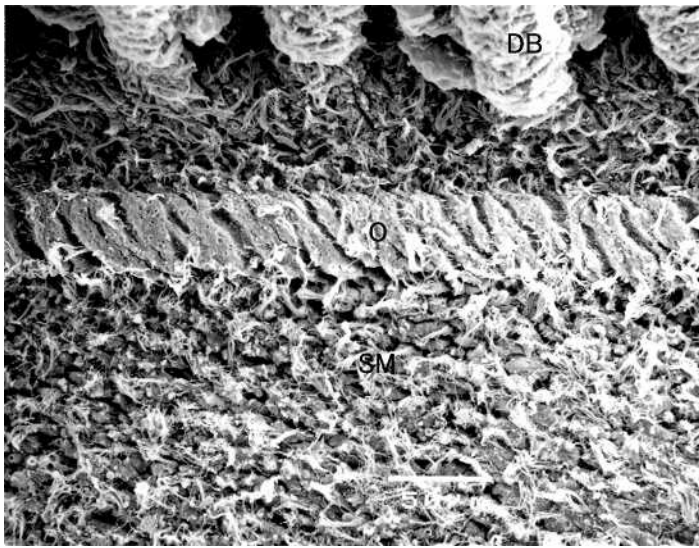


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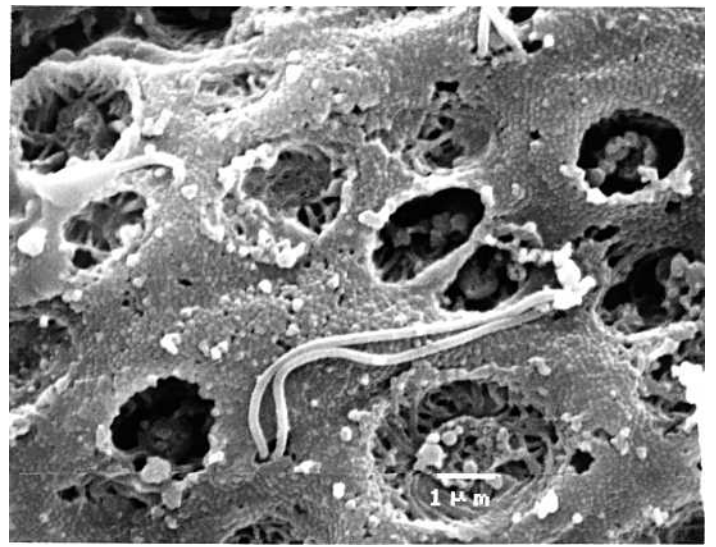


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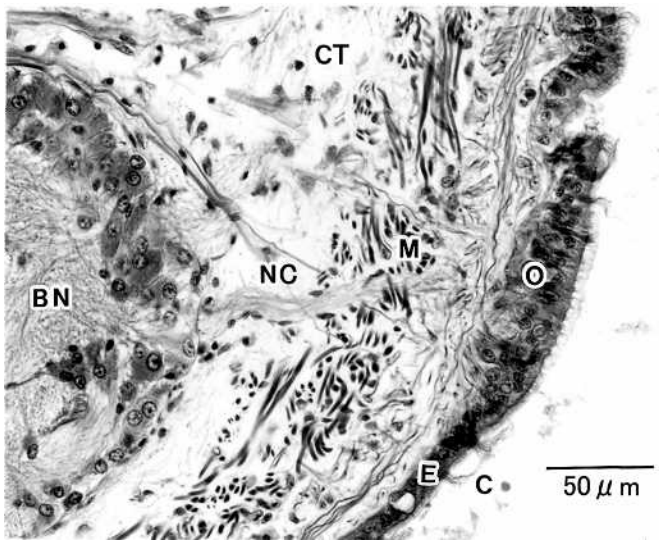


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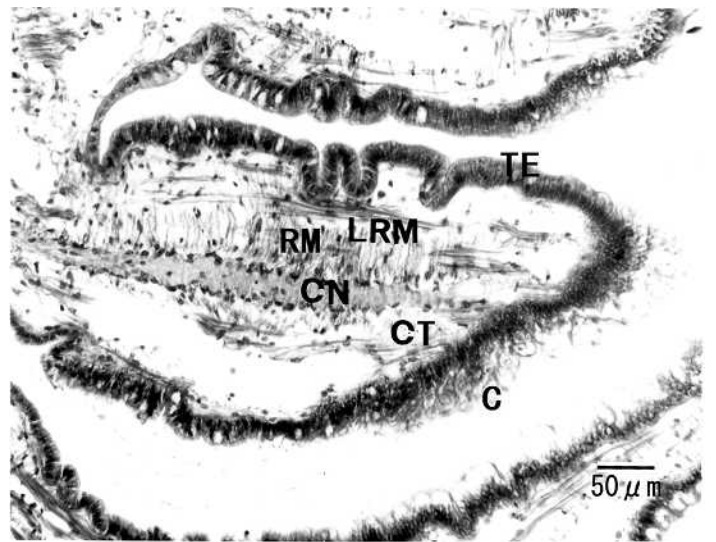


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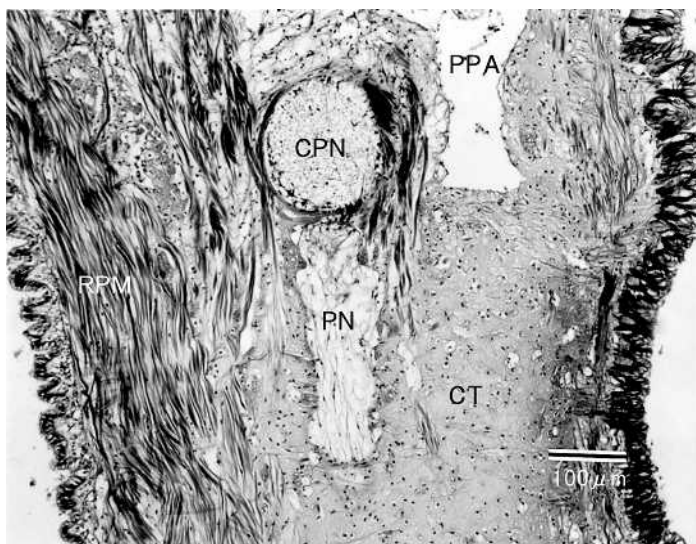


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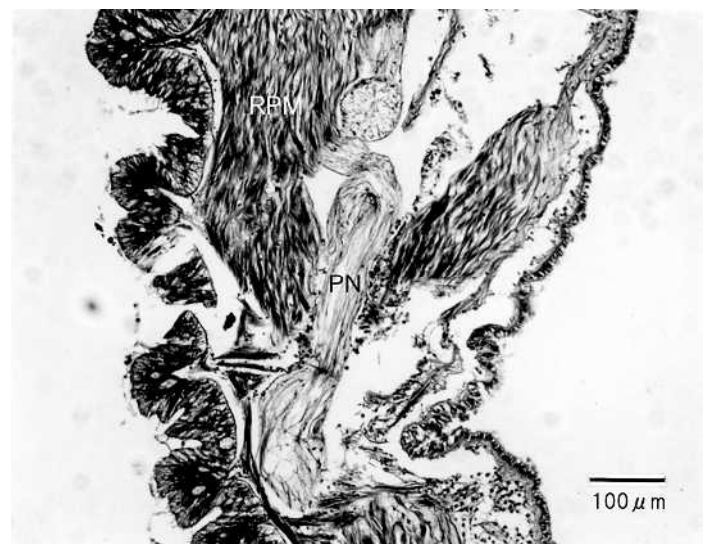


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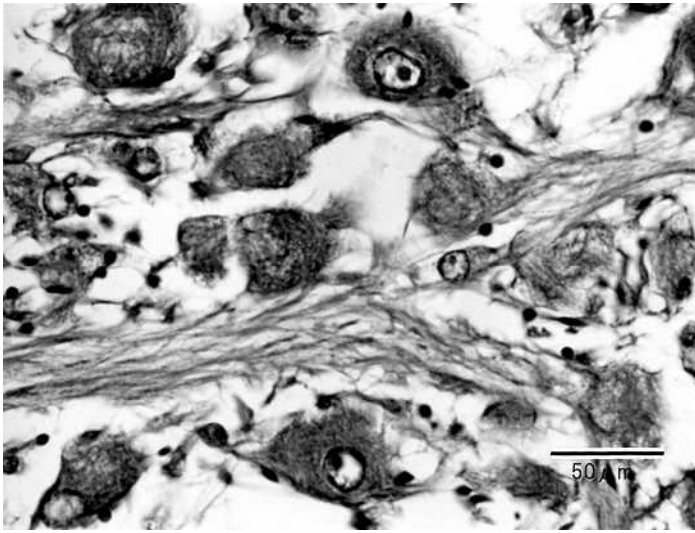


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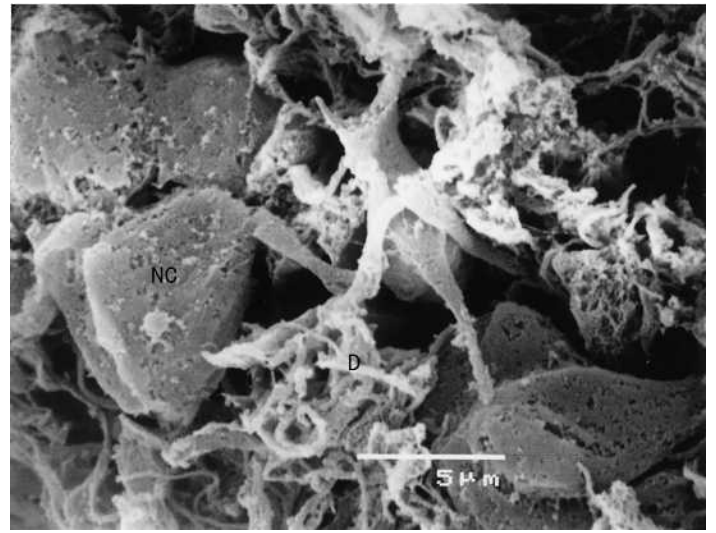


图.8.28

図.8.3. 脳神経節(cerebral ganglion)と足神経節(pedal ganglion). APN:前外套神経(anterior pallial nerve), CC:脳神経節連鎖(cerebral commissure), CG:脳神経節(cerebral ganglion), CPC:脳足神経連鎖(cerebro-pedal connective), CVC:脳内臓神経連鎖(cerebro-visceral connective), PAN:触手神経(palp nerve), PG:足神経節(pedal ganglion)

図.8.4. 体腔内臓神経節(parietovisceral ganglion). AG:副神経節(accessory ganglion), BN:鰓神経(branchial nerve), CVC:脳内臓神経連鎖(cerebro-visceral connective), DCL:背中心葉(dorsal central lobe), LL:側葉(lateral lobe), ON:嗅検器鰓神経(osphradio-branchial nerve), PN:外套神経(pallial nerve), PPN:後外套神経(posterior pallial nerve), VCL:腹中心葉(ventral central lobe)

図.8.5. 脳神経節(cerebral ganglion)の組織図. CG:脳神経節(cerebral ganglion), CPC:脳足神経連鎖(cerebro-pedal connective), PG:足神経節(pedal ganglion), TGD:中腸腺小管(tubules of digestive gland)

図.8.6. 脳内臓神経連鎖(cerebro-visceral connective)の組織図. CVC:脳内臓性神経連鎖(cerebro-visceral connective), TDG:中腸腺小管(tubules of digestive gland), VN:内臓神経(visceral nerve)

図.8.7. 足神経節(pedal ganglion)の組織図. CG:脳神経(cerebral ganglion), CVC:脳内臓神経連鎖(cerebro-visceral connective), LS:左平衡胞(left statocyst), PG:足神経節(pedal ganglion)

図.8.8. 背中心葉(dorsal central lobe)の組織図. CT:結合組織(connective tissue), CVC:脳内臓神経連鎖(cerebro-visceral connective), I:腸(intestine), LLL:側葉(left lateral lobe), AM:閉殻筋(adductor muscle), ON:嗅検器鰓神経(osphradiobranchial nerve), PN:外套神経(pallial nerve), RLL:右側葉(right lateral lobe), VCL:腹中心葉(ventral central lobe)

図.8.9. 体腔内臓神経節(parieto-visceral ganglion)の組織図. NC:神経細胞(nerve cell), PVG:体腔内臓神経節(parietovisceral ganglion)

図.8.10. 鰓神経(branchial nerve)の組織図. BN:鰓神経(branchial nerve), CT:結合組織(connective tissue), NC:神経細胞(nerve cell)

図.8.11. 放射外套神経(radial pallial nerve)の組織図. CT:結合組織(connective tissue), MF:筋繊維(muscle fiber), NC:神経細胞(nerve cell), RPN:放射外套神経(radial pallial muscle)

図.8.12. 閉殻筋(adductor muscle)側面の後外套神経(posterior pallial nerve)の組織図. CT:結合組織(connective tissue), MF:筋繊維(muscle fiber), PPN:後外套神経(posterior pallial nerve)

図.8.13. 平衡胞(statocyst)と脳神経節(cerebral ganglion)の組織図. CG:脳神経節(cerebral ganglion), LS:左平衡胞(light statocyst), MF:筋繊維(muscle fiber), NSC:神経分泌細胞(neurosecretory cell), RS:右平衡胞(right statocyst), STL:平衡石(statolith), TDG:中腸腺小管(tubule of digestive gland)

図.8.14. 左平衡胞(light statocyst)と脳神経節(cerebral ganglion)の組織図. CG:脳神経節(cerebral ganglion), CPC:脳足神経連鎖(cerebral-pedal connective), LS:左平衡胞(left statocyst), PG:足神経節(pedal ganglion), SN:平衡胞神経(statocystic nerve), SL:平衡石(statolith), TDG:中腸腺小管(tubule of digestive gland)

図.8.15. 左平衡胞(light statocyst)の組織図. CC:繊毛細胞(ciliated cell), CT:結合組織(connective tissue), LC:長繊毛(long cilia), SC:短繊毛(short cilia), SN:平衡胞神経(statocystic nerve), STL:平衡石(statolith)

図.8.16. 右平衡胞(right statocyst)の組織図. CC:繊毛細胞(ciliated cell), CT:結合組織(connective tissue), LSC:短繊毛(short cilia), SN:平衡胞神経(statocystic nerve), STC:平衡砂(statoconia)

図.8.17. 腹感覚器官(abdominal sense organ)の組織図. AM:閉殻筋(adductor muscle), CT:結合組織(connective tissue), SE:感覚細胞(sensory epithelium)

図.8.18. 腹感覚器官(abdominal sense organ)の組織図. C:繊毛(cilia), CT:結合組織(connective tissue), SE:感覚細胞(sensory epithelium)

図.8.19. 腹感覚器官(abdominal sense organ)の電顕像. ADE:閉殻筋表皮(adductor muscle epithelium), ASO:腹感覚器官(abdominal sense organ), R:直腸(rectum)

図.8.20. 腹感覚器官(abdominal sense organ)の電顕像. C:繊毛(cilia)

図.8.21. 嗅検器(osphradium)の電顕像. DB: 一次鰓弁下行枝(descending branch of principal filament), O:嗅検器(osphradium), SM:鰓懸垂膜(suspentory membrane)

図.8.22. 嗅検器(osphradium)の電顕像.

図.8.23. 嗅検器(osphradium)の組織図. BN:鰓神経(branchial nerve), C:繊毛(cilia), CT:結合組織(connective tissue), E:表皮(epithelium), NF:神経細胞(nerve cell), O: 嗅検器(osphradium)

図.8.24. 触手神経(tentacle nerve)の組織図. C:繊毛(cilia), CT:結合組織(connective tissue), CN:中央触手神経(central tentacle nerve), LRM:縦走後引筋(longitudinal retractor muscle), RM:放射筋(radial muscle), TE:触手表皮(tentacle epitherium)

図.8.25. 外套神経(pallial nerve)の組織図. CPN:環外套神経(circumpallial nerve), CT:結合組織(connective tissue), PN: 外套神経(pallial nerve), PPA:後外套動脈(posterior pallial artery), RPM:放射外套筋(radial pallial muscle)

図.8.26. 外套神経(pallial nerve)の組織図. PN:外套神経(pallial nerve), RPM:放射外套筋(radial pallial muscle)

図.8.27. 体腔内臓神経節(parieto-visceral ganglion)の神経細胞(nerve cell)の組織図. D:神経突起(dendrite), N:核(nucleus), NC:仁(nucleolus), NI:ニッスル小体(nissl body)

図.8.28. 体腔内臓神経節(parieto-visceral ganglion)の神経細胞(nerve cell)の電顕図. D:神経突起(dendrite), NC:神経細胞(nerve cell)