posterior regeneration, but that if the brain is removed 24–48 hr. after the posterior segments are amputated then posterior regeneration proceeds at the normal rate. There is thus a brief critical period during which the brain exerts its influence in initiating regeneration. Since Durchon extirpated the brain of his animals 24 hr. after amputating the posterior segments, it is not clear if the difference between his results and those of Hubl represents a real difference between lumbricids and nereids, or if it is due to the difference in experimental procedure.

Durchon's experiments have been repeated on *Nereis diversicolor*[5], and it has been found that extirpation of the supra-œsophageal ganglion 24-hr. before amputation of a number of posterior segments totally inhibits the proliferation of new segments, though one-third of the animals regenerate a pygidium. If the ganglion is extirpated 72 hr. after amputation of the posterior segments, regeneration is retarded, but not prevented, and 16 per cent of the animals proliferated 1 segment during the 30 days the experiment was continued. During this time, control animals regenerated between 1 and 11 segments (average 4).

The events occurring in the regenerating tip, the brain and the blood vascular system during the five days following the loss of posterior segments have been followed in more detail in *Nephtys cirrosa* and *N. hombergi* (members of the Nephtyidae, a family of polychætes closely related to the Nereidae).

During this period the wound is closed and, after an initial stage of dedifferentiation, blastema-formation and regeneration begin. Between the first and second days, muscle cells begin to dedifferentiate, and there is an accumulation of cœlomocytes at the wound. Cell division does not occur until the second day and is then confined to the gut epithelium and to a few dedifferentiated mesenchyme cells. By the third day, mitoses are common in the preterminal part of the nerve cord, and it is not until the fourth day that mitoses occur in the tip of the nerve cord and in the epidermis.

Within 6 hr. of amputation of a number of segments, neurosecretory cells in nucleus S^6 of the supra-œsophageal ganglion become active. After about 48 hr. the secretory cell-nucleus becomes very angular, the cytoplasm of the cell is vacuolated and appears to be depleted of its secretion. No more than one or two cells on either side of the ganglion are involved. Cells in ganglionic nucleus Z show visible signs of secretory activity 24–48 hr. after the loss of the segments. These cells become depleted of their secretion within a further 24 hr., but others in the same ganglionic nucleus start to secrete and replace them. A few cells in this nucleus contain neurosecretory material even in worms that have regenerated 12 or more segments. The secretion produced by both sets of cells migrates along the axons and those from ganglionic nucleus Z run to the cerebro-vascular complex at the base of the ganglion where neurosecretory material is released into the blood vessels[7].

Neurosecretory material is taken up by blood corpuscles[7], and these increase enormously in number during the early stages of regeneration. Initially, no more than one or two can be counted in the blood vessel beneath the brain; their numbers begin to increase about 12 hr. after amputation, and by the fifth day nearly 70 can be counted in the same length of blood vessel. A comparable increase in the number of blood corpuscles can be detected in vessels near the regenerating tip.

Detailed accounts of this work will be published elsewhere.

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The Proposed Biological Term 'Pheromone'

Karlson and Lüscher[1] have recently proposed the term 'pheromone' for a class of substances which, while resembling hormones in some respects, cannot be included among them because they are not of an endocrine origin. It is claimed that the latter part of the proposed word is derived from the Greek *hormōn* (which should properly be *hormān*), meaning 'to excite'. This is not so. It was apparently the intention of the authors to find a term which, while being derivable from *hormān*, bore little overt resemblance to the word 'hormone'. This they achieved by the improper expedient of dropping the letter 'r', thus mutilating the root of the Greek word. It should be a principle, when a scientific term is derived from classical origins, that the term must by its structure be traceable to those origins. In the case of the word 'pheromone' that principle is not observed: there is no structural clue to its derivation from *hormān*. Indeed, the only Greek verb (apart from *pherein*) which might conceivably be involved in its ancestry means 'to swear'.

It would be an etymological improvement to re-instate the missing 'r', making 'pherormone'. If this too closely resembles 'hormone', an alternative would be to abandon Greek and use the word 'transcitant', derived from the Latin *trans* and *cĭtare* (to excite). The approximate meaning, as well as the derivation, of this word is readily deducible—an advantage not shared by 'pherormone'.

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It was our aim to introduce, for a class of substances, a scientific term of international usefulness. Based on a clear definition, it should be a short word easily pronounced in many languages. This is not the case with 'pherormone'. It must be admitted that the derivation of 'pheromone' from *hormān* is questionable. We would therefore not insist on it; but we regard the ending 'mone' as a proper suffix which is used in hormone, gamone, termone and pheromone.

The alternative proposal 'transcitant' is regarded as unfortunate. Its translation would refer to a neurohumoral transmitter substance rather than to a pheromone. The exciting activity is only one of their possible actions. Furthermore, the parallelism to hormone, gamone, etc., is entirely lost.

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