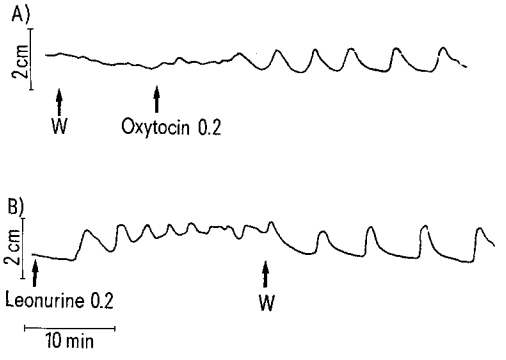
Myometrium samples were removed from excized uteri from patients after undergoing total hysterectomy. They were kept in cold Hank's medium (plus glutamine) and used within 2–3 h. From each individual uterus, one myometrium sample of 2 cm long and 3 mm in diameter was prepared and mounted in a standard organ bath with 30 ml Tyrode's solution. The organ bath was maintained at 37 °C and constantly gassed with 95% O_2: 5% CO_2. Uterine contraction was registered on an electric kymograph through a frontal lever at $2^1/_2$ magnification.

Human myometrium responds to acetylcholine (10^{-4} *M*) with an increase in tone. Individual contractions are small in amplitude and slow in rate. Oxytocin (7 mU/ml) produces more or less regular contractions of large amplitude and relatively stable tonicity (Figure A). The effects of both acetylcholine and oxytocin disappear after washing the sample with 3 changes of Tyrode's solution. Leonurine preparation, as little as 0.1 ml, can produce prominent uterine contraction shortly after application. The individual contractions are large in amplitude and they persist with a remarkably regular rhythm. A higher dose level only raises the basal tone which gradually approaches peak tension. But unlike acetylcholine and oxytocin, leonurine-induced contraction reappears after repeated washing with the same amplitude and regularity. This coincides well with observations in rat and rabbit uteri[3] (Figure B).



A) Contraction of human myometrium in vitro after application of 0.2 ml oxytocin (7 mU/ml). The myometrium was previously treated with acetylcholine (10^{-4} *M*) and then washed with 3 changes of Tyrode's solution. This tissue sample came from a patient suffering from cervival carcinoma. The drum ran at a linear speed of 0.3 cm/min. B) The same myometrium sample as in Figure A after application of 0.2 ml (10 g dry wt./ml) leonurine preparation. A transitory inhibitory period was observed in most cases following leonurine application. Note the appearance of large rhythmic contractions even after washing with 3 changes of Tyrode's solution.

It is difficult to estimate how much the patient's hormonal regime can affect the uterine response to leonurine preparations. For a total of 12 samples from individual patients, only 4 did not respond to leonurine preparation. These 4 samples were from patients well beyond menopause. In order to extract other common factors from the 8 positive samples, further experiments with human and animal uteri must be carried out under a controlled hormonal regime. The present evidence is sufficient to confirm the positive uterotonic effect of leonurine preparation on human myometrium in vitro, as is observed in rat and rabbit uteri[3]. This offers a pharmacological basis to exploit the therapeutic effect of leonurine preparations in human cases.

Unlike other uterotonic agents, e.g. oxytocin, which must be administered by i.m. or i.v. routes under a physician's supervision, leonurine preparations can be applied by the oral route without prescription. Thus it guarantees a popularity basis if the uterotonic property of leonurine preparations can be applied in other aspects of reproductive physiology. One aspect that deserves immediate investigation is an acceleration of ova passage in the fallopian tube or an increase in pre-implantation uterine activity that may lead to antifertility consequences.

Résumé. Leonurus artemisiae, l'agripaume chinoise, est applicable comme émmenagogue selon une tradition millénaire chinoise. L'élément efficient est la léonurine. L'extrait de léonurine par l'alcool méthanolique acidifié a un effet stimulant dans la myométrie humaine in vitro.

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Identification of Antennal Chemoreceptors of the Mosquito, *Aedes aegypti*: a Correction

The antennal chemoreceptor sensilla of the yellow fever mosquito, *Aedes aegypti*, have been described by several investigators[1–4]. There was general agreement on the identification of the sensilla based on their morphology, i.e., 2 types of sensilla trichodea: a long (50–60 µm), tapered, sharp-tipped sensillum (A1) and a shorter (16–40 µm), blunt-tipped sensillum (A2); and a sensillum basiconicum, a short (6–20 µm), thorn-shaped peg (A3). None of these investigators reported finding the sensilla coeloconica seen on the antennae of other mosquitos. LACHER[5] reported finding another type of sensillum that he described as a small (5.5–8.5 µm) blunt peg and identified it as A4 sensillum. MCIVER[6] has since reported finding 3 subtypes of the short sensilla trichodea (A2); 1 was short with a pointed tip and 2 were slender, blunt-tipped forms. Depending on the orientation of the 3 types, they are not always distinguishable using light or scanning electron microscopy. More recently, a sensillum coeloconicum was found on the antennae of *A. aegypti*[7]. Neither MCIVER[8] nor MAYER[9] have been able to locate the A4 type sensillum described by LACHER.

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DAVIS and REBERT[10] continued the electrophysiological studies on the antennal chemoreceptors of *A. aegypti* initiated by LACHER, using both his microscopic setup (Leitz Laborlux with Ultropak Illuminator, X700) and his classification of the antennal sensilla. It became apparent during these subsequent studies that further clarification of the nomenclature used to identify the antennal sensilla was needed.

Positive identification of single antennal sensilla was achieved by the following method. Immediately after recording the electrophysiological responses to chemical stimulation, the sensillum was marked by enlarging the hole made by the recording electrode, and its location on the antenna was mapped. When the electrophysiological experiments on a given mosquito were finished and any other sensilla were similarily marked and mapped, the antennae were prepared for examination with a scanning electron microscope (SEM). One of the 39 sensilla examined in this manner is shown in the Figure.

A scanning electron micrograph of a sensillum basiconicum (A3) on segment 9 of the antenna of a female *A. aegypti* mosquito, showing the hole left after the removal of the recording electrode.

The results of the correlation of the electrophysiological responses to chemical stimulation with the morphology of individual chemoreceptor sensilla are as follows. The electrophysiological responses of an 'A4' sensillum[5] can only be obtained from one morphological type sensillum – the sensillum basiconicum – referred to by others as an A3. The electrophysiological responses from the sensillum referred to by LACHER[11] and DAVIS and REBERT[10] as an 'A3' can also be obtained from one of the A2 type sensilla – the A2-M. SEM examination of these two sensilla revealed that both are sensilla trichodea and are morphologically indistinguishable from one another. Thus, with a lack of separable physiological and morphological features, it would seem that the 'A3' and the A2-M are in fact the same sensillum type. No other sensilla were observed on the 17 antennae examined with the SEM that do not fit into the categories described earlier, i.e., a long sensillum trichodeum (A1), 3 types of shorter sensilla trichodea (A2 family), and sensilla basiconica (A3).

This reclassification of the morphological types of antennal chemoreceptors of *A. aegypti* is now in agreement with the similar identification of these receptors by other investigators. It should be noted that the electrophysiological responses of the various chemoreceptor sensilla to chemical stimulation previously reported by LACHER[5,11] and DAVIS and REBERT[10] are not in question here, only their identification of the proper sensilla from which the responses were obtained. This paper is intended to correct that error[12].

Résumé. Deux corrections sont faites dans la classification des chémorécépteurs antennaires de la femelle du moustique *Aedes aegypti*. Le sensillum «A4» est classi comme sensillum basiconicum (A3), et l'«A3» de LACHER[11], et DAVIS et REBERT[10] comme sensillum trichodeum (type A2). Les résultats électrophysiologiques antérieurs ne sont pas contestés.

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Peripheral Neuropathy Associated with Inhalation of Methyl-*n*-Butyl Ketone

Methyl-*n*-butyl ketone (MnBK) is a solvent used extensively in vinyl and acrylic coatings and adhesives. There was recently an outbreak of peripheral neuritis in a Columbus, Ohio, concern using ink to print fabric. MnBK was suspected to be responsible for this outbreak and the following experiments were devised to investigate the effects of inhalation of MnBK by rats.

Nine rats were exposed to 200 ppm MnBK (by volume) for 6 weeks, 5 days per week, 8 h per day. 8 other rats were exposed to a mixture of 200 ppm MnBK and 2000 ppm methyl-ethyl-ketone (MEK), for a similar period; 3 rats died during this experiment. 4 rats were used as controls. The rats exposed to MnBK alone, presented with a muscular weakness of all limbs which lasted a few hours after the experiment each night. The animals exposed to the MnBK-MEK mixture were similarly weak and the recovery time took at least 24 h.

The rats were killed with ether and perfused with cold 10% formalin, buffered with 0.1 *M* sodium phosphate, pH 7.2. The sciatic nerves of all the rats were removed and examined. The following histological methods were used to examine the nerves, hematoxylin-eosin, Holmes