menopausal gonadotrophin and Mr R. Marks for technical assistance.

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Absorption Spectrum of Leech Haemoglobin: a Correction

ACCESS to a Unicam *SP*800 recording spectrophotometer prompted me to check the absorption spectra of the haemoglobins of the leeches *Hirudo medicinalis* L., *Haemopis sanguisuga* (L.) and *Erpobdella testacea* (Savigny) previously recorded[1] with another instrument. The new records (Table 1) show the previous set to have been in considerable error at the longest wavelengths, though substantially correct at the short wave end of the range. The corrected values resolve the problem raised by the apparent implication that leeches live in conditions of very low oxygen tension.

I regret that the error in prism angle of the instrument previously used was not then suspected and that the wavelength calibration therefore was not checked over the whole range. The present records have been checked against the spectrum of holmium oxide and the figures in Table 1 are values thus corrected. As an additional check, the spectra of two Hbs for which records are already available, those of *Lumbricus terrestris* L. and man, have been recorded by the same instrument and procedure. These agree well with the existing records[2,3].

The spectrum for the Hb of *Erpobdella octoculata* L. also was recorded and seems to be identical with that of *E. testacea*, within the limits of recording errors, and there are only very small differences between these and the spectra for the other two leeches. Except perhaps in the γ^1 peak the spectrum of *Lumbricus* Hb differs very little more: the positions of peaks and troughs towards the short wave end of the range are somewhat approximate because the measurements were made on whole blood and not on solutions of purified Hb, and because in any case the features are less sharp than at longer wavelengths. Further, the clitellate spectra differ relatively little from that of man, except perhaps in the β-peak. This seems to confirm fully that none of these animals are normally subject to very low oxygen tensions. All have, in addition to the features shown in Table 1, a shoulder at approximately 289 nm.

There are probably small differences between the human and clitellate annelid Hbs in the relative heights of the α and β peaks: in man α is slightly higher than β, and reciprocally in the clitellata (ref. 1, Fig. 1). Nevertheless, Hüfner's quotient (ratio of extinction coefficient at the β peak to that at the α–β trough) is lower in the annelids than in man. The height of the Soret (γ) relative to other peaks also may be lower.

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Table 1. WAVELENGTHS (NM) OF PEAKS AND TROUGHS IN ABSORPTION SPECTRA OF AQUEOUS SOLUTIONS OF BLOODS OF CLITELLATES AND MAN

Peaks		φ		γ^1		Soret γ		β		α
Erpobdella octoculata	254·5	273	311	344	369	413·5	509	538	558	575·5
Erpobdella testacea	256	274	311·5	344·5	368	413·5	509	538	557·5	575
Haemopis sanguisuga	259	274	310·5	346·5	369·5	414	509	539·5	560	576·5
Hirudo medicinalis	260	273·5	311·5	345·5	373·5	414	510	538·5	559	575·5
Lumbricus terrestris	254·5	271	313·5	339	371	414·5	508	538	558·5	576
Homo sapiens	252	274·5	306·5	344·5	369·5	413	508	540	559	576

Secretion of Pregn-4-ene-3,20-dione (Progesterone) *in vivo* by the Adrenal Gland of the Rat

Feder, Resko and Goy[1] suggested recently that the adrenal gland of the rat secretes progesterone. They observed that the arterial blood of female rats still contained significant amounts of progesterone 25 days after bilateral ovariectomy; 8 h after additional adrenalectomy, however, the steroid was no longer detectable. Because the rat is often used for experiments in reproductive physiology, it is important to assess the contribution of the adrenal gland to the total available progesterone in the female rat. We have therefore measured the secretion of progesterone from the adrenal gland by estimating the amount of the steroid secreted into the adrenal venous blood. Experimental conditions were maintained comparable with those used recently for measuring the secretion of progesterone by the ovary of the rat[2–4].

Virgin female Wistar rats, 6 weeks (110–130 g) or 9 weeks (170–230 g) old, were used. Venous blood was collected from the left adrenal gland under pentobarbitone sodium anaesthesia (50 mg/kg) for 30 min, using the method described by Vogt[5]. Results are included from rats with adrenal glands which had been demedullated for other reasons 19–44 days before the adrenal blood was collected. Blood pressure was recorded from a carotid artery and supported by infusing either rat blood or a 0·9 per cent solution of sodium chloride. Before adrenal vein cannulation the arterial pressure ranged from 113 to 165 mm Hg; when blood was being collected it was lower