cells followed by further loss during the next 72 h at a rate of 0.066 u/h/10⁶ cells. The overall rate of loss of interferon activity was 0.150 u/h/10⁶ cells. Fig. 1 also shows that interferon was not produced when the CEF cultures were inoculated with chikungunya virus that had been heat-inactivated at 65°C for 30 min. No significant interferon activity was detected in the culture medium from uninfected cell cultures.

Several experiments were conducted to determine if this loss of interferon activity was caused by proteolytic enzymes present in the culture fluid. Fluids containing interferon were collected from cell cultures infected with chikungunya virus for 62 and 120 h. Each sample was divided into two aliquots. One aliquot from each sample was heated at 65°C for 30 min and assayed immediately for interferon activity. The remaining aliquots were placed in a waterbath at 37°C for 9 h before heating to 65°C and assaying for interferon. The results of the assays for each of the two aliquots for a given sample were comparable within 4 per cent, which demonstrated the absence of degradative enzymes in the culture medium.

It is interesting to note that the initial rate of loss of interferon activity from the cell culture medium (0.340 u/h/10⁶ cells) is comparable with the rate of uptake of interferon by cells in culture (0.330 u/h/10⁶ cells) (our unpublished work). Thus it seems reasonable to assume that the loss of interferon activity from the culture medium of cells producing interferon is caused by the adsorption of this same interferon by some of the cells in the monolayer, if not by all of them. This loss of interferon would not become apparent until production of interferon had either ceased or slowed down to such an extent that the rate of adsorption exceeded the rate of production.

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PATHOLOGY

Hormonal Pregnancy Tests and Congenital Malformation

DURING a survey of babies born with meningomyelocele or hydrocephalus, one hundred mothers of such children provided histories of the relevant pregnancy. Among other things they were questioned by one of us (I. G.) as to the drugs which they had taken. The same information was obtained from a matched control group of one hundred mothers recently delivered of healthy babies. Data obtained from the mothers about drugs during pregnancy were checked with the medical advisers. As part of the survey the mothers were asked how their pregnancy was diagnosed. Nineteen mothers in the survey group and four of the control mothers reported having received oral tablets for the diagnosis of pregnancy (Table 1). There was no significant difference between the two groups with respect to any other drugs taken in the first trimester. The average interval between conception and test was 5.6 weeks in the survey group, and 6.2 weeks in the control group.

Survey cases Controls	Table 1	
	Pregnancy test	No test
	19	81
	4	96
	$\chi^2 = 0.635$	$P < 0.01$
	(1 degree of freedom)	

The age of the mothers is shown in Table 2. The survey mothers were on average some 2 yr older than the controls, and there were more older and younger mothers among those who had been given the pregnancy test. Mothers over 35 years of age are more liable to have infants with a malformed nervous system¹, and so the tests of significance were repeated leaving out those cases over 35. A high level of significance remained ($P < 0.01$).

Defects such as meningomyelocele originate before the closure of the neural canal and fusion of vertebral laminae during the second to eleventh week of intra-uterine life. The tests were administered at this time, the tablets most commonly used being 'Primodos' and 'Amenorone Forte'. The recommended dose is one tablet daily for 2 successive days in the case of 'Primodos' and for 3 successive days in the case of 'Amenorone Forte'. If the patient is not pregnant withdrawal bleeding should occur 3 days after the last tablet is given. The test depends on imitating the normal menstrual cycle during which there is an elevation of circulating progesterone and oestrogen followed by a fall which results in menstrual bleeding. Each tablet of 'Primodos' contains 10 mg of norethisterone acetate and 0.02 mg of ethinyl-oestradiol. 'Amenorone Forte' contains 50 mg of ethisterone and 0.05 mg of ethinyl-oestradiol. These doses are claimed to be safe and the test, which was introduced in 1953 by the intramuscular route and in 1956 by the oral route, has been considered free of danger if used on women who prove to be pregnant. It is used very frequently. Contraceptive pills, which have been subject to a very careful scrutiny, have a similar composition, but the dose and balance of the constituents are different; for example, 'Norlestrin' contains 2.5 mg of norethisterone acetate and 0.05 mg of ethinyl-oestradiol. Any effect of these pills on the foetus comparable with that suggested for the pregnancy test would be limited to cases in which they were taken by already pregnant women.

		Table 2		
Maternal age (yr)		< 20	20-35	> 35
Survey	Test	2	13	4
	No test	5	66	10
Control	Test	1	2	1
	No test	2	88	6

The possibility cannot be excluded that the difference significant at the 1 per cent level between the two groups of mothers whom we questioned might emerge purely by chance. Nevertheless, our observations indicate the need for a more detailed scrutiny of the role of hormonal preparations in the causation of congenital malformations, particularly when taken in the organogenic stages of pregnancy. Full details of this work will be published elsewhere.

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Induction of Tumour Immunity with Tumour Cells treated with Extract of Garlic (*Allium sativum*)

It is generally believed that in some conditions tumour cells act antigenically, and that immunization of the host animal prevents tumour growth on subsequent challenge with virulent tumour cells. One of the most important