confirmed[1] and shown to be important in the phage typing of lactic streptococci.

Williams Smith[5], working with phages for the staphylococci, noted that some batches of media were strongly inhibitory to phage action but, after the addition of $M/100$ calcium chloride to agar medium, a striking improvement in plaque formation occurred. If the phage contamination of bulk starter, referred to above, were due to undetectable lysogenic strains, then their presence might be shown by again applying the methods successfully used for other groups of bacteria, after adding calcium chloride, to the media.

Hitherto all attempts to demonstrate lysogenic strains have failed, but a technique has now been developed by which lysogenic strains have been successfully isolated from lactic streptococci.

The following is a typical example of the conditions under which phage, occurring in starter, was thought to arise from lysogenic strains; bulk starter was prepared daily by inoculation of the same can of milk with four strains of lactic streptococci (*HP* 950/5, M_2S_1, and *D*47/7). These strains had been grown separately until this sub-culture. After incubation, phage, which lysed one of the component strains *HP*, was frequently detected in the bulk starter by the activity test. Each of the four strains was smeared on to agar plates containing $M/100$ calcium chloride and the remaining strains 'spotted' on to each basal strain, after Fisk's method[3]. After the addition of calcium chloride, it was apparent that *HP* was an indicator strain lysed by the remaining three strains, which were lysogenic or phage-carrying. 950/5, M_2S_1 and *D*47/7 appeared to be true lysogenic strains, because after replating and picking colonies, sub-cultures when spotted on *HP* continued to lyse it.

Phages have been purified from these lysogenic lactic streptococci, and the phenomenon may be common among starter strains. In fact, several commercial lactic acid cultures were found to form plaques spontaneously if smeared on agar. In effect, this means that an additional precaution must be taken in their selection for cheese-making. Obviously, strains which are lysed by phages carried by lysogenic strains must be avoided when several separate strains are to be mixed daily to form the starter, or when the strains are to be used in a daily rotation.

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Pregnancy Test using a European Male Toad

THE bulk of published work[1] on the use of male batrachians as pregnancy test animals has come from the Americas. Early last year, Galli Mainini[2] suggested that the test which he initiated using an Argentinian species *Bufo arenarum* Hensel[3] could probably be carried out equally well using an indigenous species, namely, *Bufo bufo*. A small series of tests was run on *Bufo arenarum* Hensel. The results[4] obtained encouraged us to employ the common toad *Bufo bufo*.

The method previously described[5] has been modified to allow for the small size of the animal—30 gm. approximately. The volume of urine injected was reduced to 5 ml. Prompt positive results were obtained within one hour, but the mortality among the toads injected was about 40 per cent. Recently, we have employed an elution method[6], and 2·5 ml. eluate are injected. Forty tests have been run with this method with a toad mortality of nil. We intend to run a further series, but reducing the quantity injected to 2·5 ml. untreated urine.

In seventy tests, including forty-eight cases of known pregnancy, we have obtained the expected number of positive results and there have been no false positives. Hinglais and Hinglais have reported favourably on the use of *Bufo bufo*[7] and *Rana esculenta*[8], while Bhaduri[9] has obtained comparable results with *Bufo melanostictus* in Calcutta. The importance of the male toad test for pregnancy is enhanced by its availability in different world regions using indigenous species.

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A Census of Mould Spores in the Atmosphere

THE aerial dissemination of certain types of fungus spores has been studied intensively by plant pathologists, and the literature on spore dispersal in general has been summarized from this point of view by Gregory[1]. Mould spores, however, not only cause infective disease in plants but may, as airborne allergens, also give rise to disease in man, and numerous studies have established their importance as a cause of asthma[2,3].

Two principal methods have been used to sample the atmospheric content of mould spores at or near ground-level, namely, the so-called gravity slide method and the culture plate method. Other methods, mostly involving the extraction of the spores from a measured volume of air[4,5], have been operated less widely or only on an experimental scale. The gravity slide method has been employed by Durham[6] over a wide area in the United States and also by Hyde and Williams in Great Britain[7]. This method can be operated continuously, but it has the disadvantage that the spores of relatively few fungi can be identified even generically. The culture plate method only allows of sampling for short periods (10–15 min. or so) at a time, but the mycelial colonies which develop after a few days incubation enable a greater variety of forms to be recognized. This method has been used extensively in America[3,8] and at a few centres in Europe[9,10]. Hitherto, no systematic observations by