of *Aspergillus nidulans*[2,3]. In these examples two genes may appear to behave as allelomorphs in *trans* but not in *cis*, a phenomenon which has been called by Lewis[4] "position pseudo-allelism". However, the reactions of most anti-*C* and anti-*E* sera (exemplified by *y* and *z* in the table), together with the reactions of anti-*c* and anti-*e*, have never allowed *C* and *E* to be mistaken for allelomorphs.

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A New Solvent for Silk

It has been shown recently by Schurz[1] that solutions of silk in phosphoric acid undergo a considerable decrease in viscosity on standing, which is probably due to degradation of the silk. Silk is insoluble in formic acid, although the latter is an excellent solvent for many polypeptides and nylon. On the other hand, concentrated aqueous solutions of many inorganic salts, for example, halides[2] and thiocyanates[3] readily dissolve silk, in some cases without degradation of the fibroin[4,5].

We have found that silk is very readily soluble in formic acid containing small quantities of water and certain inorganic salts at room temperature. Up to 20 per cent (w/v) of silk may be dissolved in these solutions, which are then semi-solid. Salts which are effective for rendering silk soluble in formic acid include lithium chloride, bromide, iodide and thiocyanate, magnesium, calcium, strontium, zinc and manganese chlorides, and calcium and barium bromides, whereas the alkali metal halides are almost ineffective. The salt concentration is related to the water content of the formic acid. Thus, using 90 per cent (w/w) acid 10 per cent (w/v) anhydrous calcium chloride is necessary, whereas with 98 per cent formic acid, only 2 per cent calcium chloride is required.

It is seen from the table of viscosity measurements that formic acid solutions of silk undergo far less degradation on standing than do solutions in phosphoric acid. The raw silk (from Lullingstone Castle Silk Farm, Kent) was first freed from sericin by treatment with a warm dilute solution of soap and ammonia, followed by washing with distilled water and drying at 110° C. Viscosities were determined in an Ostwald viscometer at 25° C., after filtering the solution through glass wool. Intrinsic viscosities $[\eta]$ were obtained by plotting reduced viscosities, η_{sp}/c (c is silk concentration in gm./100 ml. solution), against silk concentration for four values of the latter, over the range 0·2–1·0 per cent, and extrapolating the resulting straight lines to $c = 0$.

Time (hr.)	80% w/w H_3PO_4–H_2O $[\eta]$	80% w/w H_3PO_4–H_2O % decrease	90% w/w H_3PO_4–H_2O $[\eta]$	90% w/w H_3PO_4–H_2O % decrease	90% w/w H.COOH–H_2O + 10% (w/v) $CaCl_2$ $[\eta]$	90% w/w H.COOH–H_2O + 10% (w/v) $CaCl_2$ % decrease	98% w/w H.COOH–H_2O + 2% (w/v) $CaCl_2$ $[\eta]$	98% w/w H.COOH–H_2O + 2% (w/v) $CaCl_2$ % decrease
0·5	1·48	—	1·83	—	1·65	—	2·04	—
2·0	0·85	42·6	1·42	22·4	1·56	5·5	1·98	2·9
5·0	0·44	70·3	0·92	49·7	1·47	10·9	1·88	7·8
25	0·08	94·6	0·15	91·8	1·08	34·6	1·40	31·4

Upon dilution with water, followed by vigorous agitation, the silk is precipitated from formic acid – calcium chloride solutions as a white curd. Alternatively, the silk may be obtained as a film by spreading the solution on a glass plate, allowing the solvent to evaporate in a desiccator over solid sodium hydroxide, followed by washing with ethyl alcohol to remove calcium chloride.

Infra-red absorption curves of the material precipitated by water show it to be in the β-configuration. It is of interest, however, that films cast from formic acid – calcium chloride, without removal of the salt show a carbonyl peak characteristic of the α-form of silk, although other features of the spectrum are rather obscure.

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Inhibition of Vernalization in *Linum usitatissimum* Linn. by Certain Synthetic Hormones

The present communication summarizes the results of eight hours prechilling soaking treatment at room temperature with different concentrations (500, 50, 5, 0·5, 0·05 and 0·005 parts per million in distilled water) of α-naphthaleneacetic acid, indolylbutyric acid and indolylacetic acid on the process of vernalization in *Linum usitatissimum* Linn., strain 477–3/2. Soaked seeds from each treatment were spread over cloth moistened with a solution of the same strength or with water and kept in Petri dishes inside a refrigerator, maintained at a temperature of 4–8° C. Mucilage on the seed-coat retained the solutions during the entire period of chilling (24 days), and this ensured a continuous supply of hormones to the embryo.

Only sprouted seeds of similar stages of development were used for sowings along with water-treated unvernalized seeds. Date of opening of the first flower on each individual plant was recorded, and the average number of days taken from date of sowing