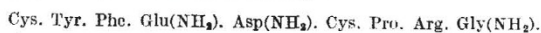The finback whale vasopressin has been compared with beef vasopressin by electrophoresis on paper at different pH's and by structural studies. The amino-acid sequence, determined by the chemical and enzymatic methods used earlier in the study of beef vasopressin[10], is the same in the two peptides, the structure being:

Cys. Tyr. Phe. Glu(NH₂). Asp(NH₂). Cys. Pro. Arg. Gly(NH₂).

It seems, therefore, that the posterior pituitary of the finback whale contains the same oxytocin and arginine-vasopressin found for most other mammals, but the difference resides in the proportions of the two hormones, the arginine-vasopressin being in the whale gland about 5 times more abundant than oxytocin.

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R. ACHER
J. CHAUVET
M. T. CHAUVET

Laboratoire de Chimie Biologique,
    Faculté des Sciences, Paris.

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Inhibition of Dehydrogenases by Salicylate

Euler and Ahlstrom[1] found that salicylate inhibited glucose and lactate dehydrogenases and that the inhibitory effect of the drug on the latter enzyme could be removed by adding cozymase. Salicylate has also been shown to inhibit malate and isocitrate dehydrogenase activities *in vitro* and the inhibitions were reversed by either NAD or NADP[2].

The results in Table 1 show that salicylate inhibits the activity of several other dehydrogenases *in vitro*. The inhibitions were reversed by the further addition of the appropriate coenzyme. Thus the drug appears to exert a general inhibitory action on dehydrogenase enzymes by a mechanism involving a reversible competition with the pyridine nucleotides required as co-factors. An exception is glutamate dehydrogenase, which is inhibited by salicylate by a mechanism not involving competition with either NAD or glutamate[3].

Table 1. INHIBITION OF DEHYDROGENASES BY SALICYLATE

Dehydrogenase	Coenzyme	Salicylate concentration (mM)	Inhibition (per cent)
Glucose-6-phosphate	NADP+	15	20
Glyceraldehyde-3-phosphate	NAD+	10	29
α-Glycerophosphate	NADH	20	34
Lactate	{ NAD+	10	30
	NADH	20	37
Alcohol	NAD+	10	19
Malate (ref. 2)	NAD+	5	40
Isocitrate (ref. 2)	NADP+	5	20

The effects of salicylate on the transfer of radiocarbon from labelled substrates into metabolic intermediates suggest that the drug inhibits dehydrogenase activities in more complex biological systems. The increased formation of radioactive malate and citrate in rat mitochondria incubated with (1 : 4-¹⁴C₂) succinate in the presence of salicylate is explicable in terms of a direct inhibitory action of the drug on the mitochondrial malate and isocitrate dehydrogenases[2]. Further work is in progress to determine if the *in vitro* inhibitory effects of salicylate on the other dehydrogenase enzymes contained in Table 1 may also be demonstrated in preparations of animal tissues.

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W. J. W. HINES
M. J. H. SMITH

Chemical Pathology Department,
King's College Hospital Medical School,
    Denmark Hill,
    London, S.E.5.

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2,6,10,14-Tetramethylpentadecanoic Acid, a Constituent of Butterfat

IN earlier work in this laboratory, on the trace and minor fatty acid constituents of butterfat, a C_{20} multi-branched chain fatty acid was isolated[1,2] which possessed physical and chemical properties corresponding with an acid afterwards isolated and conclusively identified by Bjurstam et al.[3] and by Sonneveld et al.[4] as 3,7,11,14-tetramethylhexadecanoic acid. Continued investigations on the fatty acid constituents of New Zealand butterfat have now resulted in the isolation in trace amounts of a homologous C_{19} saturated fatty acid with similar properties and with four side-chain methyl groups. Examination of this fatty acid by techniques which included mass spectrometry, nuclear magnetic resonance, infra-red spectrometry and gas-liquid chromatography has led to this previously unreported constituent being identified as 2,6,10,14-tetramethylpentadecanoic acid.

R. P. HANSEN

Fats Research Laboratory,
Department of Scientific and Industrial Research,
    Wellington,
    New Zealand.

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A Reaction between Glucose and Egg White Proteins in Incubated Eggs

RECENT work in this laboratory[1] showed that incubation of infertile chicken eggs or separated chicken egg whites resulted in changes in the starch-gel electrophoretic patterns. We have now obtained results which show: (1) The major deteriorative changes observed on incubation of egg white, as seen in starch-gel electrophoretic patterns, can be prevented by dialysis of the egg white; the changes can be simulated by adding back glucose. (2) Glucose reacts with most of the proteins. (3) The reaction occurs similarly in the egg whites of the three species investigated in addition to chicken egg white.

The deteriorative changes previously seen in chicken egg white[1] were also found in the starch-gel electrophoretic patterns of egg whites from Japanese rice quail eggs incubated at 37° C and in the separated and blended egg whites of Japanese rice quail, Peking duck, and guinea fowl incubated at 40°–44° C as shown in Fig. 1A.B. Horizontal starch-gel electrophoresis was performed with