586 G.	LYCOCOLL	AS A	DEFENSIVE	AGENT.
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DEFENSIVE AGENT	POISON	CONJUGATED FOISON
Ammonia Sulphate	Acid Phenol Indoxyl	Ammounium Salt. Phenol Sulphate. Indoxyl "
Glycocoll	Benozic Acid Salicylic " Cholic "	Hippuric Acid Salicyluric " Glycocholic "
Glycuronic Acid	Phenol Naphthol Naphthalene Camphor Chloral Hydrate	Phenol Glycuronic Acid Naphthol """ Camphor """ Trichlorethyl ""

In the table only a few of the poisons with which these defensive agents combine are given, and no notice is made of many other products of metabolism, such as alkaline carbonates, hydrogen sulphide, urea, bile acids, nuclein and proceins, which probably perform similar functions.

The number of substances in the animal body which appear to be able to act as a means of defence against poisons is so large that I am almost tempted to propound the doctrine that every substance of the body has a double functional role, namely, tissue-constituent and defensive agent, and that nature has endowed the animal economy to the extent that there is a limited means of defence against all the poisons which may enter the body with food-stuffs.

GLYCOCOLL AS A DEFENSIVE AGENT.

Glycocoll or glycine, the simplest of the amino acids into which the various proteins can be decomposed, takes a very important part in the animal economy. First it is an important building stone of many proteins, in some of which, for instance, gelatine and elastin, it is present in large proportions. Secondly, it combines with cholic acid, a product of metabolism, forming glycocholic acid, a constituent of bile, and forms similar combinations—hippuric acid and salicyluric acid with benzoic acid and salicylic acid respectively. The formation of these three conjugated acids may be illustrated by the following equations:

Benzoic :	acid	+	glycocoll	==	hippuric acid	+	water
Salicvlic	**	+	"	=	salicyluric "	+	"
Cholic	"	+	"	=	glycocholic "	+	66