underwent the change into adenoma when implanted beneath the skin, the epithelial cells must have arisen from elements present in the graft. The original tumor had been kept and sections were made from different parts of it in an endeavor to discover undoubted evidences of epithelial proliferation. Such evidences were found in several places, but notably in one place, in the glandular tubules or epithelium-lined spaces of the seminal vesicle in which organ the tumor developed originally. Hence there is no longer any doubt of the existence of a carcinomatous element in the original growth although it was restrained by the other and less highly organized parts of the tumor. The carcinomatous elements gradually gained supremacy in one strain of the tumor, then in other strains, until now all the strains which have been kept alive have either gone over into adenoma or are well advanced in this transformation.

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On nucleic acids.

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In recent years, several substances have been obtained which resemble one another in the fact that all of them contain in their molecules phosphoric acid and a sugar, but which differ one from another in the number and in the character of the nitrogenous radicals contained in their molecules. To this group of substances belong: (1) glucophosphoric acid; (2) inosinic acid and guanylic acid; (3) yeast nucleic and triticonucleic acid; and (4) thymonucleic acid.

All these substances may be classified as nucleic acids:

1. The first substance is a glucophosphoric acid proper.

2. Inosinic and guanylic acids are monopurin-glucophosphoric acids. Each of them contains in its molecule only one purin base besides the glucophosphoric acid.

3. Yeast and triticonucleic acids each contains two purin and one pyrimidin radical in its molecule and may be regarded as di-purin-monopyrimidin-glycophosphoric acid.

4. Finally, thymonucleic acid is a dipurin-dipyrimidin-glucophosphoric acid.

Conclusions as to the nature and existence of the monopurin-glucophosphoric acid have passed through several phases during the past year. Last summer a paper by v. Fürth and Jerusalem appeared in which the existence of the substance was denied. However, within a short time, work done by Steudel, by Jones and by ourselves has not only established the existence of the substance, but also has shown that its occurrence is more general in animal organs than has hitherto been conceded. In fact, with the acceptance of this discovery, some investigators are inclined to regard thymonucleic acid as simply a mixture of different monopurin-glucophosphoric acids.

This view is not supported by our experiments. Both the carbohydrate and the purin bases are easily obtained on decomposition of guanylic acid, while great difficulty is experienced in obtaining these substances quantitatively, by hydrolysis of thymonucleic acids.

However, it is possible that all nucleic acids resemble one another in the order in which the components are linked together. There is support for the assumption that the carbohydrate is joined to the phosphoric acid and the base to the carbohydrate in a glucoside form. Thus, upon hydrolysis of inosinic acid by means of alkali, a condition may be obtained in which the original solution is not changed in its rotatory power and does not show reducing action on Fehling's solution, but which gives evidence of the presence of free phosphoric acid. On the other hand various workers report experiments in which on hydrolysis of inosinic acid, a glucophosphoric acid was obtained which had the power of reducing Fehling's solution and which formed phenylosazone.

Furthermore on partial hydrolysis of thymonucleic acids, substances are obtained which contain only purins or only pyrimidins linked to a carbohydrate. These substances have no reducing power, but on further cleavage yield levulinic acid.

These considerations, and also the results of our analysis of the bases lead us to believe that the accepted view of the elementary composition and of the structure of the thymonucleic acids has not yet been fully demonstrated.

It seems to us possible that thymonucleic acid consists not of a tetra- but of a penta-phosphoric acid. On this assumption and on further assumptions that the oxypurins and oxypyrimidins form anhydrids with the corresponding sugars, one would deduce the following formula for nucleic acid: $C_{54}H_{71}N_{20}O_{37}P_5$.

Calculated.	Found by Levene in 1905.
C 37.0 %	C 37.78 %
H 4.0	H 4.86
N 16.0	N 16.51
P 9.0	P 8.91

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Regarding the innervation of the blood vessels of the kidney.

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The blood flow through the left kidney was determined by means of the stromuhr described previously.[1] Having determined that the left splanchnicus major, as well as the plexus renalis, contains vaso-constrictory fibers for the corresponding kidney, different fibers of the plexus were isolated and stimulated separately. Of five nerve-fibers tested, four proved to be constrictory and one dilatory. The constricting fibers displayed different grades of effectiveness.

By cutting the fibers composing the plexus, a faster blood flow was obtained. Cutting the nervi vagi in the neck produced a slowing of the renal bloodflow. Division of these nerves above the diaphragm did not seem to change the flow very markedly.

In another series of experiments the right splanchnicus was stimulated while the bloodflow through the left kidney was being measured. The results indicate that the innervation of the kidney is bilateral. Although stimulation of the right splanchnic produced a vaso-constriction in the left kidney, the effect was much weaker and more gradual than when the left nerve was used.

[1] Burton-Opitz: This journal, 1907, iv, p. 24.