

The above suggestion is supported by the work of Bu'Lock and Ryan<sup>15</sup> who used labelled 6-methylsalicylic acid<sup>16</sup> as a nutrient of *P. patulum* and isolated labelled patulin with the activity in the expected positions according to the above scheme of biogenesis. However, it is possible that patulin (XVIII) could be derived from the intermediate (XXII) itself as follows instead of passing through the gentisic aldehyde (XIX) as a further intermediate; the decarboxylation may take place at an undetermined stage.

#### SUMMARY

Members of the anacardic acid series and the accompanying orcinol derivatives are derived from orsellinic acids (C<sub>8</sub>-compounds) with lengthened side chains. *m*-Cresol derivatives are related to the anacardic acid series by a stage of decarboxylation and quinol derivatives by an extra stage of nuclear oxidation. Hydration of *m*-cresols also seems to be possible. Catechol derivatives with long side chains are derived from the corresponding aldehydes involving a stage of oxidation. Patulin is a typical example of a product obtained by ring fission from 6-methylsalicylic acid.

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\* The following are recent additions to natural benzoquinones and related compounds: (i) solanachromene (Rowland, R. L., *J. Amer. Chem. Soc.*, 1958, 80, 6130); (ii) the corresponding plant quinone (Kofler, M., *et al.*, *Helv. Chim. Acta*, 1959, 42, 1283; Trenner, N. R., *et al.*, *J. Amer. Chem. Soc.*, 1959, 81, 2026) and (iii) ubichromenol (Leidman, D. L., *et al.*, *Chem. and Ind.*, 1959, 1019).

#### NOBEL PRIZE IN MEDICINE

DR. SEVERO OCHOA and Dr. Kornberg, both of the United States, have been awarded the Nobel Prize in Medicine for 1959, for their discoveries of the mechanism in the biological synthesis of the Ribonucleic Acid and Deoxyribonucleic Acid.

The nucleic acids are present both in the nuclei and in the protoplasm of living cells and they are intimately connected with cell division, mutation and the manufacture of enzymes. The ribonucleic acid (RNA) takes part in the production of proteins whereas the deoxyribonucleic acid (DNA) is present in the chromosomes as carrier of the hereditary qualities.

Dr. Ochoa was born in Lueca, Spain, in 1905 and qualified at Madrid University. In 1937

he worked in the Marine Biological Institute at Plymouth, England, and later was Nuffield Research Assistant in Biochemistry at the Oxford University Medical School. He came to the United States in 1940, and has been Professor of Biochemistry since 1954, at the New York College of Medicine. He has written a number of works on the biochemistry of muscles and of the brain.

Dr. Kornberg was born in 1918 in Brooklyn, New York, and received his M.D. at Rochester University. Until 1952 he was attached to the National Institute of Health, and later was Professor of Microbiology at the University of Washington. He is now Professor of Biochemistry at Stanford University, California.