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## Original Articles

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### PHARMACOLOGY AND THERAPEUTICS OF SALICYLIC ACID AND ITS PREPARATIONS.\*

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Salicylic acid (ortho-oxy-benzoic acid  $C_6H_4OH,COOH$ ) is an organic acid which exists naturally in the flowers of meadow sweet (*spiraea ulmaria*), and as methyl-salicylate in the volatile oils of the leaves of wintergreen (*gaultheria procumbens*), and the bark of sweet birch (*betula lenta*). It is also a derivative, probably, by double oxidation of salicin, a glucoside, obtained from several species of *salix*, the willow, and *populus*, the poplar, trees of the natural order *salicaceae*.

Natural salicylic acid may be obtained, therefore, from natural salicylates, the oils of wintergreen and sweet birch (each representing about 81 per cent. of the pure acid), and from salicin, by heating with caustic potash and treating the product with hydrochloric acid. Synthetic salicylic acid and salicylates were first evolved by Kolbe, in 1874, from carbolic acid, caustic soda, and carbonic acid gas, with subsequent treatment as in the case of salicin. The artificial product constitutes very largely the therapeutic article in use at the present day, and, though chemically identical with the genuine, is yet, as would appear from the experiments of Stokvis, distinctly more toxic—

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\*This paper was adjudged the best in the DOMINION MEDICAL MONTHLY'S Prize Competition.