

SCIENCE

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FURTHER EVIDENCE THAT CROWN GALL OF PLANTS IS CANCER¹

TUMORS without visible cause are the subject of this address. They have been studied most numerous in man, but they occur also in the domestic animals, in wild animals (mammals, birds, batrachians, fish) and now, as we know, in plants. If this paper were given a full descriptive title it would read as follows: *Further Evidence that Crown Gall is Cancer, and that Cancer in Plants because of its Variable Form and its Bacterial Origin offers Strong Presumptive Evidence Both of the Parasitic Origin and of the Essential Unity of the Various Forms of Cancer Occurring in Man and Animals*. This is the text I shall talk to, and in passing I may add it is a view entirely opposed to the current views of cancer specialists.

To make plain what I have to say about plant tumors of this type it will be necessary briefly to mention similar animal tumors. This I shall do without special reference to medicine, *i. e.*, simply from the standpoint of a biologist, but first I shall show you the gross appearance of a few animal cancers. (Lantern slides.)

These tumors without visible cause are very common in man. They have been observed in every organ and in every tissue of every organ. They have been studied diligently by human pathologists, and especially by morphologists, for many years and there is now a great volume of literature respecting their structure and course of development, but very little is known as to

¹ Read before the Washington Academy of Sciences, May 11, 1916.