

# SCIENCE

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THE GERMLASM AS A STEREOCHEMIC SYSTEM<sup>1</sup>

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THE discovery in 1883 by Dr. S. Weir Mitchell and myself that the toxic principles of the venoms of serpents are albuminous marked an era in the chemistry, physiology and pathology of proteins, and among other things laid the foundation of our knowledge of bacterial and other toxalbumins. Since that time our information of the properties of albuminous substances, then extremely meager and somewhat chaotic, has greatly advanced, and many investigations have been made to determine the precise nature of these poisons, with the effect of more or less modifying the statements we then set forth. The astonishing fact that these terribly lethal substances were found by the tests of the day to be proteins, and that apart from their toxic properties they were indistinguishable from corresponding bodies that are ingested as food or derived therefrom by the processes of digestion, or found as normal constituents of the living tissues generally, naturally led me to much speculation and ultimately to the pursuit of the very elaborate series of researches that I have been carrying on during the past decade under the auspices of the Carnegie Institution of Washington, reports of two of which have appeared as Publications Nos. 116 and 173.

It would be futile for me to attempt within the necessarily restricted time that can reasonably be allotted to the reading of a communication to present in a satisfactory form even the briefest summary of the very voluminous results and conclusions that are embodied in these works, or even an outline of

<sup>1</sup> Read by title at the meeting of the American Philosophical Society, April 25, 1914, and in full before the Society of Normal and Pathological Physiology of the University of Pennsylvania, April 28, 1914.