protein molecule with lecithins (lecithans, phosphatids).

III. Derived Proteins.

1. Primary Protein Derivatives.—Derivatives of the protein molecule apparently formed through hydrolytic changes which involve only slight alterations of the protein molecule.

(*a*) *Proteans.*—Insoluble products which apparently result from the incipient action of water, very dilute acids or enzymes.

(*b*) *Metaproteins.*—Products of the further action of acids and alkalies whereby the molecule is so far altered as to form products soluble in very weak acids and alkalies, but insoluble in neutral fluids.

This group will thus include the familiar "acid proteins" and "alkali proteins," not the salts of proteins with acids.

(*c*) *Coagulated Proteins.*—Insoluble products which result from (1) the action of heat on their solutions, or (2) the action of alcohols on the protein.

2. Secondary Protein Derivatives.[7]—Products of the further hydrolytic cleavage of the protein molecule.

(*a*) *Proteoses.*—Soluble in water, uncoagulated by heat, and precipitated by saturating their solutions with ammonium sulphate or zinc sulphate.[8]

(*b*) *Peptones.*—Soluble in water, uncoagulated by heat, but not precipitated by saturating their solutions with ammonium sulphate.[9]

(*c*) *Peptids.*—Definitely characterized combinations of two or more amino acids, the carboxyl group of one being united with the amino group of the other, with the elimination of a molecule of water.[10]

[7] The term secondary hydrolytic derivatives is used because the formation of the primary derivatives usually precedes the formation of these secondary derivatives.

[8] As thus defined, this term does not strictly cover all the protein derivatives commonly called proteoses, *e. g.*, heteroproteose and dysproteose.

[9] In this group the kyrins may be included. For the present we believe that it will be helpful to retain this term as defined, reserving the expression peptid for the simpler compounds of *definite* structure, such as dipeptids, etc.

[10] The peptones are undoubtedly peptids or mixtures of peptids, the latter term being at present used to designate those of definite structure.

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For the American Physiological Society

Chicago,
December 31, 1907

Organization of a Utah Academy of Sciences

At a meeting of the Utah science teachers, held in Provo during the holidays, steps were taken toward the organization of a Utah Academy of Sciences. After an informal discussion of some length Dr. Ira D. Cardiff, professor of botany, University of Utah, was elected president and Mr. Geo. W. Bailey, of Weber Academy, secretary. A committee was appointed to draft a constitution and arrange for a future meeting. The committee was composed of the president and the following: Dr. J. A. Widtsoe, president of the Agricultural College; Dr. S. H. Goodwin, president of the Proctor Academy; Dr. W. C. Ebaugh, professor of chemistry, University of Utah; Dr. D. E. Ball, professor of zoology, Agricultural College; Dr. John Sundwall, professor of anatomy, University of Utah; Dr. L. H. Hartman, professor of physics, University of Utah; Professor Marcus E. Jones, botanist, Salt Lake City; Mr. Robert Forrester, geologist, Salt Lake City; Mr. Ernest M. Hall, instructor in biology, L. D. S. High School; Mr. A. O. Garrett, instructor in botany, Salt Lake High School. The committee met in Salt Lake City in February, arranged for a

meeting to be held in Salt Lake City, April 3, 4 and 6 and drew up a constitution to be submitted at that meeting. At the April meetings eight or ten papers will be given by men engaged in various lines of scientific work in the state. On the evening of the sixth, the new organization will be addressed by President David Starr Jordan, of Stanford University. All those interested in scientific work in the state are invited to attend the meetings.

THIRD SESSION OF THE GRADUATE SCHOOL OF AGRICULTURE

THE third session of the Graduate School of Agriculture, of which Dr. A. C. True is dean, will be held at Ithaca and Geneva, New York, beginning July 6, 1908, and continuing four weeks. Instruction adapted to the needs of graduate students will be given under the general heads of biochemistry, agronomy, horticulture, dairy husbandry and dairying, poultry, veterinary medicine and entomology. The following is an incomplete list of the faculty for this session:

Biochemistry.—Professor Dr. N. Zuntz, professor of animal physiology, Royal Agricultural College, Berlin, Germany; Professor L. B. Mendel, professor of physiological chemistry, Yale University; Dr. H. P. Armsby, director of Institute of Animal Nutrition, Pennsylvania State College; Dr. C. F. Langworthy, expert in nutrition, U. S. Office of Experiment Stations; Professor H. S. Grindley, professor of chemistry, University of Illinois; Professor H. C. Sherman, professor of analytical chemistry, Columbia University.

Agronomy.—A. D. Hall, director of the Rothamsted Experimental Station, England; Professor Milton Whitney, chief, U. S. Bureau of Soils; H. A. Harding, bacteriologist, New York Agricultural Experiment Station; Professor T. L. Lyon, professor of experimental agronomy, Cornell University; Professor W. J. Spillman, agriculturist, U. S. Bureau of Plant Industry; Dr. Samuel Fortier, chief of irrigation investigations, U. S. Office of Experiment Stations; C. G. Elliott, chief of drainage investigations, U. S. Office of Experiment Stations; Professor H. J. Webber, professor of experimental plant biology, Cornell University; E. G. Montgomery, instructor in agronomy, University of Nebraska.

Horticulture.—Professor J. C. Whitten, professor of horticulture, University of Missouri; Professor F. A. Waugh, professor of horticulture, Massachusetts Agricultural College; Professor S. A. Beach, vice dean, division of agriculture, and professor of horticulture, Iowa State College; Professor U. P. Hedrick, horticulturist, New York Agricultural Experiment Station; Professor John Craig, professor of horticulture, Cornell University; Professor B. M. Duggar, professor of plant physiology in its relations with agriculture, Cornell University; G. H. Powell, pomologist, U. S. Bureau of Plant Industry; W. T. Swingle, physiologist in charge, plant life history investigations, U. S. Bureau of Plant Industry; Dr. L. J. Briggs, physicist in charge, physical laboratory, U. S. Bureau of Plant Industry; Dr. Erwin F. Smith, pathologist in charge, Laboratory of Plant Pathology, U. S. Bureau of Plant Industry.

Dairy Husbandry and Dairying.—Dr. W. H. Jordan, director of the New York Agricultural Experiment Station; Professor T. L. Hæcker, professor of dairy husbandry, University of Minnesota; Dr. H. L. Russell, dean of the College of Agriculture, University of Wisconsin; Dr. E. Davenport, dean of the College of Agriculture, University of Illinois; Professor H. H. Wing, professor of animal husbandry, Cornell University; Professor R. A. Pearson, professor of dairy industry, Cornell University; Dr. L. L. Van Slyke, chemist, New York Agricultural Experiment Station; E. H. Webster, chief, Dairy Division, U. S. Bureau of Animal Industry.

Poultry.—Professor S. H. Gage, professor of microscopy, histology and embryology, Cornell University; Professor G. S. Hopkins, professor of veterinary anatomy and anatomical methods, New York State Veterinary College; Professor P. A. Fish, professor of veterinary physiology, pharmacology and therapeutics, New York State Veterinary College; Professor C. B. Davenport, department of experimental evolution, Carnegie Institution; Professor J. E. Rice, professor