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RESEARCH  
CAREERS  
IN  
NUTRITION,  
FOOD SCIENCE,  
AND FOOD  
ECONOMICS

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# RESEARCH CAREERS IN NUTRITION, FOOD SCIENCE, AND FOOD ECONOMICS

Consumer oriented food and nutrition research is an organized effort to establish the nutrient needs of the individual and to determine which foods, food qualities, and diet patterns satisfy these needs. The health and well-being of our nation are dependent on the nutritional vigor which results from the satisfaction of our diverse nutrient needs.

Research in the nutrition and food sciences is conducted by two research units of the Agricultural Research Service, the Human Nutrition Research Division and the Consumer and Food Economics Research Division. Each Division has several laboratories or branches that specialize in different areas of fundamental and applied research. They possess the latest scientific equipment and supporting facilities, and are located in the Washington, D. C. area, a nationally recognized research center.

Scientists in these laboratories have opportunity to grow in professional stature, to advance on the basis of research creativity and accomplishment, to present papers before national and international scientific meetings, to publish the findings of their research and to participate in the many benefits of Government programs directed toward personal and professional development.

The challenging programs of these two Divisions offer career opportunities for nutritionists, physiologists, chemists, biologists, microbiologists, food economists, food specialists, and other scientists in disciplines related to the fields of food and nutrition.

*An atomic absorption spectrometer is used to analyze trace minerals in research on food quality or nutritional responses to diet.*

**Human Nutrition Research Division  
Agricultural Research Center  
Beltsville, Maryland 20705**

**Principal Fields of Research:** Basic nutrition studies, human nutritional needs, nutrient values of foods, food quality, procedures for consumer use of food.

**NUTRITIONISTS** study requirements for nutrients, the interrelationships and metabolism of nutrients in experimental animals and human subjects. Nutritionists also cooperate in studies of the nutritional status of the population.

**PHYSIOLOGISTS** evaluate the nutritional responses of man and laboratory animals to nutrients and to diet patterns.

**BIOCHEMISTS** conduct fundamental and exploratory studies on enzyme systems and on the components of blood, tissues, and foodstuffs that are related to the nutritional responses of organisms or the quality of our foods.

**ANALYTICAL AND ORGANIC CHEMISTS** determine the complex makeup of our foods to further our knowledge of the amount and forms of nutrients, flavor constituents, and other components that affect the quality of the food we eat.

**BIOLOGISTS AND MICROBIOLOGISTS** search for conditions in home storage and preparation of food that will assure minimum spoilage and maximum safety, and engage in fundamental nutrition research using unicellular organisms as tools.

**HISTOLOGISTS AND HISTOPATHOLOGISTS** investigate the structure of foods and body tissues, using the light microscope and electron microscopy to interpret changes.

**FOOD SPECIALISTS** develop principles and procedures for handling and preparing quality foods for the home or for quantity food service, including the National School Lunch Program, and for international food and nutrition programs.

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**Consumer and Food Economics Research Division  
Federal Center Building  
Hyattsville, Maryland 20782**

**Principal Fields of Research:** Food consumption and nutrient content of the diets of households and individuals, food management practices of families, development of tables of food composition, food economics including food budgets, food habits of individuals,



and guidance materials for food and nutrition programs. The Division also conducts a related research program in family economics.

**FOOD ECONOMISTS AND STATISTICIANS** make surveys of the kinds and amounts of foods used by households, of the food intake of individuals and of food costs and of management practices in homes. Food Economists also investigate the relative economy of foods and develop food budgets at different levels of costs.

**NUTRITION ANALYSTS**, working with food economists and statisticians, appraise the dietary levels of households and individuals family members as shown by surveys of food consumption.

**NUTRITION ANALYSTS AND CHEMISTS** develop tables of food composition from the world's scientific literature and from unpublished data.

**NUTRITIONISTS** synthesize and interpret research findings as a basis for preparing guidance materials on food selection for use in national and international food programs.

*Using survey data and food composition tables, nutrition analysts and food economists appraise dietary levels.*



## PROFESSIONAL GROWTH AND RECOGNITION

Challenging research problems  
Stimulating research environment  
Collaboration with outstanding scientists  
Scientific seminars  
Individual specialization and recognition  
Papers presented at scientific meetings  
Publication with authorship

## CAREER BENEFITS

Promotions based on achievements  
Incentive and honor awards  
Training opportunities  
Regular salary increases  
Liberal vacation and sick leave benefits  
Low-cost life and health insurance  
Excellent retirement system

## CREATIVE SCIENTISTS SOUGHT

B.S.		Analytical chemistry, organic chem-
M.S.	IN	istry, and biochemistry
Ph.D.		Biology
M.D.		Food Economics
		Food Science
		Histology
		Histopathology
		Microbiology
		Nutrition Science
		Physiology
		Statistics

### PLUS

Summer		Graduate Students
research	FOR	University professors and instructors
assign-		
ments		

### PLUS

Postdoctoral Resident Research Associateships

**WRITE OR VISIT THESE DIVISIONS FOR INFORMATION AND APPLICATION FORMS.**

**Human Nutrition Research Division  
Agricultural Research Center  
Beltsville, Maryland 20705**

**Consumer and Food Economics Research Division  
Federal Center Building  
Hyattsville, Maryland 20782**



## FIELDS OF SPECIALIZATION

Diversified research programs offer careers in a wide variety of work in specialized fields:

- Natural constituents in foods that contribute to their nutritive value, flavor and other eating qualities;
- Composition and nutritive value of foods in processed and prepared forms, and availability of nutrients to the body;
- Microscopic structure of plant and animal tissues;
- Objective measures for food qualities important in food consumption;
- Human requirements for vitamins, amino acids, trace minerals, fatty acids, carbohydrates;
- Metabolic interrelationships of nutrients in foods and diet patterns;
- Enzymes in metabolism of nutrients in body tissues;

## QUALIFICATIONS AND SALARIES

The positions are in the Federal civil service and are filled through competitive examinations. Some civil service examinations require written tests. Others require an evaluation of your education, training and experience. Appointments are made from lists of persons who qualify through appropriate examinations. The selections from these lists are made without reference to race, creed, color, sex, or national origin.

Several entrance levels are available. Each level has a salary range that provides annual increases for 3 years and periodic increases thereafter. Career advancement is accomplished by grade promotions based on research achievements and potential.

<u>Grade levels</u>	<u>Entrance salaries</u>	<u>Requirements</u>
GS-5	\$5,181 (chemists, \$6,207)	Bachelor's degree in an appropriate major.
GS-7	\$6,269 (chemists, \$7,511)	Master's degree or bachelor's degree plus 1 year of appropriate graduate work or 1 year of research experience. Persons with a bachelor's degree, obtained within the past two years, may qualify for GS-7 if they have shown superior academic qualifications by their overall college average, by their average in their college major, by high class standing, or by election to national academic honor societies.

- Absorption, transport and utilization of nutrients at the cellular level;
- Structural and biochemical lesions from faulty nutrition;
- Radioactive tracer studies of metabolic processes;
- Effects of heredity, aging, and environment on nutritional requirements of humans and experimental animals;
- Food consumption patterns and nutritional status of population groups;
- Consumer-use practices in food preparation and management in homes and institutions;
- Evaluation and interpretation of research for use in developing guidance materials for food selection;
- Food budgets at different cost levels;
- Nutrition guidance in national and international food programs.

<u>Grade levels</u>	<u>Entrance salaries</u>	<u>Requirements</u>
GS-9	\$7,479 (chemists, \$8,241)	Master's degree in appropriate field, obtained within the past two years, and demonstrated superior ability in graduate studies; or bachelor's degree plus 2 years of appropriate graduate work (60 semester hours), or 2 years of progressive research experience.
GS-11	\$8,961 (chemists, \$9,267)	Completion of all requirements for Ph.D. degree; or 3 years of progressively responsible research experience beyond the bachelor's degree level.
GS-12	\$10,619	Completion of all requirements for Ph.D. degree and demonstrated superior ability in graduate studies; or 3 years of progressively responsible, highly specialized research experience beyond the bachelor's degree level.
GS-13	\$12,510	Increasingly responsible professional experience is required at each higher grade level. These positions require pertinent experience showing ability to conduct the most difficult research, outstanding competence in a scientific field, and ability of a high order in planning, organizing, directing, and interpreting difficult research projects.
GS-14	\$14,680	
GS-15	\$17,055	



