

**U.S. Office of Personnel Management
Division for Human Capital Leadership & Merit System Accountability
Classification Appeals Programs**

Chicago Field Services Group
230 South Dearborn, Room 3060
Chicago, IL 60604

**Classification Appeal Decision
Under section 5112 of title 5, United States Code**

Appellant: [appellant]

Agency classification: Research Geneticist (Plants)
GS-440-14

Organization: Cereal Crops Research Unit
Northern Crop Science Laboratory
Red River Valley Agricultural Research
Center
Agricultural Research Service
U.S. Department of Agriculture
[city and state]

OPM decision: GS-440-14
(title at agency discretion)

OPM decision number: C-0440-14-01

/s/

Manuela Martinez
Classification Appeals Officer

March 7, 2003

Date

As provided in section 511.612 of title 5, Code of Federal Regulations, this decision constitutes a certificate that is mandatory and binding on all administrative, certifying, payroll, disbursing, and accounting officials of the government. The agency is responsible for reviewing its classification decisions for identical, similar, or related positions to ensure consistency with this decision. There is no right of further appeal. This decision is subject to discretionary review only under conditions and time limits specified in the *Introduction to the Position Classification Standards* (PCS's), appendix 4, section G (address provided in appendix 4, section H).

Decision sent to:

[appellant]
Northern Crop Science Laboratory
Agricultural Research Service
U.S. Department of Agriculture
State University Station
[address]
[city and state]

Director, Personnel Division
Agricultural Research Service
U.S. Department of Agriculture
Greenbelt, Maryland 20770-1433

Acting Director of Human Resources Management
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Introduction

On June 10, 2002, the Chicago Oversight Division of the U.S. Office of Personnel Management (OPM) accepted a position classification appeal from [appellant]. He requested that his position, currently classified as Research Geneticist (Plants), GS-440-14, be classified at the GS-15 grade level. We received the complete appeal administrative report from the agency on July 17, 2002. The appellant works in the Cereal Crops Research Unit, Northern Crop Science Laboratory, [station] Agricultural Research Center, Agricultural Research Service (ARS), U.S. Department of Agriculture, in [city and state]. We accepted and decided this appeal under the provisions of section 5112 of title 5, United States Code (U.S.C.).

To help adjudicate this appeal, we conducted a telephone audit with the appellant on October 9, 2002, and a telephone interview on January 4, 2003, with his immediate supervisor. We interviewed 12 other scientists knowledgeable of the appellant's work and of biotechnology and cytogenetics research, including scientists recommended by the appellant and his agency. In reaching our decision, we reviewed the findings from the audit and the interviews and all information of record furnished by the appellant and his agency, including his official position description (PD), number [number], and work examples provided by the appellant.

General issues

In his appeal letter, the appellant provides two different reasons to explain why his position should be classified at the GS-15 grade level. First, he takes issue with his agency's review of his position, in particular the peer panel's evaluation of his work in May 2001. The appellant believes that Degree E should be assigned to the four factors for evaluating research positions, as described in the Research Grade Evaluation Guide. The appellant states that he should have received Degree E for Factor III because of the originality of his research work. He believes that his publications, accomplishments, and honors since his last promotion in 1992 make him eligible for Degree E for Factor IV. The appellant's second rationale is that the borderline score of 44 points in the agency's last two research evaluation reports should be adjusted upward and his position upgraded based on his important publications, accomplishments, honors, and recognition since his last promotion.

OPM is required by law to classify positions on the basis of their current duties, responsibilities, and qualification requirements by comparison to the criteria specified in the appropriate PCS or guide (5 U.S.C. 5106, 5107, and 5112). The law does not authorize use of other methods or factors of evaluation, such as the appellant's critique of the quality of his agency's previous or current classification analysis. Our decision sets aside all previous agency decisions regarding the classification of the appellant's position. Therefore, this decision is based on the actual work assigned by management to and performed by the appellant.

Position information

The appellant's Cereal Crops Research Unit conducts research essential to the development of improved, disease resistant, desirable agronomical cultivars of hard red spring wheat, durum wheat, barley, and oats. There are 22 positions in the Cereal Crops Research Unit which include

the appellant's supervisor, Research Plant Pathologist, GS-434-14; Research Plant Pathologist, GS-433-14; Research Plant Pathologist, GS-433-12; Research Chemist, GS-1320-14; Research Chemist, GS-1320-12; Research Geneticist Plants, GS-440-14; Research Geneticist Plants, GS-440-11; Research Geneticist, GS-440-13; Geneticist Plants, GS-440-11; Food Technologist, GS-1382-13; and 12 technical and administrative support positions. The appellant and the supervisor have certified the accuracy of the appellant's official position description.

The primary purpose of the appellant's work is to perform basic and applied research in cytogenetics and biotechnology of wheat. The appellant's major duties include usually functioning as leader, providing expertise in wheat cytogenetics, the branch of biology that deals with the knowledge of heredity and the cellular components associated with heredity. The appellant is responsible for independently conducting exceptionally difficult research on critical problems. He has responsibility for formulating, conducting, and directing research within the broad context of ARS goals. The appellant's current work assignments involve using cytogenetic techniques on wild species for wheat improvement including studying genes from wild wheat grasses as sources of scab resistance. The appellant supervises one research technician and directs the work of one to three part-time graduate or undergraduate students.

Series, guide, and title determination

The agency has classified the appellant's position in the Genetics Series, GS-440, and he does not disagree. We concur with the agency's determination.

The Research Grade Evaluation Guide (RGEG) is used across series lines to determine the grade levels of research positions. Part I of the RGEG is used to evaluate positions at the GS-11 through GS-15 grade levels that are engaged in basic or applied research in the sciences, when the position involves the personal performance, as the highest level function and for a substantial portion of the time, of professionally responsible research. The appellant spends nearly all of his time (90 percent to 95 percent) performing research in the field of plant genetics. His position is properly evaluated by application of the grading criteria in Part I of the RGEG.

OPM has no specified titles for positions in the GS-440 series. Therefore, the agency may construct a title consistent with guidance in the *Introduction to the Position Classification Standards*. The RGEG states that agencies may use the prefix "Research" in the title for positions in series for which there are no standards.

Grade determination

Part I of the RGEG includes four factors that are considered and rated separately: *the research situation or assignment, supervision received, guidelines and originality, and qualifications and scientific contributions*. The total of the point values assigned to each factor is converted to a grade level by use of the grade determination chart in the RGEG.

Each factor is evaluated at one of five degree levels. Levels A, C, and E are defined. Degree B may be assigned when a position is evaluated between Levels A and C, and Degree D may be

assigned when a position is evaluated between Levels C and E. A position must substantially exceed the level defined before crediting at the next higher level can be considered.

The agency assigned Degree E for Factors I and II and Degree D for Factors III and IV. The appellant believes that his position should be credited at Degree E for all four factors. After careful review of all of the information provided by the appellant and his agency, we concur with the agency's evaluation of Factors I and II. Therefore, our detailed analysis addresses the two factors at issue.

Factor III, Guidelines and originality

This factor deals with the creative thinking, analyses, syntheses, evaluation, judgment, resourcefulness, and insight that characterize the work performed by the employee in the current job situation.

In assessing the impact of creativity found in the position three considerations are important. The first consideration involves the requirement for original and independent creation, analysis, reasoning, evaluating, judging, and choosing between alternative methodologies. The second consideration is the required interpretation of findings, translation of findings into a problem solution, and recording of these findings and interpretations in a form usable by others as well as in application to specific end-products. The third consideration is the impact of theories, principles, concepts, techniques, and approaches developed by the employee upon the scientific field of the research effort.

At Degree C in basic research, available guidelines and precedents are limited in usefulness or may be largely lacking because of the novel character of the work being done. A high degree of originality is required in defining the problems which are very elusive and/or highly complex, in developing productive hypotheses for testing, in identifying significant problems for study, in developing important new approaches, methods, and techniques, and in interpreting and relating the significance of results to other research findings. Work in applied research at Degree C typically involves developing and applying new techniques and original methods of attack to the solution of important problems presenting unprecedented or novel aspects. This includes applying a high degree of insight to isolate and define the critical features of the problem and applying a high degree of originality and ingenuity in adapting, extending, and synthesizing existing theory, principles, and techniques into original and nonobvious combinations and in defining and conducting specific studies necessary to solve the problems dealt with.

At Degree E, originality is represented by creative extension of existing theory or methodology, or significant contribution to the development of new theory or methodology which is of such scope as to supplant or add new dimensions to a previous framework of theory or methodology. Degree E originality (particularly in applied research) may be represented by creative responsibility for applying a very high degree of imagination and creativity in the solution of problems of marked importance (for example, to health, to major segments of the national economy), for which there is an almost complete absence of applicable guidelines, pertinent literature, and methodology. Originality at Degree E is also represented by creative extension of existing theory of methodology or significant contribution to the development of new theory or

methodology which is of such scope as to supplant or add new dimensions to a previous framework of theory or methodology. For example, the new theory may represent a higher abstraction which includes relevant prior knowledge, at least as special cases of the new and which accounts for phenomena which may have been inconsistent with prior theory.

The most recent ARS peer group found that the appellant's originality was evidenced by his development of a transformation protocol for durum wheat based on the use of scutellar tissue. They said that the relevant information on the use of wild species for wheat improvement is limited, and the protocol for successful genetic transformation had to be developed. Available techniques such as interspecific and intergeneric hybridization and evaluation of progenies require major adaptation. Originality is required to transfer genes from wild wheat grass species to cultivated durum wheat. The assignment is difficult because wheat genetics is complex and this system must be understood in order to draw accurate conclusions based on data obtained. The ARS peer panel noted that the appellant's originality in the application of known techniques of cytogenetics to the problem of using wild species for wheat improvement has significantly modified existing technology but that this work fell short of Degree E. Thus, the panel credited it at Degree D.

Scientists whom we contacted said that the appellant applied an earlier technique of his development in genome analysis to assess the inter- and intra-genomic relationships in durum wheat [*Crop Science* 38:1080-1087(1998) and *Journal of Heredity* 90: 437-445 (1999)], produced the first transgenic durum wheat, and improved the technique of direct gene transfer into the scutellar cells [*Journal of Heredity* 88:475-481 (1997)]. Before this, the appellant standardized the technique of regenerating full plants from single cells [*Plant Science* 116: 197-203 (1996)]. In addition, the scientists said the appellant successfully transferred a gene conferring scab resistance from the wild grass *Thinopyrum junceiforme* into durum wheat [*Genome* 42: 570-583 (1999) and *Euphytica* 118: 127-136 (2001)]. They stated that his research pertaining to genetic transformation in wheat provides new exciting avenues of germplasm enhancement. Further, they said his contribution to better understanding of the control of chromosome pairing and of intergenomic relationships is very significant.

Scientists whom we contacted confirmed the significance of the appellant's accomplishments that have been credited by his agency; e.g., developing genetic control of chromosome pairing, elucidating genomic relationships, and developing transgenic techniques in durum wheat. The scientists who had the greatest knowledge of his most recent work stated that this work was particularly significant in improving scientific understanding of genes from wild wheat grasses as sources of scab resistance. As one scientist put it, this work usually does not produce an instant new variety, but it does provide a scientific basis for wheat improvement to meet future demands for high quality food. Overall, these scientists indicated that the appellant's recent work had the potential to result in the extension of existing theory or methodology envisioned at Degree E but had not yet reached that level of impact. His work to standardize the transgenic technology in his laboratory is recognized as having paved the way for direct introduction of superior genes, including anti-fungal genes, into commercial durum cultivars and opening up new avenues of germplasm enhancement. The appellant's position exceeds Degree C in that the work requires overcoming significant problems, developing important new techniques, and relating the significance of results to other research findings. However, the position falls

substantially short of the impact envisioned at Degree E where the scope of the creative extension or methodology supplant or add a new dimension. Degree D (8 points) is assigned.

Factor IV, Qualifications and scientific contributions

This factor measures the total qualifications, professional standing and recognition, and scientific contributions of the researcher, insofar as these bear on the dimensions of the current research situation and work performance. The RGEG instructs that, although the total history of accomplishment is to be considered under this factor, recent research which assures maintenance of research competence, is essential to full credit for past accomplishments.

At Degree C, the researcher has demonstrated ability as a mature, competent, and productive worker and will typically have authored one or more publications of considerable interest and value to the field (as evidenced by favorable reviews, by citation in the work of others, by presentations of papers to professional societies, etc.), and/or will have contributed inventions, new designs, or techniques which are of material significance in the solution of important applied problems. Contributions at this level derive from highly productive (in terms of both quantity and quality) personal performance of research of such originality, soundness, and value as to have marked the employee as a significant contributor to his or her field. Researchers at this level are beginning to be sought out for consultation by colleagues who are professionally mature researchers. The RGEG also explains that evidence of “emerging recognition” may be selection of the employee to serve in important committee assignments of professional groups. At Degree C, the researcher is qualified to speak and deal responsibly concerning technical matters in the area of immediate specialization with researchers within and outside the employee’s own organization.

At Degree E, the researcher has demonstrated outstanding attainment in a broad, or in a narrow but intensely specialized, field of research. The researcher will typically have authored a number of important publications, of which at least some have had a major impact on advancing the field, or are accepted as definitive of important areas of it. The researcher will have contributed inventions, new designs, or techniques which are regarded as major advances in basic or applied research, and which have opened the way for extensive further developments, or have solved problems of great importance to the scientific field, to the agency, or to the public. Contributions at Degree E are of such importance and magnitude that they serve to move the art forward to the extent other researchers must take note of the advance in order to keep abreast of development in the field. Typical of Degree E, the researcher speaks authoritatively in contacts within and outside the government, and the researcher is sought out as a consultant by colleagues, who are themselves specialists in the researcher’s field. At Degree E, recognition in the literature of the researcher’s field through favorable reviews and numerous citations by others is considered further evidence of attainment.

The appellant points to the following publications, and accomplishments in support of Degree E: 40 publications since his last promotion; use of his books and several research papers for graduate teaching at numerous universities; the first transgenic durum wheat and the standardization of techniques of genetic transformation; and the production of durum haploids helping to generate knowledge on the genomic constitution and phylogeny of durum wheat. He

also noted the importance of his recognition as a Fellow of the Crop Science Society of America (CSSA) in 1995, Fellow of the American Society of Agronomy (ASA) in 1996, and Fellow of American Association for the Advancement of Science (AAAS), 2002.

The ARS peer panel determined that the appellant's best work included his pre-1992 accomplishment of determining the genetic control of chromosome pairing in *Festuca*. The appellant developed the hypothesis, synthesized the genetic material, studied the material cytologically, and interpreted the data. The ARS panel stated that the appellant's stature is evidenced by election as Fellow to CSSA and ASA, invitation to present a paper at the international workshop on evaluation and utilization of biodiversity in wild relatives and primitive forms for wheat improvement at the International Center for Agricultural Research in the Dry Areas, and receipt of a Fulbright Scholar to his laboratory to learn techniques of classical and molecular cytogenetics in relation to wheat improvement. The panel noted that the appellant is internationally recognized for research in wheat cytogenetics and has an excellent record of participation in scientific meetings. Scientists whom we contacted stated that he has been honored by the World Health Organization in recognition of his contributions to W.H.O. symposium. His most significant advisory and consultant activities include serving on the ARS grain review panel (1996), serving on the plant genome review panel (1996-2000), being invited by Foreign Agricultural Service to advise Bangladesh scientists on a three-year wheat project (2000-2003). The ARS panel determined that because the appellant has received several prestigious awards, is a recognized expert in the field, and developed materials which promise to have major impact in U.S. agriculture, Degree C criteria are not sufficiently exceeded to fully meet Degree E because the awards and work accomplishments have not led to a major breakthrough; i.e., the work is not yet definitive of the area. The appellant's work would need to have contributed techniques which are regarded as major advances in basic or applied research that have opened the way for extensive further developments or have solved problems of great importance to the scientific field, or to the public to meet Degree E. While scientists recognize the appellant's insight and perseverance in his accomplishments on transgenic durum wheat and their importance, they still expect that it may be 10 to 20 more years before they may look back at the appellant's efforts as pioneering.

The RGEG instructions for application of Factor IV caution that, although this factor is not restricted to present and immediate past job performance, particular care must be observed to consider only those features of the factor which have a significant impact on the job. The instructions further caution that recency of accomplishment is important. Although the total history of accomplishment is considered, recent research or similar activity which assures maintenance of research competence is essential to full credit for past accomplishments. The appellant's pre-1992 accomplishment is not current. The appellant's election as a Fellow is a decision of its members based on society criteria and not on published OPM PCS's. Therefore, the appellant's election may be considered only to the extent that it may help to explain the scope of difficulty and complexity of the appellant's current work. The advisory and consulting function at and above Degree C are not creditable for guiding Fulbright Scholars and postdoctoral and graduate students. This work does not fall within the RGEG's meaning of advisory or consultant work.

Scientists whom we contacted to evaluate the appellant's work corroborated the significance of his past work in the genetic control of chromosome pairing in *Festuca* and stated that it has provided plant breeders with guidance in combining superior traits into new cultivars of fescue grass. They indicated that this accomplishment met Degree E requirements. They stated overall that his more recent work with the regeneration and transformation of durum wheat and the genetic control of haploid production frequency exceeds Degree C but does not meet Degree E. These scientists indicated that his more recent work had the potential to result in the extension of existing theory or methodology envisioned at Degree E. They noted that procedures developed by the appellant are currently being used in their laboratories or others around the world and that they have adapted the techniques reported from the appellant's laboratory to produce transgenic wheat/and or other cereals. They said that his innovative research has stimulated research on cytogenetics and phylogeny and their relevance to crop improvement. Therefore, the magnitude of the appellant's current work exceeds Degree C but does not meet Degree E.

The appellant stated that of a total of 109 publications, he is the senior author on 95 and since his last promotion he has produced, on average, about 4.5 publications per year. The scientists who we contacted noted that the appellant produced 40 publications of which he is the senior author on 30, since his last promotion in August 1992. These included 15 peer reviewed manuscripts, 6 invited papers in national proceedings, 2 papers in national proceeding, 2 books (one as an author and one as coauthor and editor), 1 popular article, 6 book reviews published in international journals, 7 invited book chapters, and 1 invited commentary. He has been published in a wide variety of International Journals such as *Nature*, *Chromosoma*, *Theoretical and Applied Genetics*, *Genome*, and *Journal of Heredity*. Three of these manuscripts were cover stories in three international journals, *Journal of Heredity*, *Genome*, and *Crop Science*. His books and research papers are used for graduate teaching at numerous universities worldwide, including the University of Wisconsin, Purdue University, and Colorado State University. The ARS peer panel considered the material the appellant published in regard to his more recent work. They also indicated that although his current work has resulted in published findings, that work does not as yet reflect the impact on scientific theory or methodology envisioned at Degree E. The appellant provided a list of his publications in the last 5 years that includes 29 publications of which 5 are monographs and the remainder are coauthored. His coauthors included a Fulbright Scholar, a postdoctoral student, and a technician in his laboratory; a postdoctoral student in a collaborating scientist's laboratory; a collaborating scientist from another country; and two ARS scientists. One of the monographs was an invited book chapter to the *Handbook of Genome Analysis*.

Scientists whom we contacted stated that the fundamental genetic information that the appellant produces is being taught in plant genetics courses in agriculture facilities in the United States and elsewhere. They noted that he is published extensively in high quality peer reviewed journals, received international recognition for his productivity by being invited to write books and book chapters, and presented his findings at international symposia. He has had at least 15 other special invitations, national and international, in the last 5 years including those to present papers, contribute book chapters, organize and chair symposium, and serve as editor for the *International Journal of Biotechnology and Genetics*.

The appellant has been an editor of the *Journal of Heredity*, an international journal of genetics, since 1990. He was invited by mainly society presidents to be the Chair of the International Service in Agronomy Award Committee in 1996, the Chair of the CSSA Committee C-456, NCCPB Genetics and Plant Breeding Award for Industry in 1997, the Chair of the Agronomic Research Award Committee in 1997-1998, a member of the Fellows Committee of the CSSA in 1997-1998, a member of the Plant Genome Panel in 1996-2002, and a guest editor of science for the journal *Plant Cell, Tissue and Organ Culture*, an international journal of biotechnology of higher plants, in 2001-2002. Scientists stated that the appellant is invited to serve in many professional capacities on panels, boards, and committees in recognition of his familiarity with a broad range of scientific disciplines and issues. Together, the appellant's invitations, publications, and recognition exceed Degree C. However, we must conclude that Degree E is not warranted because his recent research contributions have not been of the scope to supplant or add new dimensions to theory or methodology or had the definitive impact as envisioned at Degree E. Because his new techniques are viewed as opening the way for further developments and hold promise for future impact, we assign Degree D (16 points).

Summary

We have evaluated the appellant's position as follows:

<i>Factor</i>	<i>Degree</i>	<i>Points</i>
I. The research situation or assignment	E	10
II. Supervision received	E	10
III. Guidelines and originality	D	8
IV. Qualifications and scientific contributions	D	16
<i>Total</i>		44

A total of 44 points falls in the gap between the GS-14 (36-42 points) and GS-15 (46-52 points) grade level ranges. In borderline situations, the position may be placed in the higher or lower grade based on aspects of the position that may have not been fully considered in arriving at the point values and in consideration of best alignment with other properly classified positions. In our analysis, we fully considered all of the aspects of the appellant's work and the best alignment with other positions. Because the appellant's position falls substantially short of Degree E for Factors III and IV, the appellant's position is best graded at the GS-14 level.

Decision

The appellant's position is properly classified as GS-440-14 and titled at the agency's discretion.