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U.S. Department of Homeland Security  
Bureau of Citizenship and Immigration Services

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ADMINISTRATIVE APPEALS OFFICE  
425 Eye Street N.W.  
ULLB, 3rd Floor  
Washington, D.C. 20536



File: EAC-01-177-54216 Office: Vermont Service Center

Date: MAR 18 2003

IN RE: Petitioner:  
Beneficiary:



Petition: Immigrant Petition for Alien Worker as a Member of the Professions Holding an Advanced Degree or an Alien of Exceptional Ability Pursuant to Section 203(b)(2) of the Immigration and Nationality Act, 8 U.S.C. § 1153(b)(2)

**Identifying data deleted to  
prevent clearly unwarranted  
invasion of personal privacy**

ON BEHALF OF PETITIONER: SELF-REPRESENTED

INSTRUCTIONS:

This is the decision in your case. All documents have been returned to the office that originally decided your case. Any further inquiry must be made to that office.

If you believe the law was inappropriately applied or the analysis used in reaching the decision was inconsistent with the information provided or with precedent decisions, you may file a motion to reconsider. Such a motion must state the reasons for reconsideration and be supported by any pertinent precedent decisions. Any motion to reconsider must be filed within 30 days of the decision that the motion seeks to reconsider, as required under 8 C.F.R. § 103.5(a)(1)(i).

If you have new or additional information that you wish to have considered, you may file a motion to reopen. Such a motion must state the new facts to be proved at the reopened proceeding and be supported by affidavits or other documentary evidence. Any motion to reopen must be filed within 30 days of the decision that the motion seeks to reopen, except that failure to file before this period expires may be excused in the discretion of the Bureau of Citizenship and Immigration Services (Bureau) where it is demonstrated that the delay was reasonable and beyond the control of the applicant or petitioner. *Id.*

Any motion must be filed with the office that originally decided your case along with a fee of \$110 as required under 8 C.F.R. § 103.7.

Robert P. Wiemann, Director  
Administrative Appeals Office

**DISCUSSION:** The employment-based immigrant visa petition was denied by the Director, Vermont Service Center, and is now before the Administrative Appeals Office on appeal. The appeal will be dismissed.

The petitioner seeks classification pursuant to section 203(b)(2) of the Immigration and Nationality Act (the Act), 8 U.S.C. § 1153(b)(2), as a member of the professions holding an advanced degree. The petitioner asserts that an exemption from the requirement of a job offer, and thus of a labor certification, is in the national interest of the United States. The director found that the petitioner qualifies for classification as a member of the professions holding an advanced degree, but that the petitioner had not established that an exemption from the requirement of a job offer would be in the national interest of the United States.

Section 203(b) of the Act states in pertinent part that:

(2) Aliens Who Are Members of the Professions Holding Advanced Degrees or Aliens of Exceptional Ability. --

(A) In General. -- Visas shall be made available . . . to qualified immigrants who are members of the professions holding advanced degrees or their equivalent or who because of their exceptional ability in the sciences, arts, or business, will substantially benefit prospectively the national economy, cultural or educational interests, or welfare of the United States, and whose services in the sciences, arts, professions, or business are sought by an employer in the United States.

(B) Waiver of Job Offer.

(i) . . . the Attorney General may, when the Attorney General deems it to be in the national interest, waive the requirement of subparagraph (A) that an alien's services in the sciences, arts, professions, or business be sought by an employer in the United States.

The petitioner holds a Ph.D. in Biomolecular and Bioanalytical Chemistry from Emory University. The petitioner's occupation falls within the pertinent regulatory definition of a profession. The petitioner thus qualifies as a member of the professions holding an advanced degree. The remaining issue is whether the petitioner has established that a waiver of the job offer requirement, and thus a labor certification, is in the national interest.

Neither the statute nor pertinent regulations define the term 'national interest.' Additionally, Congress did not provide a specific definition of 'in the national interest.' The Committee on the Judiciary merely noted in its report to the Senate that the committee had 'focused on national interest by increasing the number and proportion of visas for immigrants who would benefit the United States economically and otherwise. . . .' S. Rep. No. 55, 101st Cong., 1st Sess., 11 (1989).

Supplementary information to the regulations implementing the Immigration Act of 1990 (IMMACT), published at 56 Fed. Reg. 60897, 60900 (November 29, 1991), states:

The Service believes it appropriate to leave the application of this test as flexible as possible, although clearly an alien seeking to meet the [national interest] standard must make a showing significantly above that necessary to prove the 'prospective national benefit' [required of aliens seeking to qualify as 'exceptional.']. The burden will rest with the alien to establish that exemption from, or waiver of, the job offer will be in the national interest. Each case is to be judged on its own merits.

*Matter of New York State Dept. of Transportation*, 22 I&N Dec. 215 (Comm. 1998), has set forth several factors which must be considered when evaluating a request for a national interest waiver. First, it must be shown that the alien seeks employment in an area of substantial intrinsic merit. Next, it must be shown that the proposed benefit will be national in scope. Finally, the petitioner seeking the waiver must establish that the alien will serve the national interest to a substantially greater degree than would an available U.S. worker having the same minimum qualifications.

It must be noted that, while the national interest waiver hinges on *prospective* national benefit, it clearly must be established that the alien's past record justifies projections of future benefit to the national interest. The petitioner's subjective assurance that the alien will, in the future, serve the national interest cannot suffice to establish prospective national benefit. The inclusion of the term 'prospective' is used here to require future contributions by the alien, rather than to facilitate the entry of an alien with no demonstrable prior achievements, and whose benefit to the national interest would thus be entirely speculative.

The petitioner is a full-time researcher at the Department of Molecular Biology and Microbiology, Tufts University. According to Dr. Catherine L. Squires, a professor at Tufts University, the petitioner works in the field of biomimetic nanotechnology, a field requiring expertise in molecular biology and protein chemistry. Dr. Squires continues:

[The petitioner] has been working on the design, construction, and characterization of self-assembled novel recombinant proteins, which are components in nanometer-scale architectures. The goal of [the petitioner's] research is to study, at the molecular level, the self-assembling mechanism of T4 bacteria phage's tail fiber, which has a unique rodlike structure and mechanical strength. The result of her work will help in the design of a new generation of protein-based biomaterials that could self-assemble into pre-designed three-dimensional structures. These protein-based biomaterials could be used in biomedical applications such as virus separation, detoxifying body fluid, etc.

We concur with the director that the petitioner works in an area of intrinsic merit. The director then concluded, without discussion, that the petitioner had not demonstrated that the proposed benefits of her work would be national in scope. We find that the benefits from improved synthesis of biomaterials would not be limited to any geographic region. Thus, the proposed

benefits of the petitioner's work would be national in scope. It remains, then, to determine whether the petitioner will benefit the national interest to a greater extent than an available U.S. worker with the same minimum qualifications.

The director concluded that the petitioner had not demonstrated that she was primarily responsible for the research in which she participated or that her work is "generally acknowledged as representing major advances that have enjoyed widespread implementation in the field." While the letter from [REDACTED] submitted on appeal sufficiently addresses the director's first concern, the record is still absent sufficient evidence of the petitioner's influence on the field as a whole.

Several references note that nanotechnology is a government priority and can profoundly impact our economy and society. Eligibility for the waiver, however, must rest with the alien's own qualifications rather than with the position sought. In other words, we generally do not accept the argument that a given project is so important that any alien qualified to work on this project must also qualify for a national interest waiver. At issue is whether this petitioner's contributions in the field are of such unusual significance that the petitioner merits the special benefit of a national interest waiver, over and above the visa classification she seeks. By seeking an extra benefit, the petitioner assumes an extra burden of proof. A petitioner must demonstrate a past history of achievement with some degree of influence on the field as a whole. *Id.* at 219, note 6.

In addition, several references note that the petitioner's work is supported by grants from the National Institutes of Health (NIH) and the National Science Foundation (NSF). It can be argued, however, that most research, in order to receive funding, must present some benefit to the general pool of scientific knowledge. It does not follow that every researcher working with a government grant inherently serves the national interest to an extent that justifies a waiver of the job offer requirement.

Dr. Squires asserts that the petitioner's "exceptional interdisciplinary ability in chemistry, molecular biology and biomaterials" qualify the petitioner for a waiver of the labor certification requirement in the national interest. This sentiment is also expressed by other references. It cannot suffice, however, to state that the alien possesses useful skills, or a "unique background." Special or unusual knowledge or training does not inherently meet the national interest threshold. The issue of whether similarly-trained workers are available in the U.S. is an issue under the jurisdiction of the Department of Labor. *Id.* at 221.

Dr. Squires asserts that the petitioner works with Professor Edward Goldberg, "a world leader in the field of protein nanotechnology and an internationally renowned scientist." Dr. Squires further asserts that the petitioner's "work has been acclaimed by world-renowned scientists." In her discussion of the specifics of the petitioner's research, Dr. Squires explains that self-assembled structural proteins "should permit rapid and cheap separations of viruses from larger cells and smaller proteins and of proteins of different sizes and shapes." In addition, the proteins "would be useful in removing or detoxifying various poisons in the environment or from within [the] body" and in designing smaller water purification systems. The synthesis of such proteins

could also aid in advanced biosensors, novel drug delivery systems, diagnostic agents, vaccines and tissue repair. Finally, such proteins could be incorporated into the manufacture of computer chips. Dr. Squires does not explain, however, how the petitioner's work has contributed to any of these potential uses for synthesized proteins. The letters quoted by Dr. Squires will be discussed below.

In a subsequent letter, Dr. Squires asserts that the petitioner discovered several new protein assembly elements using a biological assay that the petitioner developed. The petitioner has yet to publish these results. As such, it is difficult to gauge the influence of these results.

Dr. Goldberg discusses the goals of his laboratory as follows:

We are working toward the practical enablement of genetic design of porous scaffolding, at the nanometer level, with specific functional doping (chemical, optical and electronic) to permit great decreases in weight of materials while increasing density of e.g. digital memory as well as efficiencies of energy and information transfer. Successful completion of this work should add great health benefits as well as an important new approach to the manufacture of value added, smart materials to our industrial base, thereby improving the US economy as well as reducing the pollution normally associated with manufacture.

While these results are clearly in the national interest, Dr. Goldberg provides little detail regarding any specific contributions the petitioner has already made towards these goals. Regarding her work, he states that she is attempting to solve the atomic structure of the basic units for the self-assembling scaffolding. The petitioner has focused on genetic design and in vivo expression of segments of the basic units in order to solve unresolved structures. Dr. Goldberg does not, however, specify any specific breakthroughs that have resulted from the petitioner's research in this area. Nor does he provide examples of other laboratories who have been influenced by the petitioner's results. In another letter, Dr. Goldberg provides the following specifics:

[The petitioner] has managed to reengineer a protein so that it will mature in the absence of a heretofore-required additional chaperone protein (at high temperature). The alterations in the protein required to confer this new activity have given us new scientific insights into the mechanism of the maturation. Of even greater importance are the ramifications for our overall engineering goals. One of the major goals is a new method for practical manufacture of nanostructures by controlled self-assembly. A general method for producing functional nanoarchitectures is a major unsolved problem in the field of nanotechnology, which the government and industry recognize as the leading edge for new developments in materials, energy, pollution control and many other industries. [The petitioner's] work when completed, should enable a new dimension of the control we seek for the self-assembly mechanism.

Dr. Paul Hyman, a former member of Dr. Goldberg's team who now works for a nanotechnology start-up company, asserts that his laboratory and Dr. Goldberg's are the only two laboratories using the biological approach to nanotechnology. In addition to discussing the importance of nanotechnology, which the Service (now the Bureau) has not contested, Dr. Hyman asserts that the petitioner took on two difficult projects, is contributing to the field, and will continue to do so.

Professor Vincent P. Conticello, the petitioner's Ph.D. advisor at Emory University, discusses the petitioner's dissertation as follows:

[The petitioner] has conducted the design, biosynthesis and characterization of a synthetic protein polymer, which is modeled on the modular structure of spider dragline silk – a natural protein material with mosaic structure underlies the unique combination of tensile and compressive strength in the fiber, and the ability to absorb impact energy. She developed the method for the self-assembly of this protein under mild conditions to form a macroscopic membrane of the silk network triggered by structural rearrangement. This inventively designed silk analogue has the advantages of uncomplicated processing conditions, and the capacity for engineering different bioactive functional groups into the membrane, while maintaining the terrific mechanical performance.

Professor Conticello concludes that this research, presented at conferences and published in a prestigious journal, has significant industrial potential.

Professor P. Barry Ryan, a member of the petitioner's graduate research advising committee, provides the following information:

[The petitioner's] work on synthesis, characterization, and applications of novel biomaterials with controlled microstructures represents an important direction for a new generation of "designer" biomaterials in which both structural and functional properties can be programmed into the polymer at the molecular level. By utilizing the principles of protein structure and the concepts of material science as a guide, [the petitioner] was able to design non-natural protein-based materials that are capable of self-assembly into unique geometries on the basis of their primary structure. The biological recognition motifs could be incorporated for their functional characteristics, such as enzyme modification or cell binding sites. Such structural protein polymers can potentially be modified upon interaction with a biological substrate. Therefore, [the petitioner's] work forms the basis to the design and synthesis of "intelligent" biomaterials. These types of materials should find biomedical application as agents of controlled drug release and biological sensing devices, etc.

The above letters are all from the petitioner's collaborators and immediate colleagues. While such letters are important in providing details about the petitioner's role in various projects, they

cannot by themselves establish the petitioner's influence over the field as a whole. The petitioner did submit the following letters from more disinterested references.

Lee Makowski, Director of the Biosciences Division of the Argonne National Laboratory, discusses the importance of the petitioner's area of research. He asserts that she is "quickly becoming a leader in the field of self assembling nanostructures" and that her previous work in self-assembly of silk has demonstrated her skills and potential. Mr. Makowski's assertions regarding the petitioner's background have been addressed above. Mr. Makowski does not identify any specific contribution or assert that any of the researchers at his laboratory have been influenced by the petitioner's results.

Dr. Shuguang Zhang, Associate Director of the Center for Biomedical Engineering at Massachusetts Institute of Technology, states that he often meets with Professor Goldberg where they discuss their ongoing projects. Dr. Zhang asserts that the petitioner's work "will have significant impact in improving healthcare in the United States." Dr. Zhang's assertions regarding the unique nature of the petitioner's experience have been addressed above. Dr. Zhang concludes:

[The petitioner] developed a very creative methodology in the construction of protein nanostructure. [The petitioner's] work is enormously significant, and indeed is considered as breakthroughs in the field. She has already made many important contributions and will certainly continue to do so in her cutting edge research on nanotechnology.

These general accolades, however, do not provide any specifics regarding the nature of the petitioner's contributions and their alleged influence on the field. Dr. Qiang Cui, an Assistant Professor at the University of Wisconsin – Madison, provides similar information. Neither Dr. Zhang nor Dr. Cui indicates that the petitioner's work has influenced his or her own research projects.

Dr. Xiaoyang Xia, a senior research scientist at Amgen, asserts that he has read the petitioner's articles and attended her presentations at conferences. Dr. Xia asserts that the petitioner's work has provided insights and paved the way to the discovery of better functional peptides as building blocks for biomaterials. Dr. Xia further asserts that the petitioner's self-assembled biomaterials based on protein polymers have advantages over conventional organic polymers and that her achievements have made the development of a protein analogue commercially viable. Dr. Xia does not indicate that Amgen as a company has expressed any interest in marketing the petitioner's proteins or even developing marketable proteins based on the petitioner's techniques.

Stephen T. Abedon, an Associate Professor at Ohio State University, discusses the importance of research into bacteriophage virion assembly and asserts that the petitioner brings an important background and experience to this area of research.

The petitioner initially indicated that she has authored four articles and presented findings at

three conferences. She claimed that one article had been cited twice by independent researchers and another article had been cited four times, twice by independent researchers.

In response to the director's request for additional documentation, the petitioner submitted citation index materials reflecting that her article in the *Journal of the American Chemical Society* had been cited six times, including in a review article.

The Association of American Universities' Committee on Postdoctoral Education, on page 5 of its *Report and Recommendations*, March 31, 1998, set forth its recommended definition of a postdoctoral appointment. Among the factors included in this definition were the acknowledgement that "the appointment is viewed as preparatory for a full-time academic and/or research career," and that "the appointee has the freedom, and is expected, to publish the results of his or her research or scholarship during the period of the appointment." Thus, this national organization considers publication of one's work to be "expected," even among researchers who have not yet begun "a full-time academic and/or research career." This report reinforces the Bureau's position that publication of scholarly articles is not automatically evidence of influence; we must consider the research community's reaction to those articles.

The petitioner and several of her references note that the petitioner's work was cited in a review article by Jan C. M. van Hest and David Tirrell. In their article, they note that the petitioner's article reported synthesizing "multiblock copolymers consisting of alanine-rich blocks and elastin memetic domains." Van Hest and Tirrell continue that the method reported in the petitioner's article leads to a good protein yield and a method for controlling  $\beta$ -sheet formation. Van Hest and Tirrell conclude that "the ability to introduce switches for  $\beta$ -sheet formation as well as the production of multiblock copolymers will ultimately lead to materials with predictable processing behavior and mechanical properties."

While the director's dismissal of the above citations because peer citation is inherent to the field is too general, we find that the number of citations of the petitioner's work is not significant. While the review article clearly indicates that the petitioner's research has practical applications, it can be argued that any Ph.D. thesis or published article, in order to be accepted or published, must offer new and useful information to the pool of knowledge.

In response to the director's request for additional documentation, Dr. Goldberg asserts that his team has prepared an article that will be published in a special nanotechnology edition of *The Proceedings of the National Academy of Sciences*. It is not clear from Dr. Goldberg's letter that the petitioner will be a listed author on this article. Regardless, the article had not been published at the time of filing and cannot be considered evidence of the petitioner's eligibility at that time.

As is clear from a plain reading of the statute, it was not the intent of Congress that every person qualified to engage in a profession in the United States should be exempt from the requirement of a job offer based on national interest. Likewise, it does not appear to have been the intent of Congress to grant national interest waivers on the basis of the overall importance of a given profession, rather than on the merits of the individual alien. On the basis of the evidence submitted,

the petitioner has not established that a waiver of the requirement of an approved labor certification will be in the national interest of the United States.

The burden of proof in these proceedings rests solely with the petitioner. Section 291 of the Act, U.S.C. § 1361. The petitioner has not sustained that burden.

This denial is without prejudice to the filing of a new petition by a United States employer accompanied by a labor certification issued by the Department of Labor, appropriate supporting evidence and fee.

**ORDER:** The appeal is dismissed.