



U.S. Citizenship
and Immigration
Services

(b)(6)

DATE: DEC 05 2014

Office: TEXAS SERVICE CENTER

FILE: [REDACTED]

IN RE:

Petitioner: [REDACTED]

Beneficiary: [REDACTED]

PETITION: Immigrant Petition for Alien Worker as an Alien of Extraordinary Ability Pursuant to Section 203(b)(1)(A) of the Immigration and Nationality Act, 8 U.S.C. § 1153(b)(1)(A)

ON BEHALF OF PETITIONER:

SELF-REPRESENTED

INSTRUCTIONS:

Enclosed please find the decision of the Administrative Appeals Office (AAO) in your case.

This is a non-precedent decision. The AAO does not announce new constructions of law nor establish agency policy through non-precedent decisions. If you believe the AAO incorrectly applied current law or policy to your case or if you seek to present new facts for consideration, you may file a motion to reconsider or a motion to reopen, respectively. Any motion must be filed on a Notice of Appeal or Motion (Form I-290B) within 33 days of the date of this decision. **Please review the Form I-290B instructions at <http://www.uscis.gov/forms> for the latest information on fee, filing location, and other requirements.** See also 8 C.F.R. § 103.5. **Do not file a motion directly with the AAO.**

Thank you,

Ron Rosenberg

Chief, Administrative Appeals Office

DISCUSSION: The Director, Texas Service Center, denied the immigrant visa petition and the matter is now before the Administrative Appeals Office on appeal. We will dismiss the appeal.

The petitioner, a Bioinformatics Research Scientist, seeks classification as an employment-based immigrant pursuant to section 203(b)(1)(A) of the Immigration and Nationality Act (the Act), 8 U.S.C. § 1153(b)(1)(A), as an alien of extraordinary ability in the sciences. The director determined that the petitioner had not met the requisite criteria for classification as an alien of extraordinary ability.

On appeal, the petitioner submits a statement contesting the director's decision and additional evidence. In her statement, the petitioner asserts that she meets the categories of evidence at 8 C.F.R. § 204.5(h)(3)(iv), (v), and (vi).

I. LAW

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

(1) Priority workers. -- Visas shall first be made available . . . to qualified immigrants who are aliens described in any of the following subparagraphs (A) through (C):

(A) Aliens with extraordinary ability. -- An alien is described in this subparagraph if --

(i) the alien has extraordinary ability in the sciences, arts, education, business, or athletics which has been demonstrated by sustained national or international acclaim and whose achievements have been recognized in the field through extensive documentation,

(ii) the alien seeks to enter the United States to continue work in the area of extraordinary ability, and

(iii) the alien's entry into the United States will substantially benefit prospectively the United States.

U.S. Citizenship and Immigration Services (USCIS) and legacy Immigration and Naturalization Service (INS) have consistently recognized that Congress intended to set a very high standard for individuals seeking immigrant visas as aliens of extraordinary ability. *See* H.R. 723 101st Cong., 2d Sess. 59 (1990); 56 Fed. Reg. 60897, 60898-99 (Nov. 29, 1991). The term "extraordinary ability" refers only to those individuals in that small percentage who have risen to the very top of the field of endeavor. *Id.*; 8 C.F.R. § 204.5(h)(2).

The regulation at 8 C.F.R. § 204.5(h)(3) sets forth a multi-part analysis. First, a petitioner can demonstrate the alien's sustained acclaim and the recognition of the alien's achievements in the field through evidence of a one-time achievement (that is, a major, internationally recognized award). If the

petitioner does not submit this evidence, then a petitioner must submit sufficient qualifying evidence that meets at least three of the ten categories of evidence listed at 8 C.F.R. § 204.5(h)(3)(i)-(x).

The submission of evidence relating to at least three criteria, however, does not, in and of itself, establish eligibility for this classification. *See Kazarian v. USCIS*, 596 F.3d 1115 (9th Cir. 2010) (discussing a two-part review where the evidence is first counted and then, if satisfying the required number of criteria, considered in the context of a final merits determination). *See also Rijal v. USCIS*, 772 F.Supp.2d 1339 (W.D. Wash. 2011) (affirming USCIS' proper application of *Kazarian*), *aff'd*, 683 F.3d 1030 (9th Cir. 2012); *Visinscaia v. Beers*, 4 F.Supp.3d 126, 131-32 (D.D.C. 2013) (finding that USCIS appropriately applied the two-step review); *Matter of Chawathe*, 25 I&N Dec. 369, 376 (AAO 2010) (holding that the "truth is to be determined not by the quantity of evidence alone but by its quality" and that USCIS examines "each piece of evidence for relevance, probative value, and credibility, both individually and within the context of the totality of the evidence, to determine whether the fact to be proven is probably true").

II. ANALYSIS

A. Evidentiary Criteria

The petitioner earned her Ph.D. in Statistics from [REDACTED] in 2008 under the supervision of Dr. [REDACTED] Professor and Chair, Department of Statistical Science, and Dr. [REDACTED] Professor Emeritus of Mathematics and Statistics, Department of Statistical Science. At the time of filing, the petitioner was "employed by [REDACTED] as a Bioinformatics Research Scientist and . . . assigned to a full-time, long-term contract research position in the Statistical Genomics Unit of the [REDACTED] within the [REDACTED]" The petitioner has submitted documentation pertaining to the following categories of evidence under 8 C.F.R. § 204.5(h)(3).¹

Evidence of the alien's participation, either individually or on a panel, as a judge of the work of others in the same or an allied field of specification for which classification is sought.

The petitioner submitted evidence demonstrating that she peer-reviewed manuscripts for [REDACTED] [REDACTED] Accordingly, the evidence supports the director's finding that the petitioner meets this regulatory criterion.

Evidence of the alien's original scientific, scholarly, artistic, athletic, or business-related contributions of major significance in the field.

The petitioner submitted letters of support, her publications and presentations, and citation evidence for her published work. The director acknowledged the petitioner's submission of the preceding evidence, but found that it was not sufficient to demonstrate that the petitioner's work equated to

¹ We have reviewed all of the evidence the petitioner has submitted and will address those criteria the petitioner claims to meet or for which the petitioner has submitted relevant and probative evidence.

original contributions of major significance in the field. For example, the director determined the petitioner had not shown that her work had “made a significant impact within [her] field,” that her discoveries had “been heavily cited or widely implemented,” or that her findings were otherwise of “major significance.” The director therefore concluded that the petitioner did not establish eligibility for this regulatory criterion.

The plain language of this criterion requires “[e]vidence of the alien’s original scientific, scholarly, artistic, athletic, or business-related contributions of major significance in the field.” Here, the evidence must be reviewed to see whether it rises to the level of original scientific contributions “of major significance in the field.” The phrase “major significance” is not superfluous and, thus, it has some meaning. *Silverman v. Eastrich Multiple Investor Fund, L.P.*, 51 F. 3d 28, 31 (3rd Cir. 1995) quoted in *APWU v. Potter*, 343 F.3d 619, 626 (2nd Cir. Sep 15, 2003).

The petitioner submitted evidence showing that she had published five journal articles at the time of filing the Form I-140, Immigrant Petition for Alien Worker, on August 13, 2013. The regulations, however, contain a separate criterion regarding the authorship of scholarly articles in professional publications. 8 C.F.R. § 204.5(h)(3)(vi). However, the petitioner’s sixth journal article entitled [REDACTED] was not published in [REDACTED] until 2014. In addition, petitioner’s manuscript entitled [REDACTED] was under revision and has not yet been published. Thus, any impact resulting from the latter two articles post-dates the August 13, 2013 filing of the Form I-140 petition. Eligibility must be established at the time of filing. 8 C.F.R. § 103.2(b)(1), (12); *Matter of Katigbak*, 14 I&N Dec. 45, 49 (Reg’l Comm’r 1971).

In the appeal brief, the petitioner asserts that the number of publications in the mathematics/statistics field is “much less frequent than that of other fields such as cell biology, physics, medicine, etc.” The petitioner submits an article entitled [REDACTED] which states that “mathematicians tend to be listed as authors of fewer papers than their colleagues in the experimental sciences.” The director’s decision, however, did not take issue with the number of journal articles published by the petitioner. Nor did the director’s decision include any comparison of the petitioner’s number of publications with that of researchers in experimental science fields. Rather, the director determined that the petitioner had not demonstrated that her work was of major significance in the field.

In addition, the petitioner submits a January 2005 article in *Notices of the [REDACTED]* [REDACTED] entitled [REDACTED] that states:

The data we used were kindly provided by the [REDACTED] and cover approximately the time period 1940–1999.

How Much Research Is Going On?

The [REDACTED] currently catalogs (and in most cases publishes reviews or edited author summaries of) about 86,000 published items per year that can

generally be classified as research in the mathematical sciences. At the turn of the century, the database contained about 1.6 million papers (and books), produced by about 300,000 authors.

* * *

Figure 1 shows the number of authors in the database with different numbers of papers. About 43% of all authors have just one paper. The median is 2, the mean 6.87, and the standard deviation 15.35. It is interesting (for tenure review committees?) to note that the 60th percentile is 3 papers, the 70th percentile is 4, the 80th percentile is 8, the 90th percentile is 17, and the 95th percentile is 30.

The issue here, however, is not the number of publications authored by the petitioner, but whether her research findings are of major significance in the field.

The petitioner also asserts that the citation rate in the mathematics/statistics field is “much lower than that of other fields such as cell biology, physics, medicine, etc.” The petitioner points to the aforementioned article entitled “Assessing research in the mathematical sciences” that states: “Particularly coupled with the fact that in many subdisciplines of mathematics publication is infrequent, this means that the numbers of citations of a paper in the mathematical sciences is generally lower than that of a paper in many other sciences.” In addition, the petitioner submits a June 11, 2008 report from the [REDACTED] with the [REDACTED]

The report states:

The special citation culture of mathematics, with low citation counts for journals, papers, and authors, makes it especially vulnerable to the abuse of citation statistics.

* * *

We do not dismiss citation statistics as a tool for assessing the quality of research – citation data and statistics can provide some valuable information. We recognize that assessment must be practical, and for this reason easily derived citation statistics almost surely will be part of the process. But citation data provide only a limited and incomplete view of research quality, and the statistics derived from citation data are sometimes poorly understood and misused. Research is too important to measure its value with only a single coarse tool.

The report acknowledges the value of citation evidence for assessing the “quality of research” and states that mathematics is a field “with low citation counts” relative to other scientific disciplines. The preceding information, however, does not disprove that a high citation count in the mathematics field can be a reliable indicator of significant impact in the field. Numerous favorable independent citations for an article authored by the petitioner may indicate that other researchers have been influenced by her work and are familiar with it. A scant citation record, on the other hand, may indicate that the petitioner’s findings have gone largely unnoticed by others in the field.

Initially, the petitioner submitted search results from Google Scholar reflecting that her article entitled [REDACTED] in [REDACTED] that she coauthored with Dr. [REDACTED] and Dr. [REDACTED] was cited to two times. The two citation results, however, were self-cites by Dr. [REDACTED] and Dr. [REDACTED] to their own article. Self-citation is a normal, expected practice. Self-citation, however, does not show to what extent a researcher has influenced others' work.

In addition, the petitioner submitted search results from Google Scholar reflecting that her article in [REDACTED] entitled "[REDACTED] a mixture framework for identifying transcription factor and a coregulator motif in [REDACTED]" was independently cited to five times. The petitioner also submitted a copy of one of the preceding articles that cited to her work entitled "[REDACTED]". On appeal, the petitioner submits updated search results from Google Scholar as of May 12, 2014 reflecting that "[REDACTED] a mixture framework for identifying transcription factor and a coregulator motif in [REDACTED]" has now been cited to an aggregate of eight times. One of the three additional articles citing to the petitioner's work, entitled "[REDACTED]" was published in November [REDACTED] and post-dates the filing of the Form I-140 petition on August 13, 2013. Again, eligibility must be established at the time of filing. 8 C.F.R. § 103.2(b)(1), (12); *Matter of Katigbak*, 14 I&N Dec. a 49. Accordingly, we cannot consider the latest citation from November 2013 as evidence to establish the petitioner's eligibility at the time of filing. Regardless, the petitioner has not established that the number of independent cites for her article in [REDACTED] is indicative of an original scientific contribution of "major significance" in the field. Moreover, the petitioner did not submit any citation evidence for her remaining articles.

In addition to the Google Scholar citation evidence, the petitioner submitted information from [REDACTED] showing the ranking and impact factor of [REDACTED] the journal that published her work. Although a journal's ranking and impact factor can provide an approximation of the prestige of the journal, the ranking does not demonstrate the major significance of every article published in that journal. The petitioner must establish that the findings in her article have affected the bioinformatics field at a level indicative of original contributions of major significance in the field.

The petitioner also points to documentation showing that her article entitled [REDACTED] a mixture framework for identifying transcription factor and a coregulator motif in [REDACTED] in [REDACTED] was cited to at a higher than average rate relative to other articles published in the field of mathematics and computer science. An above average citation rate, however, does not necessarily equate to contributions of "major significance" in the field. The petitioner has not established that the above average citation rate and number of independent cites to the preceding article is indicative of a contribution of major significance in her field.

In addition, the petitioner's appeal brief points to the letters of support as evidence that she meets this criterion.

Dr. [REDACTED] Head, Medicinal Chemistry Group, retired, Laboratory of Toxicology and Pharmacology, [REDACTED] states:

Since 2009 [the petitioner] played a key role in federally funded research projects in identifying the co-regulation or joint effect of multiple transcription factors from high throughput DNA sequence data at the [REDACTED] . . . While most currently existing methods only identify one genetic factor at a time, [the petitioner] is the first scientist who developed an innovative computational/statistical analysis to detect and discover the co-regulation by multiple transcription factors from large-scaled DNA sequence data associated with human disease.

[The petitioner's] method has an immediately direct contribution to our understanding of the genetic causes of human disease. Applying this technique to large-scaled DNA sequence datasets, she successfully identified the co-existence of two transcription factors [REDACTED] and [REDACTED] associated with liver disease. [REDACTED] regulates metabolism in the pancreas and liver, and [REDACTED] are essential for sexual dimorphism in liver cancer. [REDACTED] is critical for liver development, metabolic regulation, and function; further evidence suggests a suppressor role in liver cancer.

At this time, the genetic basis for diseases, especially cancer, is poorly understood and will undoubtedly continue to be the frontier in medical research. . . . [The petitioner's] discovery of the co-regulation of the transcription factors [REDACTED] provided evidence on their joint genetic effect in causing liver cancer. This represents a major milestone for developing novel diagnoses, prevention and new gene therapy treatment. Her stunningly novel and brilliant research has significantly increased our understanding of the interplay between genetic variants in humans and human liver disease; her ongoing work is of key [sic] not only for the many Americans now living with liver cancer, but also for the entire population at risk for liver diseases.

Dr. [REDACTED] comments that the petitioner developed a computational/statistical analysis method to determine co-regulation by multiple genetic transcription factors, but there is no independent evidence showing that her method has substantially affected genetics research practices in the field or was otherwise indicative of major significance to her field. In addition, while Dr. [REDACTED] mentions that the petitioner's "discovery of the co-regulation of the transcription factors [REDACTED] and [REDACTED] provided evidence on their joint genetic effect in causing liver cancer," he does not provide specific examples of how the petitioner's work has been utilized to develop novel diagnoses, prevention methods, or novel gene therapy treatments for the disease. Although the petitioner's postdoctoral research has value, any research must be original and likely to present some benefit if it is to receive funding and attention from the scientific or academic community. In order for a university, publisher or grantor to accept any research for graduation, publication or funding, the research must offer new and useful information to the pool of knowledge. Not every scientist who performs original research that adds to the general pool of knowledge in the field has inherently made a contribution of "major significance" to the field as a whole. The petitioner has not established that her work has impacted the statistical science field or bioinformatics research community in a major way, or that her work was otherwise commensurate with original contributions of major significance in the field.

Dr. [REDACTED] further states:

In addition, [the petitioner] continues her cutting-edge research at [REDACTED] with developing novel statistical methods to identify the enrichment of nuclear receptors in DNA sequence data. Nuclear receptors are a class of proteins found within cells that are responsible for the function of steroid and hormones. By virtue of their abilities to regulate myriad human developmental and physiological functions, nuclear receptors have been implicated in a wide range of diseases, such as cancer, diabetes, obesity, etc. [The petitioner's] pioneering research contributions indisputably will continue to advance our understanding of human diseases necessary for next-generation diagnosis, prevention and therapy.

Dr. [REDACTED] points out that the petitioner is continuing her research at [REDACTED] to develop novel statistical methods for identifying the enrichment of nuclear receptors in DNA sequence data and that her work will improve "understanding of human diseases necessary for next-generation diagnosis, prevention and therapy," but he does not provide specific examples of how the petitioner's original work has already been utilized to achieve those effects. Dr. [REDACTED] speculation about possible future impact of the petitioner's work is not evidence, and cannot establish eligibility for the category of evidence at 8 C.F.R. § 204.5(h)(3)(v). Again, eligibility must be established at the time of filing. 8 C.F.R. § 103.2(b)(1), (12); *Matter of Katigbak*, 14 I&N Dec. at 49.

Dr. [REDACTED] continues:

[The petitioner's] frontier research in developing novel statistical methods to identify joint genetic factors for human disease was published in [REDACTED] (2011). [REDACTED] is an internationally renowned journal in [REDACTED] research with an impact factor of 5.468, and ranked first out of 43 professional journals worldwide in bioinformatics and computational biology. Being highly selective, publishes [sic] only research deemed to be technically brilliant and of significant practical importance.

Dr. [REDACTED] points to the "impact factor" of [REDACTED] as evidence of the prestige of that journal. The aforementioned "Citation Statistics" report from the [REDACTED] comments specifically on "impact factor" and states that its validity is "neither well understood nor well studied." In addition, the report states:

For journals, the impact factor is most often used for ranking. This is a simple average derived from the distribution of citations for a collection of articles in the journal. The average captures only a small amount of information about that distribution, and it is a rather crude statistic. In addition, there are many confounding factors when judging journals by citations, and any comparison of journals requires caution when using impact factors. Using the impact factor alone to judge a journal is like using weight alone to judge a person's health.

Furthermore, the article entitled "Assessing research in the mathematical sciences" states that "the [REDACTED] journal impact factor is not a robust measure of a journal's standing." Regardless, with respect to the petitioner's article being published in a reputable journal such as [REDACTED] the regulations contain a separate criterion regarding the authorship of scholarly articles in professional

publications. 8 C.F.R. § 204.5(h)(3)(vi). In *Kazarian v. USCIS*, 580 F.3d 1030, 1036 (9th Cir. 2009), the court held that publications and presentations are not sufficient evidence under 8 C.F.R. § 204.5(h)(3)(v) absent evidence that they were of “major significance” in the field. In 2010, the *Kazarian* court reaffirmed its holding that the AAO did not abuse its discretion in finding that the alien had not demonstrated contributions of major significance. 596 F.3d at 1122. Again, there is no presumption that every published article or conference presentation is a contribution of major significance; rather, the petitioner must document the actual impact of her article or presentation. Although the seven citations to her [redacted] article at the time of filing the Form I-140 petition show that the field has taken some interest in the petitioner’s work, she has not established that the level of citation for the article is indicative of a contribution of major significance in the field.

In addition, Dr. [redacted] states:

[The petitioner] received the [redacted] for research excellence. [redacted] is the acronym for the Fellows Award for Research Excellence, begun in 1995 to provide recognition for the outstanding scientific research performed by [redacted] research fellows.) Only exceptionally skilled scientists, identified through a notoriously competitive process, are selected to become [redacted] Research Fellows. Fewer than 25% are honored with [redacted]. This reflects recognition and acclaim at the highest level of the profession. Previously in 2004, [the petitioner] was honored as the only scientist to receive the prestigious [redacted] Fellowship in the statistics department, having made outstanding achievements and displaying exceptional scientific talent.

With regard to [redacted] comments about the petitioner’s [redacted] we note that the petitioner submitted a document entitled “Training and Mentoring” which states that the [redacted] component of [redacted] “had 21 winners of [redacted]” The petitioner’s name is listed in the document among the 21 individuals identified as [redacted] award recipients. The document further states:

[redacted] program was started in 1995 to recognize scientific excellence among intramural trainees at all [redacted]. Trainees submit an abstract of their research, which is peer reviewed. . . . Each winner received a \$1000 travel award to attend a meeting in the United States at which they presented their abstract, either as a poster or a seminar.

Dr. [redacted] asserts that “fewer than 25%” of [redacted] research fellows “are honored with [redacted] Awards.”² The petitioner, however, has not established that receiving an award limited to [redacted]

² According to information posted on the [redacted] webpage, [redacted] applications are accepted every year in February and March” and “[t]he authors of the 25% of abstracts that receive the highest scores are recognized as [redacted] winners.” See [redacted] accessed on October 16, 2014, copy incorporated into the record of proceeding. In addition, according to the [redacted] the petitioner was among 250 [redacted] who received [redacted] that year. See [redacted] accessed on October 16, 2014, copy incorporated into the record of proceeding.

“intramural trainees” and won by a substantial number (250) and percentage of individuals who submitted an abstract to the [REDACTED] is indicative of a contribution of major significance in the field.

Regarding Dr. [REDACTED] assertion that the petitioner was honored with a [REDACTED] in the statistics department in 2004, the petitioner submitted letters of support from Dr. [REDACTED] and Dr. [REDACTED] confirming her receipt of the [REDACTED] given to a “candidate who is writing his or her dissertation in the Statistical Science Department.” In addition, the petitioner submitted information from the website of [REDACTED] entitled “Student Awards.” The submitted information states: “[REDACTED] for Academic Excellence is given to two first-year students for outstanding performance in the theory and applied portions, respectively, of the first-year curriculum. The first recipients of this award were [the petitioner] and [REDACTED].” In a precedent decision involving a lesser classification than the one sought in this matter, we have held that academic performance, measured by such criteria as grade point average, is not a specific prior achievement that establishes the alien’s ability to benefit the national interest. *In re New York State Dept of Transportation*, 22 I&N Dec. 215, 219, n.6 (Act. Assoc. Comm’r 1998). Thus, academic performance is certainly not comparable to the original contributions of major significance in the field criterion set forth at 8 C.F.R. § 204.5(h)(3)(v), designed to demonstrate an alien’s eligibility for this more exclusive classification. The petitioner has not established that receiving academic awards limited to [REDACTED] statistical science students is commensurate with original scientific contributions of major significance in the field.

With regard to the petitioner’s [REDACTED] student awards, the regulations include a separate criterion for prizes or awards at 8 C.F.R. § 204.5(h)(3)(i).³ Evidence relating to or even meeting the prizes and awards criterion is not presumptive evidence that the petitioner also meets this criterion. The regulatory criteria are separate and distinct from one another. Because separate criteria exist for awards and original contributions of major significance, USCIS clearly does not view the two as being interchangeable. To hold otherwise would render meaningless the statutory requirement for extensive evidence or the regulatory requirement that a petitioner meet at least three separate criteria.

Dr. [REDACTED] Professor of Genetic Epidemiology and Bioinformatics, [REDACTED] United Kingdom, states:

[The petitioner] successfully developed novel statistical/computational approaches to unravel the co-existence of multiple genetic factors directly related to terminal diseases. Her method

³ On appeal, the petitioner does not claim to meet the category of evidence at 8 C.F.R. § 204.5(h)(3)(i). Even if the petitioner had made such a claim, which she has not, the petitioner did not submit evidence demonstrating the national or international recognition of her particular awards. The plain language of the regulation at 8 C.F.R. § 204.5(h)(3)(i) specifically requires that the petitioner’s awards be nationally or internationally recognized in the field of endeavor. There is no documentary evidence demonstrating that the petitioner’s [REDACTED] award and [REDACTED] student awards were recognized beyond the presenting institutions at a level commensurate with nationally or internationally recognized prizes or awards for excellence in the field. Rather, the petitioner’s awards reflect internal recognition limited to research fellows at [REDACTED] or students in the statistical science program at [REDACTED].

is the first to estimate the joint distribution of multiple transcription factors and at the mean time, noise rate of the dataset. [The petitioner's] novel method has provided scientists with key information needed for data collection and enhancement of scientific discovery. Even more important, [the petitioner] developed this method into a software package, published at [REDACTED]. Compared with other available methods/tools, her method is far superior in both practical effectiveness and computational efficiency in identifying multiple transcription factors simultaneously. Most other tools for analyzing DNA sequence data are not suitable for large sized data, and usually the analysis results are obscure and incomplete.

Dr. [REDACTED] comments that the petitioner worked on "novel statistical/computational approaches to unravel the co-existence of multiple genetic factors directly related to terminal diseases" and that she developed a method for identifying multiple transcription factors simultaneously. The petitioner submitted the [REDACTED] webpage that provides download information for the petitioner's software program [REDACTED]. The petitioner, however, has not established that availability of her software on the [REDACTED] website along with numerous other biostatistics software programs constitutes a contribution of major significance in the field. There is no documentary evidence showing that the petitioner's [REDACTED] software has affected the field of in a major way, has been widely utilized as a successful approach for identifying multiple transcription factors of various human diseases, or has otherwise risen to the level of a contribution of major significance in the field.

Dr. [REDACTED] further states: "[The petitioner] has made presentations and published two conference abstracts at the Joint Statistical Meeting, the largest international conference of the statistics community with more than five thousand attendees from more than thirty countries world wide." With regard to the petitioner's conference presentations, many professional fields regularly hold meetings and conferences to present new work, discuss new findings, and to network with other professionals. Professional associations, educational institutions, employers, and government agencies promote and sponsor these meetings and conferences. Participation in such events, however, does not equate to original contributions of major significance in the field. There is no documentary evidence showing that the petitioner's presented work has been heavily cited, has significantly impacted the field as a whole, or otherwise constitutes an original contribution of major significance in the field.

Dr. [REDACTED] continues:

Now, [the petitioner] is conducting frontier research in developing a novel statistical method to estimate the distribution of the onset of human diseases or drug effects with association to human genes or environmental factors. It is well know[n] that the use of genetic factors in making medicinal decision and practices for the individual patient, so-called personalized medicine, will be the future of medicine. [The petitioner's] current research well fits into this area and can significantly facilitate the prediction of the onset of a disease or drug effect for each individual patient based on his genes. This pioneering research work will be presented at the 2nd International Conference and Exhibition on Biometrics and Biostatistics by the [REDACTED] for a[n] oral presentation. [The petitioner's] work is at the very front of this new paradigm in medical research; based upon her stunning record of achievements, if she is

able to continue her research in the U.S., she can surely make more major break-through directly benefitting the health care of U.S.

Dr. [REDACTED] mentions that the petitioner's work "can significantly facilitate the prediction of the onset of a disease or drug effect for each individual patient based on his genes," but he does not point to specific examples of how the petitioner's work has already been successfully utilized by a significant number of medical centers. Again, speculation about possible future impact of the petitioner's work is not evidence, and cannot establish eligibility for this regulatory criterion. 8 C.F.R. § 103.2(b)(1), (12); *Matter of Katigbak*, 14 I&N Dec. at 49. In addition, while Dr. [REDACTED] comments on the petitioner's presentation at the 2nd International Conference and Exhibition on Biometrics and Biostatistics, there is no evidence showing that the petitioner's work has affected her field in a major way, that her statistical method for estimating the onset of disease and for predicting drug effects associated with human genes or environmental factors has been widely implemented in the healthcare industry, or that her work has otherwise risen to the level of original contributions of major significance in the field.

Dr. [REDACTED] Professor, Department of Epidemiology and Biostatistics, [REDACTED] states:

[The petitioner], first as a Research Fellow at [REDACTED], Biostatistics Branch, and then as a Research Scientist at [REDACTED], Statistical Genome Unit, has led several research projects funded by the U.S. federal government. Among these, [the petitioner] led a project in which she developed a unique approach to identify multiple gene-regulation factors simultaneously from large-scaled DNA sequence data. This was a landmark accomplishment in the field because it enabled biologists for the first time to identify the joint effect of multiple genetic factors causing human diseases. No other computational tools in existence can identify the coregulation of multiple genetic factors, and so [the petitioner]'s work was revolutionary in the field.

In additional novel contributions of major significance, [the petitioner] used this pioneering algorithm and discovered the co-existence of multiple factors for gene regulation such as [REDACTED] which are significantly related to liver disease. Her results have proven to be instrumental for biologists in understanding the joint effect of these factors for liver disease such as liver cancer (one of the two cancers with the highest mortality rates) and other human diseases. It is of practical significance to identify those genetic factors for predicting disease and develop gene-therapy solutions for people with those diseases. For this extraordinary work she was honored with the [REDACTED] award for making fundamental research contributions.

Dr. [REDACTED] asserts that the petitioner "developed a unique approach to identify multiple gene-regulation factors simultaneously from large-scaled DNA sequence data" and that she used her method to discover "the co-existence of multiple factors for gene regulation such as [REDACTED] which are significantly related to liver disease," but he does not provide specific examples of how the petitioner's methodology has been implemented as a diagnostic or treatment protocol for liver disease with corresponding improvement in patient outcomes, or was otherwise indicative of

contributions of major significance in the field. In addition, Dr. [REDACTED] mentions that the petitioner “was honored with the [REDACTED] award” for her research contribution. The plain language of the regulation at 8 C.F.R. § 204.5(h)(3)(v) requires that the petitioner’s contributions be “of major significance in the field” rather than limited to an “intramural trainee” recognition program at her research institution. *See Visinscaia v. Beers*, 4 F.Supp.3d at 134 (D.D.C. 2013) (upholding a finding that a ballroom dancer had not met this criterion because she did not demonstrate her impact in the field as a whole).

Dr. [REDACTED] further states:

In additional scientific contributions of major significance to her field, [the petitioner] developed several highly novel statistical methods for filtering time series data that contain multiple components with nonaligned irregular frequencies of behavior. Despite efforts by other leading experts over quite a long time, no one ever before had overcome the complex challenges for these important achievements. The solutions [the petitioner] devised and developed are extraordinary, and have flexibility and mathematical power that, without exception, far exceeds all other filtering methods. These, too are novel scientific contributions of major consequence to the field. Her methods have been used to filter components from bat echolocation data – research important for enhancing radar navigation systems, and have been used to filter components from complex seismic data to study earthquakes.

Dr. [REDACTED] describes the petitioner’s research work as “scientific contributions of major significance to her field” and asserts that her solutions “are extraordinary,” but merely repeating the language of the statute or regulations does not satisfy the petitioner’s burden of proof. *Fedin Bros. Co., Ltd. v. Sava*, 724 F. Supp. 1103, 1108 (E.D.N.Y. 1989), *aff’d*, 905 F. 2d 41 (2d. Cir. 1990); *Avyr Associates, Inc. v. Meissner*, No. 95 civ 10729, 1997 WL 188942 at *1, *5 (S.D.N.Y.). In addition, Dr. [REDACTED] points to the petitioner’s development of “novel statistical methods for filtering time series data that contain multiple components with nonaligned irregular frequencies of behavior.” There is no documentary evidence showing, however, that the petitioner’s methodologies for filtering time series data have been frequently cited by independent researchers or that her approaches were otherwise of major significance in the field.

Dr. [REDACTED], Associate Professor of Medicine and Director of the [REDACTED] at [REDACTED] School of Medicine, states:

[The petitioner] developed new and innovative statistical methods to identify the joint effect of multiple genetic factors relating to human disease, and her contributions create the ability to start with large-scale DNA sequence data associated with human disease and detect and discover coregulation by multiple transcription factors. In this way, the novel statistical and computational approaches she developed reveal the co-existence of multiple genetic factors directly related to diseases. Her methodology is the first ever to identify multiple interacting transcription factors from large-scale DNA data and this is a breakthrough of major significance for understanding genetic causes of human disease.

Dr. [REDACTED] comments that the petitioner's statistical methods "reveal the co-existence of multiple genetic factors directly related to diseases" and that her work "is the first ever to identify multiple interacting transcription factors from large-scale DNA data," but he does not provide specific examples of how the petitioner's work has been widely implemented as an effective approach for diagnosing or treating diseases, or has otherwise been of major significance to the field. In addition, Dr. [REDACTED] asserts that the petitioner's methodology "is a breakthrough of major significance for understanding genetic causes of human disease." USCIS, however, need not rely on unsubstantiated claims. *See 1756, Inc. v. U.S. Att'y Gen.*, 745 F. Supp. 9, 15 (D.D.C. 1990) (holding that an agency need not credit conclusory assertions in immigration benefits adjudications).

Dr. [REDACTED] further states:

In a scientific contribution of major significance to her field, [the petitioner] developed multiple novel statistical methods for filtering time series data containing multiple components for which the frequency behaviors vary with time – that is, her methods accurately take into account complex irregular frequencies of behavior. In doing so, she overcame longstanding challenges that stumped other highly skilled experts in her field for many years, and both the flexibility and power of her new methods are extraordinary, surpassing by far those of all other filtering methods ever invented. Unquestionably, her novel methods are a breakthrough of major significance.

Dr. [REDACTED] mentions twice that the petitioner's novel statistical methods for filtering time series data are "of major significance" in the field. Again, merely repeating the language of the regulations does not satisfy the petitioner's burden of proof. There is no evidence showing that the petitioner's work on filtering time series data has been heavily cited in professional journals, has substantially influenced the work of others in her field, or has otherwise risen to the level of contributions of major significance in the field.

Dr. [REDACTED] continues:

[The petitioner's] achievements as well as her ongoing work – developing statistical methods to estimate the distribution of human disease onset and drug effects in relation to both human genes and environmental factors – are at the very forefront of "personalized medicine." [The petitioner's] research is first ever to study the association of the onset of medical treatment with patients' personal information and clearly distinguish her as a giant in her field, among the elite small percent of experts at the very top of her field.

The pioneering and novel statistical methods [the petitioner] developed have been applied by [REDACTED] in a famous study known as the [REDACTED] which is the largest and longest study ever conducted to evaluate depression treatment. In the [REDACTED] Study, the [REDACTED] determined which treatments work best for patients in outpatient settings who suffer from non-psychotic major depressive disorders. This successful study has been influencing clinical practices nationwide and has provided and improved strategies to efficiently reduce depression symptoms and improve remission for clinical treatment to patients suffering from these disorders. [The

petitioner's] research contributions were indispensable for evaluating the associations of the onset of the effect of the antidepressant drug citalopram with patients' age, gender and anxiety status. In this way her work has a direct influence on customizing the dosage of this drug to individual patients from different age and sex groups and also patients with complexity of the coexistence of anxiety and depression.

Dr. [REDACTED] comments that the petitioner's statistical methods were applied by her research institution, the [REDACTED] in a study known as [REDACTED] but there is no documentary evidence showing that the petitioner was a coauthor of the [REDACTED] study, that her specific findings were heavily cited by independent researchers, or that her work was otherwise of major significance to the field. In addition, Dr. [REDACTED] asserts that the petitioner's "research contributions were indispensable for evaluating the associations of the onset of the effect of the antidepressant drug citalopram" and that "her work has a direct influence on customizing the dosage of this drug to individual patients." Dr. [REDACTED] however, does not identify examples of any medical centers whose diagnostic and treatment protocols have specifically changed as a result of the petitioner's work, or point to other evidence demonstrating that the petitioner's work is commensurate with contributions of major significance in the field.

Dr. [REDACTED] Professor, Department of Electrical and Computer Engineering, [REDACTED] states:

[The petitioner] has played a leading role in developing innovative statistical methods for filtering time series data containing multiple components, of which frequency behavior vary with time. . . . Developing an appropriate filtering method for data with irregular frequency behavior has been a very challenging and difficult subject in signal processing area. [The petitioner] developed a filtering method for non-stationary signals based on time-deformation concept, which can filter not only the data where frequency can be modeled by available functions, but also those with complicated and irregular frequency behavior. In the groundbreaking and technically brilliant method she developed, dependence upon the exact frequency structure of the component is much less stringent. The flexibility and power of her new method is extraordinary, significantly surpassing that of all other filtering methods ever invented.

Her research is a major breakthrough and a long-sought key to solve the filtering problem for data with irregular and complicated frequency behavior. This method has been successfully applied to seismic waves and bat echolocation data. . . . Based upon the very nature of the novel method [the petitioner] devised, it can be used efficiently to analyze medical data such as ultrasound and EEG signals of human brain, acoustic signals, and optical data. Thus, the results of [the petitioner's] work are [sic] of fundamental importance to the research in many applied fields such as medical, electrical engineering, biology, national defense and national disaster prevention.

Dr. [REDACTED] asserts that the petitioner's filtering method for non-stationary signals has been successfully applied to seismic waves and bat echolocation data, but he does not identify the other research institutions that have applied the petitioner's method in their work. There is no documentary

evidence showing that other scientists are utilizing the petitioner's methodology at a level indicative of a contribution of major significance in the field. In addition, Dr. [REDACTED] contends that the petitioner's method "can be used efficiently to analyze medical data such as ultrasound and EEG signals of human brain, acoustic signals, and optical data," but he does not provide specific examples of how the petitioner's work has already had this effect or was otherwise of major significance to the field. A petitioner cannot establish eligibility based solely on the expectation of future eligibility. *Matter of Katigbak*, 14 I&N Dec. at 49. Moreover, there is no documentary evidence showing that "applied fields such as medical, electrical engineering, biology, national defense and national disaster prevention" have already utilized the petitioner's filtering method at a level commensurate with contributions of major significance in the field.

The petitioner submitted letters of varying probative value. We have addressed the specific assertions above. Generalized conclusory assertions that do not identify specific contributions or their impact in the field have little probative value. *See 1756, Inc. v. U.S. Att'y Gen.*, 745 F. Supp. at 17; *see also Visinscaia*, 4 F.Supp.3d at 134-35 (upholding USCIS' decision to give limited weight to uncorroborated assertions from practitioners in the field); *Matter of Caron Int'l, Inc.*, 19 I&N Dec. 791, 795 (Comm'r 1988) (holding that an agency "may, in its discretion, use as advisory opinions statements . . . submitted in evidence as expert testimony," but is ultimately responsible for making the final determination regarding an alien's eligibility for the benefit sought and "is not required to accept or may give less weight" to evidence that is "in any way questionable"). The submission of reference letters supporting the petition is not presumptive evidence of eligibility; USCIS may evaluate the content of those letters as to whether they support the petitioner's eligibility. *Id.* *See also Matter of V-K-*, 24 I&N Dec. 500, n.2 (BIA 2008) (noting that expert opinion testimony does not purport to be evidence as to "fact"). Without additional, specific evidence showing that the petitioner's original work has been unusually influential, widely implemented throughout her field, or has otherwise risen to the level of contributions of major significance, the petitioner has not established that she meets this regulatory criterion.

Evidence of the alien's authorship of scholarly articles in the field, in professional or major trade publications or other major media.

The petitioner has documented her authorship of scholarly articles in professional publications and, thus, has submitted qualifying evidence pursuant to 8 C.F.R. § 204.5(h)(3)(vi). Accordingly, the evidence supports the director's finding that the petitioner meets this regulatory criterion.

B. Summary

For the reasons discussed above, we agree with the Director that the petitioner has not submitted the requisite initial evidence, in this case, evidence that satisfies three of the ten regulatory criteria.

III. CONCLUSION

The documentation submitted in support of a claim of extraordinary ability must clearly demonstrate that the alien has achieved sustained national or international acclaim and is one of the small percentage who has risen to the very top of his or her field of endeavor.

Had the petitioner submitted the requisite evidence under at least three evidentiary categories, in accordance with the *Kazarian* opinion, the next step would be a final merits determination that considers all of the evidence in the context of whether or not the petitioner has demonstrated: (1) a “level of expertise indicating that the individual is one of that small percentage who have risen to the very top of the field of endeavor,” and (2) “that the alien has sustained national or international acclaim and that his or her achievements have been recognized in the field of expertise.” 8 C.F.R. § 204.5(h)(2) and (3); *see also Kazarian*, 596 F.3d at 1119-20. As the petitioner has not done so, the proper conclusion is that the petitioner has failed to satisfy the antecedent regulatory requirement of presenting evidence that satisfied the initial evidence requirements set forth at 8 C.F.R. § 204.5(h)(3) and (4). *Kazarian*, 596 F.3d at 1122. Nevertheless, although we need not provide the type of final merits determination referenced in *Kazarian*, a review of the evidence in the aggregate supports a finding that the petitioner has not demonstrated the level of expertise required for the classification sought.⁴

The appeal will be dismissed for the above stated reasons, with each considered as an independent and alternate basis for the decision. In visa petition proceedings, it is the petitioner’s burden to establish eligibility for the immigration benefit sought. Section 291 of the Act, 8 U.S.C. § 1361; *Matter of Otiende*, 26 I&N Dec. 127, 128 (BIA 2013). Here, that burden has not been met.

ORDER: The appeal is dismissed.

⁴ We maintain *de novo* review of all questions of fact and law. *See Soltane v. United States Dep’t of Justice*, 381 F.3d 143, 145 (3d Cir. 2004). In any future proceeding, we maintain the jurisdiction to conduct a final merits determination as the office that made the last decision in this matter. 8 C.F.R. § 103.5(a)(1)(ii); *see also* INA §§ 103(a)(1), 204(b); DHS Delegation Number 0150.1 (effective March 1, 2003); 8 C.F.R. § 2.1 (2003); 8 C.F.R. § 103.1(f)(3)(iii) (2003); *Matter of Aurelio*, 19 I&N Dec. 458, 460 (BIA 1987) (holding that legacy INS, now USCIS, is the sole authority with the jurisdiction to decide visa petitions).